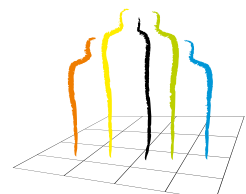
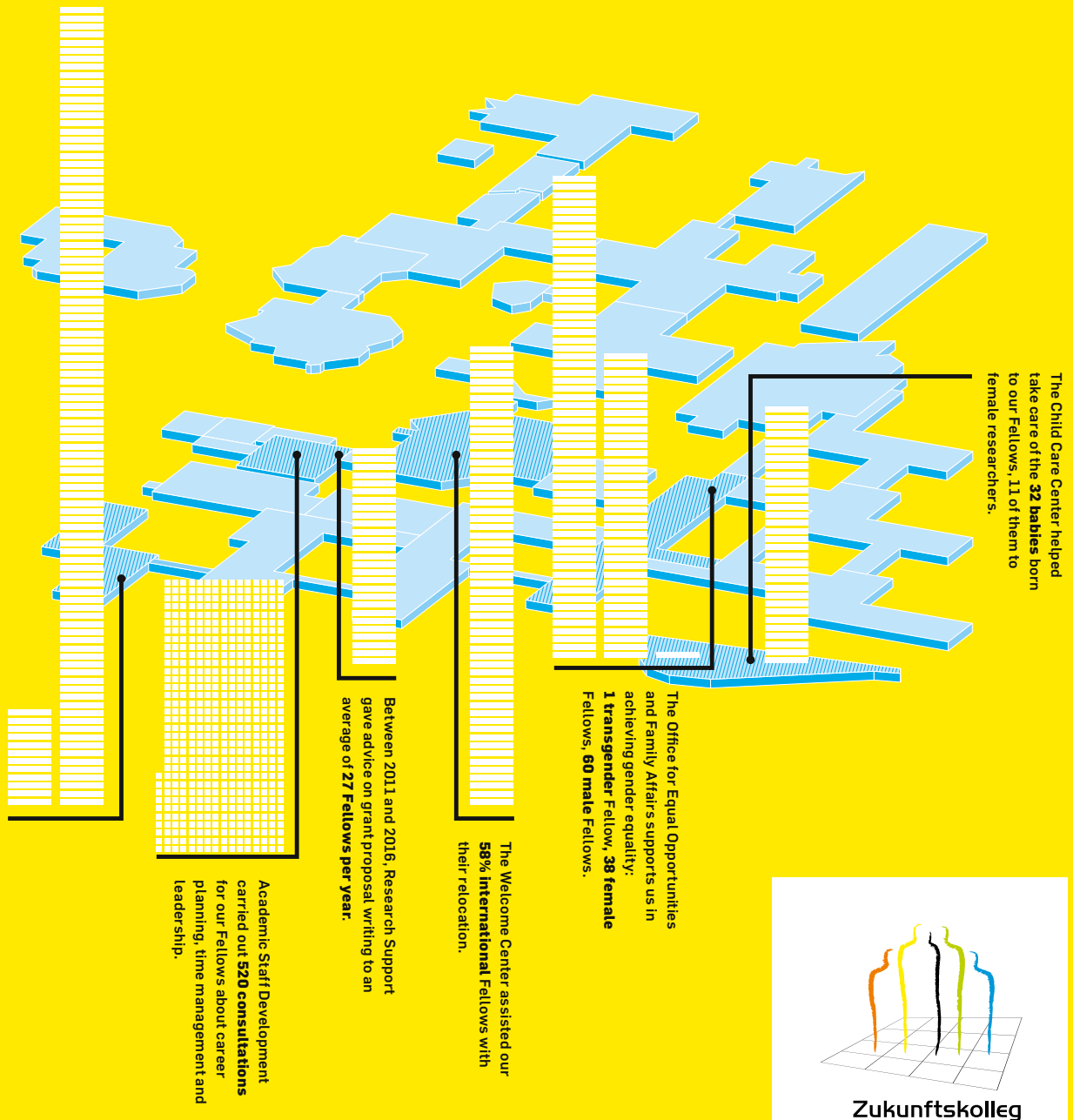


# Zukunftskolleg Annual Report 2016|2017

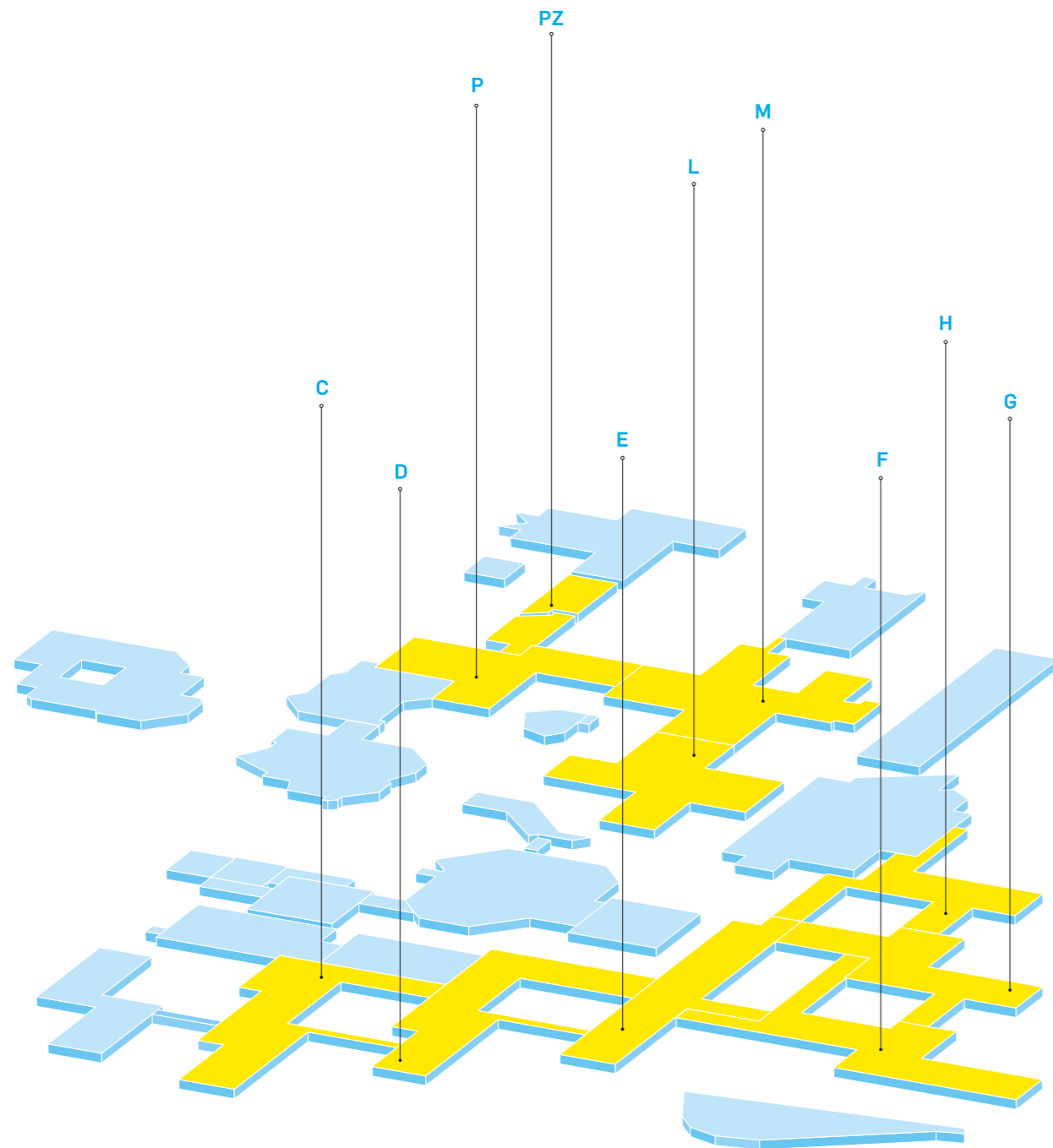
10 years  
Zukunftskolleg



Zukunftskolleg

The statistics on the cover provide an overview of the work in the past ten years (11|2007-08|2017).





[ Simplified mapping of the departments. ]

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**Giovanni Galizia**  
Director of the Zukunftskolleg

**Dear Reader,**

**This year we are celebrating the ten-year anniversary of the Zukunftskolleg. The Zukunftskolleg has established itself as a keystone in the University of Konstanz's institutional strategy to promote top-level research and independent researchers in the early phase of their academic career. We are looking forward to many more years!**

**Our Fellows were members of the Zukunftskolleg as well as their department at the University of Konstanz from the very beginning. It is essential for the Zukunftskolleg and the departments to maintain good relations in order to support the outstanding young researchers and foster their future careers together: The departments give our Fellows roots by ensuring that the junior researchers are connected to the scholarly community. The Zukunftskolleg gives them wings so that they enjoy the necessary freedom and autonomy to conduct their research. Together we are a team – or, as our alumna Chiara Gianollo puts it in our alumni career paths series:**

**“The Zukunftskolleg as an institution is quite unique, but without the department something would be missing.” You can read what our current Fellows have to say about this issue in an interview with the Executive Committee on page 6.**

**This annual report covers the academic year 2016|2017. It describes the activities of our 5-year, 2-year, and Bridge Fellows between August 2016 and July 2017 and is full of statistics that provide an overview of our work in the past ten years.**

**Sincerely,  
Giovanni Galizia**

A handwritten signature in dark ink, appearing to read 'G. Galizia', written in a cursive style.

# The Executive Committee

An interview with  
 Klaus Boldt | James Griffiths |  
 Dennis Pinggen | Sebastian Schutte |  
 Leila Whitley

The Executive Committee is the supreme decision-making body of the Zukunftskolleg: It decides which research projects are to be funded through the support measures. Its members are five elected Fellows, the Director of the Zukunftskolleg and the Vice Rector for Research and Academic Staff Development of the University of Konstanz. We talked to the Fellows in the Executive Committee about what it means to be a Fellow of the Zukunftskolleg, what they gain through their committee work and how they feel about mobility and staying in the German academic system.

## When you explain to outsiders what it means to be a Fellow of the Zukunftskolleg, what do you tell them?

James: People often ask me: What does it mean to you to be a Fellow of the Zukunftskolleg on a day-to-day basis? And I answer: I get to carry out my research. The Zukunftskolleg really supports young researchers in their ability to do research by providing the time and instruments to do so.

Dennis: I usually add that there is a lot of contact with other disciplines – it is really easy to come in contact with researchers from other disciplines as you meet each other at the Jour Fixe on a weekly basis. This enables collaboration.

Leila: Yes, it is quite unusual for so many of us to come together from various disciplines and also from diverse fields across the natural sciences, social sciences and humanities. It is also exceptional that we are all junior researchers in early career positions who are provided the opportunity to work independently on research projects at this career stage.

Sebastian: The independence is really an important aspect for me – being able to independently pursue research projects outside of traditional structures.

**The Executive Committee is the supreme decision-making body of the Zukunftskolleg: You decide which research projects are to be funded through the support measures. Some people are critical towards this form of self-administration because Fellows distribute funds among Fellows. How do you feel about it?**

Klaus: The structure follows the idea of researchers funding researchers. That is the general principle the DFG works on as well – although we work at a much smaller scale.

Sebastian: Such decision making is always difficult; it is difficult for the DFG, it is difficult for ERC grants, it is difficult for everybody. We try to come up with the most informed decision possible based on the responsible consideration of several people who discuss the applications constructively.

Leila: This procedure is genuinely peer-review: The Executive Committee discusses projects from people that are at a similar career stage as themselves. This is a different kind of orientation in regard to evaluating projects and I think there is something useful in that.

**The Executive Committee currently consists of Fellows with a background in chemistry, linguistics, literature as well as politics and public administration. You decide upon applications that come from all disciplines represented at the University of Konstanz. How do you evaluate applications from disciplines in which none of you are experts?**

James: The important thing is that a good application should be comprehensible to non-experts to an extent that they can assess it. Further criteria are: Is the proposal clear? Is the work, or the plan for the work, well



structured? Is it timely? I think there are enough criteria that are universal and that we can apply to evaluate research proposals from all research fields. And of course, if it's a big grant, we refer to an expert as well: For large funding amounts, the application goes to the Committee on Research of the university.

**Being a member of the Zukunftskolleg Executive Committee means that you have to commit some time for this task. Why does being an Executive Committee member pay off nonetheless?**

Sebastian: It's an opportunity to gain experience in committee work – an experience that is required for an academic career. Research is one aspect of building that kind of career, but it's not the only one, especially in Germany. You need teaching experience and experience in committee work. You have to show that you can fulfil all these academic expectations.

Klaus: In that respect the Zukunftskolleg is really fulfilling its purpose: It provides its members wide-ranging opportunities to prepare for taking on the future responsibilities of academic life. And there is the aspect of learning how to deal with such important decisions, such as deciding which individuals from a large pool of applicants receive a position. To evaluate the sheer amount of applications in a reasonable manner without getting lost in both details and personal stories in order to select the best candidate is something that I would not be able to do just out of hand.

**All of you come from abroad or have been abroad for extended research stays. The academic system puts high demands on junior researchers in terms of mobility. What are the advantages and disadvantages of mobility?**

Klaus: Mobility opens your perspective and provides you with the ability to see different cultures and different ways of dealing with research problems that I do not want to miss out in my scientific work. In that aspect, I support mobility completely. But it depends a lot on which stage of life you are in. If you plan to have a family, it becomes difficult because it makes it hard to settle down.

**How do you feel about the support that is given to researchers in that respect?**

James: In Konstanz the support for mobility was adequate. It is the support for settling down that would be nice, and for that more tenure-track positions are required, which is currently not up for discussion. So as Klaus said, the mobility is really nice, but not being able to see five years into the future – that is the thing that gets to you after a while.

**Did you come to Konstanz in order to stay in Germany or is your stay here a stopover before heading to other parts of the world?**

Dennis: In terms of research environment, I do like Germany. But if you want to pursue an academic career, you have to look at the chances that you get. And well, if the chances are here at the moment, then I will take a look at them. But if the chances are somewhere else, then I would also take a serious look abroad.



Klaus: I am speaking from a slightly different perspective here because I am originally from Germany and am more advanced in my career. I definitely came here with the idea that Germany is probably the easiest place for me to find a position because I grew up in this academic system. I am not set on it, but for a whole bunch of private reasons, Germany would be a good choice for me moving forward. So yes, I can see myself staying.

Leila: I have always been in Anglo-American academic environments before coming here. I was looking for positions in Germany because of the generous research funding opportunities for postdoctoral researchers, which can be hard to find in the British context within the humanities. Germany is really a wonderful idea at this career stage, but in the long term, there are tenure-track and permanent positions in the Anglo-American world. I know that in Germany these positions are very, very rare. Additionally, the academic systems are quite distinct in the way that they approach research questions and there is no habilitation system in the Anglo-American world. Altogether, it would be a huge investment for an unlikely position in Germany.

**You are all Fellows of the Zukunftskolleg and you are all members of your respective departments at the university. How do you feel about your double affiliation?**

Dennis: As a chemist, I spend much time in and close to the labs. I actually do not spend very much time in the Zukunftskolleg building, only for the Jour Fixes, and that increases the distance to the Zukunftskolleg somewhat. On the other hand, I do enjoy the differences in other research work I see and working together with the different disciplines. I am definitely a member of the department with a good connection to the Zukunftskolleg.

Leila: For me, it is quite different, because my office is at the Zukunftskolleg and I share it with Fellows who are either from the humanities or social sciences. The contact with my department is somewhat peripheral, since in my field people work more independently. I have a very nice and welcoming interaction with my department, but much of my work is carried out independently.

James: My situation is almost identical with Leila's. The only difference is that I spend a lot of time teaching for my department. When I am teaching, I feel much more engaged within the department. I like the fact that if I want to feel more like a member of the Zukunftskolleg, then I can, and when I want to feel more like a member of my department, I can do that as well. It is nice to have a double academic life.

Sebastian: For me, my affiliation depends on the context. When I go to political science conferences, people usually realize that I am affiliated with the corresponding department here. For the general public, the Zukunftskolleg is a very useful reference. I'm certainly happy to be here.

Sebastian Schutte  
[ p. 55 ]



Leila Whitley  
[ p. 46 ]



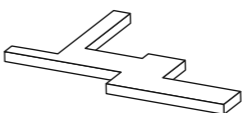

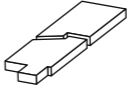

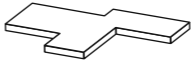

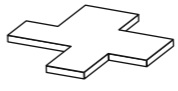

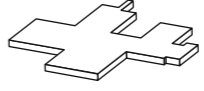



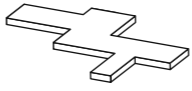



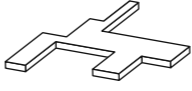

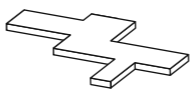

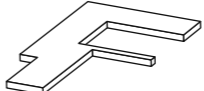

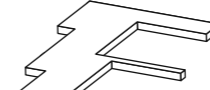

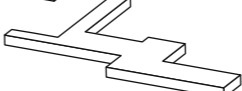

James Griffiths  
[ p. 49 ]



# Fellow Reports Academic Year 08|2016-07|2017

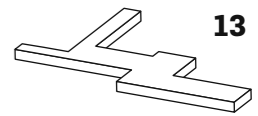
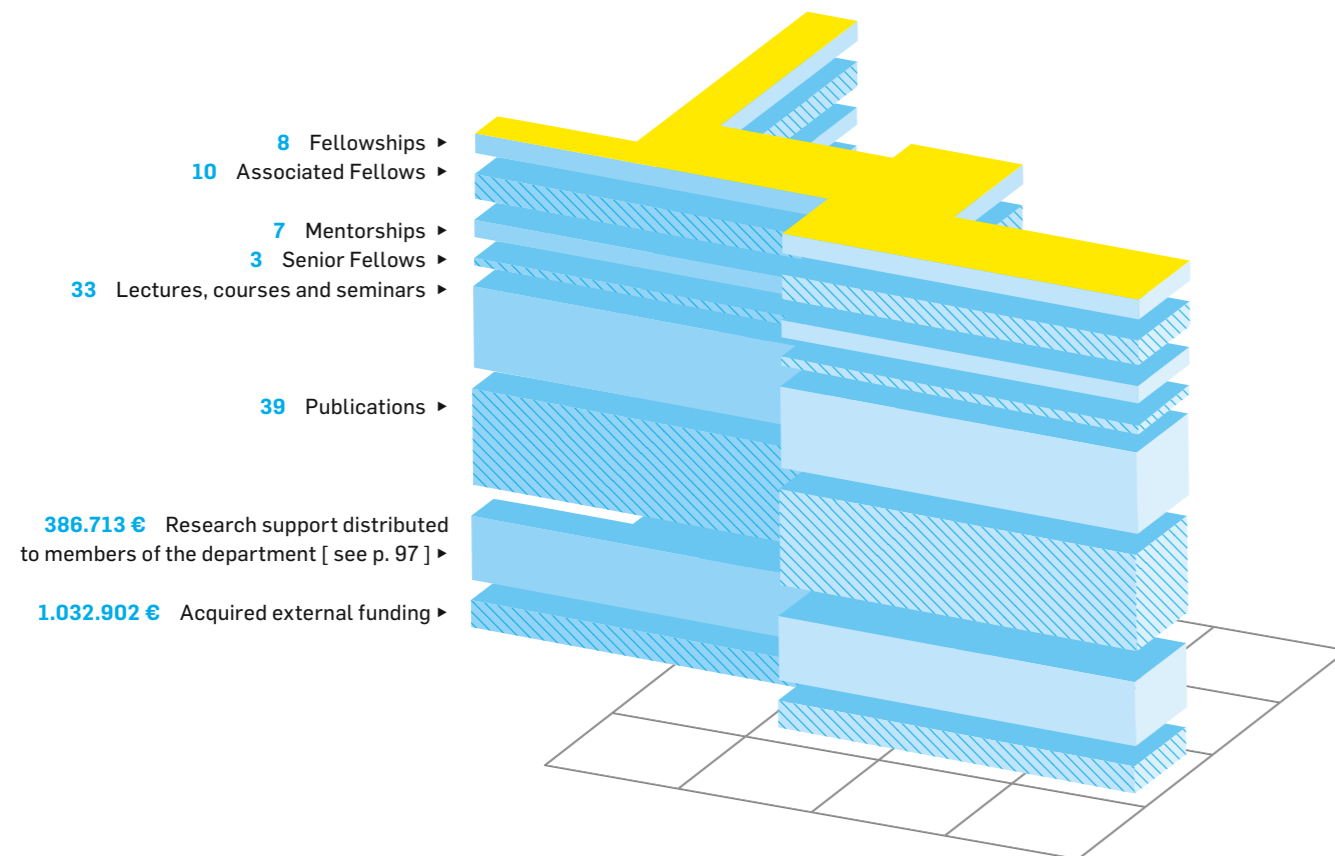
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# 10 Year Statistics 13 Departments 11|2007-08|2017

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[ p. 16 ]		 <b>Computer and Information Science</b>
[ p. 18 ]		 <b>Physics</b>
[ p. 22 ]		 <b>Chemistry</b>
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[ p. 36 ]		 <b>Philosophy</b>
[ p. 40 ]		 <b>History and Sociology including Empirical Educational Research and Sports Science</b>
[ p. 44 ]		 <b>Literature including Art and Media Studies</b>
[ p. 48 ]		 <b>Linguistics</b>
[ p. 52 ]		 <b>Politics and Public Administration</b>
[ p. 56 ]		 <b>Law</b>
[ p. 58 ]		 <b>Economics</b>

# Department of Mathematics and Statistics

from 11|2007 to 08|2017  
Building F



## Zero Forcing Parameter and Searching Models



**Mohammad Adm**  
Bridge Fellow

at the Zukunftskolleg from 05|2016 to 01|2017

My research work during this fellowship can be divided into two categories: zero forcing parameter and searching models and the sub-direct sum of totally non-negative matrices. The concept of zero forcing has been named and described differently by electrical engineers, graph theorists, and physicists. Zero forcing is a (type of) propagation on graphs described by the following process: Consider a graph  $G$  and color each of its vertices blue or white. A blue vertex  $v$  can force a white vertex  $w$  to be blue if  $w$  is the only white vertex in the neighborhood of  $v$ . The zero forcing number of  $G$ ,  $Z(G)$ , is the minimum cardinality of a set of vertices  $S \subset V(G)$ , such that if the vertices of  $S$  are colored blue and the remaining vertices are colored white, then every vertex can eventually become blue after repeated application of the forcing process. I have proposed an algorithm to calculate  $Z(G)$  by using the adjacency matrix. At present, I am working on this algorithm to prove its efficiency and simplicity compared to the existing methods. A real matrix is called totally nonnegative if all of its minors are nonnegative. Such matrices arise in a remarkable variety of ways in mathematics and many areas of its applications. Jointly with Prof. Dr. J. Garloff, I published the paper *Invariance of total nonnegativity of a matrix under entry-wise perturbation and subdirect sum of totally nonnegative matrices* in "Linear Algebra", 2017, 514, 222-233.

## How to Transfer Geometry of Roots to the Geometry of Polynomials?



**Grey Violet**  
Bridge Fellow

at the Zukunftskolleg since 04|2015

The main theorem of algebra states that any polynomial of degree  $n$  has no more than  $n$  complex roots (or exactly  $n$ , if one counts roots with their multiplicities together). A natural question would be: What will happen with coefficients of polynomials if we change the roots continuously? The algebraic answer is straightforward: it is the Vieta theorem. Geometrically this means that the set of coefficients of a degree  $n$  polynomial is the set of all unordered subsets of the space of roots that has  $n$  elements (counted with multiplicities). Suppose that the roots of a polynomial are distributed in some fixed way across a fixed region  $R$  on a complex plane. What can we say about the set of all polynomials with fixed distribution of roots? Special cases of the question have a long history and lead us to the foundational question of control theory: Given a dynamical system, how can we verify that the system has some fixed properties and how can we modify the system such that it would have these properties? Despite the long history of this question and many algorithmic and algebraic results on it, both in special cases and in general formulations, little is known about the geometry of the problem. I have described the topology of the problem in many important cases.



## Groups Definable in Tame Expansions of O-Minimal Structures



**Panteleimon Eleftheriou**  
Fellow

at the Zukunftskolleg since 08/2013

This project belongs to tame geometry, an area of mathematics studying geometric objects satisfying certain tameness conditions imposed by logic. Consider, for example, a line and a curve forming an area. This area is defined by polynomial equations and inequalities and the logical symbol “AND”, for example  $y \leq x + 1$  AND  $y \geq x^2$ . It is known that such objects are tame, and they are the objects of study of semi-algebraic geometry. Their basic properties, such as volume and dimension, are easy to calculate. On the other hand, a fractal, such as the Koch snowflake, is known to have peculiar and abnormal properties which exhibit a rather wild and non-tame behavior. To study these properties, one has to appeal to a whole new branch of mathematics, called fractal geometry. Tame geometry strives to identify exactly those geometric objects which, although large in scope, still exhibit tame behavior. So far in my project, I have established new structure theorems for tame sets, opening promising paths towards an analysis of tame groups, which is the ultimate goal of this project.

## Parameterization and Algebraic Points in O-Minimal Structures

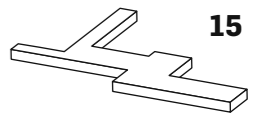


**Margaret Thomas**  
Fellow

at the Zukunftskolleg since 01/2011

Logic provides a foundational perspective on mathematics, presenting objects in terms of their underlying structure. The focus of my research group at the Zukunftskolleg is to use this unifying approach to tackle problems across the mathematical spectrum. We look in particular at “*o-minimal*” objects, which have a simple geometrical description in these logical terms. This makes them very amenable to study and relatable to a variety of topics. In combinatorics, we have shown that they give us new information about mutual acquaintances/strangers in certain networks. In dynamical systems, we are looking (together with Senior Fellow Prof. Patrick Speissegger) at the limiting behaviour of orbits in analytic vector fields. And our work on *o-minimal* topology has relevance for the independence of certain set-theoretic axioms at the foundations of mathematics.

Our main focus is on number theory – evaluating how many points lying on *o-minimal* objects have special coordinates, e.g. whole numbers, fractions, or algebraic numbers (solutions to polynomial equations). This is a geometric way of studying solutions to equations. The evaluation process uses a tool called “parameterization” and, in a DFG-funded project, we have developed several new ways to apply this tool in the *o-minimal* setting. This is furthering an important and flourishing cross-disciplinary interaction between number theory, geometry, and logic.



## Boundary Conditions for Geometric Flows



**Ben Lambert**  
Fellow

at the Zukunftskolleg from 09/2013 to 02/2017

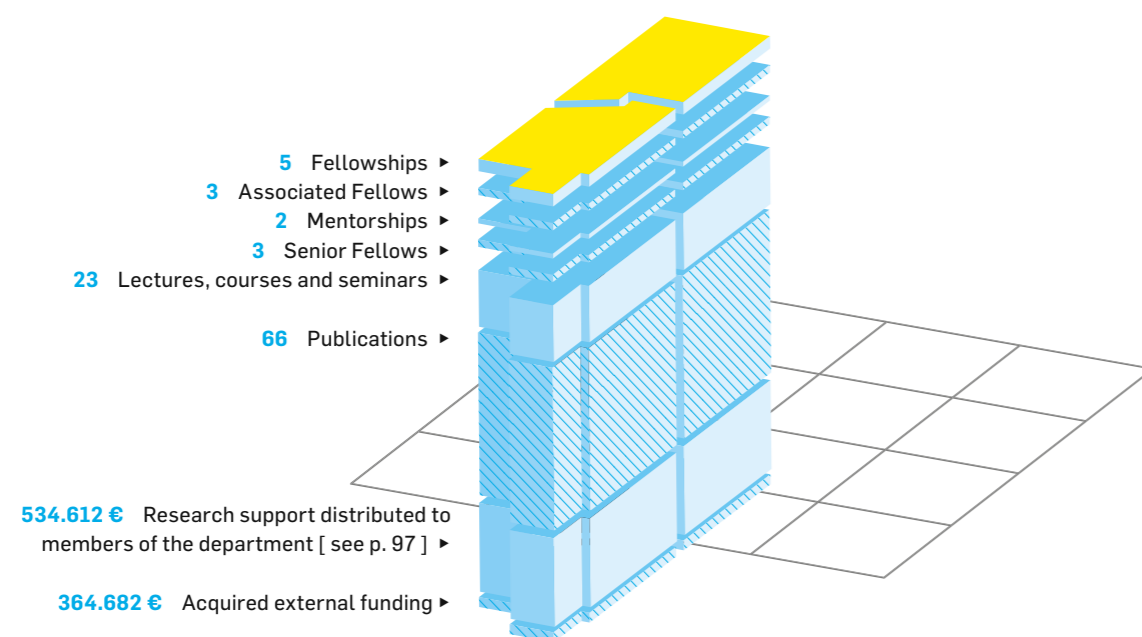
Einstein's space-time may be written from a geometric point of view, and one tool used in trying to understand such space-times is to consider the so-called maximal surfaces in this space. I demonstrated that mean curvature flow (a way of deforming surfaces) may be used to construct maximal surfaces with certain boundary conditions. There are two things that we do not want to happen with mean curvature flow in a simple flat space-time: One is the “*grim reaper solution*” to mean curvature flow, so called because it translates through the plane, killing off solutions to mean curvature flow. The other is the death's trumpet, which is at a (Minkowski) right angle to the flowing grim reaper solution at every point. However, as the curve of the grim reaper moves upwards, the curve after time  $t=?$  has points with a gradient of almost 1, i.e., it becomes almost light-like. This throws a spanner in the mathematical works, as one of the key estimates we require for a mean curvature flow to exist (in general) is a gradient estimate – this is roughly the statement that a flowing solution to mean curvature flow stays strictly far away from being light-like. The death's trumpet shows highly singular behaviour for a flow with boundary, and if we want the flow to converge to a maximal surface, we need to assume some conditions that disallow this example.

Some general conditions ensuring convergence to maximal surfaces have recently been published in the paper *Construction of maximal hypersurfaces with boundary conditions* in “*Manuscripta Mathematica*”, 2017, 153(3-4), p. 431-454.

*This text is an abridged version of the report of Ben Lambert for the annual report 2016.*

# Department of Computer and Information Science

from 11|2007 to 08|2017  
Building PZ

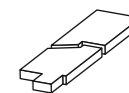


**Monssef Alsweis**  
Bridge Fellow

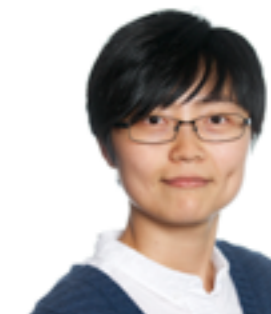
at the Zukunftskolleg from 01|2017 to 03|2017

One of my main research areas is the modeling and visualization of plants and ecosystems. Computer graphics images are reaching an ever increasing degree of realism due to the complexity of rendering methods and underlying computer graphics scene descriptions. Today the challenges consist mainly in the efficient construction of the necessary virtual objects. We are working on efficient methods to create and transmit such models and to render them in real time. A look at botanical plants shows that branches sometimes fuse together locally. This natural effect is called inosculation. Basically, friction destroys the cork. Wound cork is produced and grows together at the border of the pressure area. In my project, I aim to visualize this process and to enable the user to control the blending of the branches. A common means of doing this is to use implicit surfaces to combine objects in a clean and smooth way. Unfortunately, this is not a fast method for producing a mesh, since all polygonization algorithms first have to "find" the surface. Therefore, I suggest combining parametric surfaces which can be converted fast to a mesh with implicit surfaces. I use parametric surfaces for branches which do not need to be merged with other branches and implicit surfaces for those which will be merged with other branches. The user can define where the tree structure should merge and also interact with a knife tool which suppresses connections in the implicit parts.

*This text is an abridged version of the research proposal of Monssef Alsweis.*



## Single-Image Insect Pose Estimation by Graph-based Geometric Models and Random Forests



**Minmin Shen**  
Fellow

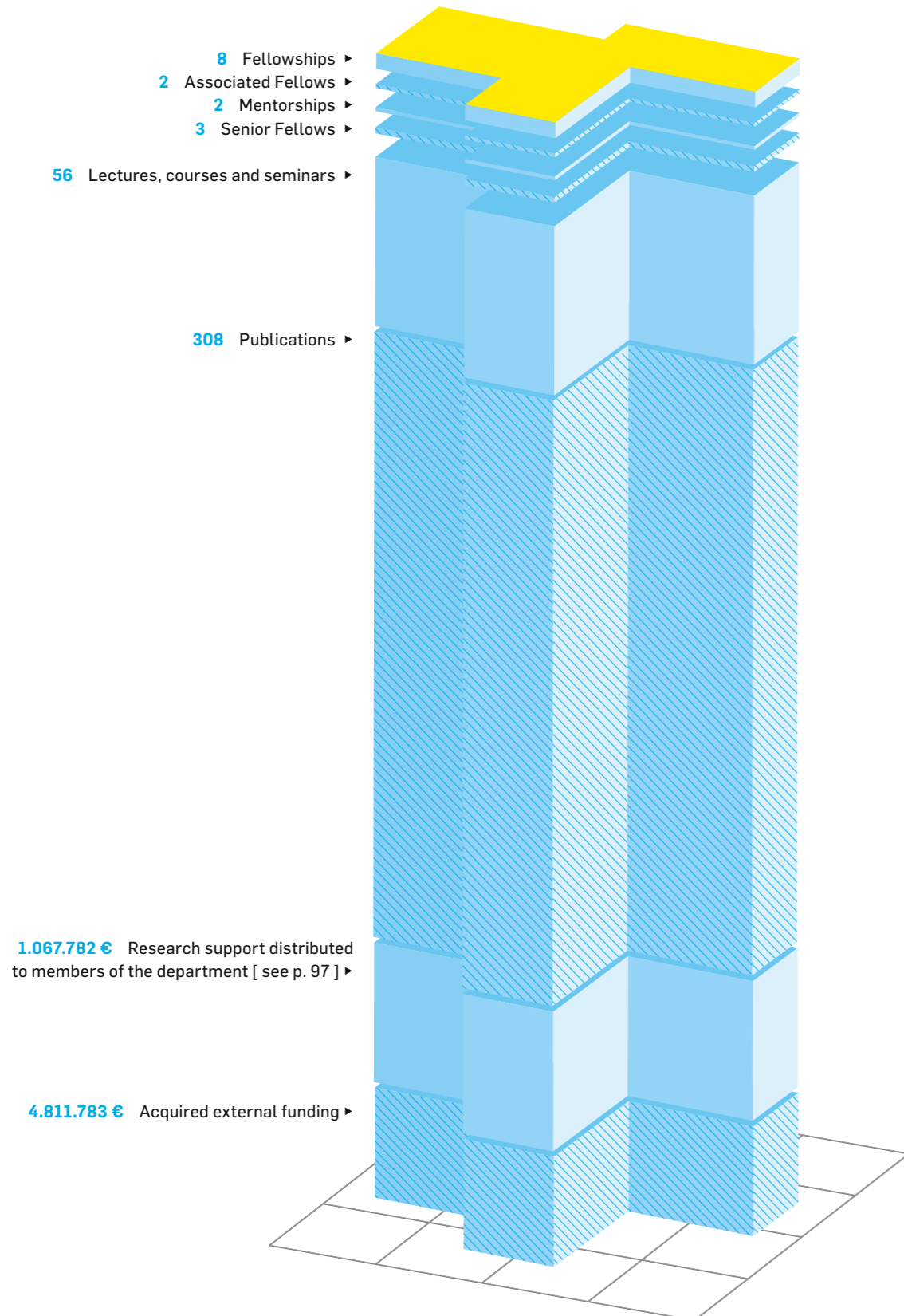
at the Zukunftskolleg from 09|2013 until 02|2017

Automated image-based tracking and pose estimation is receiving increasing interest from both the biology and the computer science community, as developments in this area enable remote quantification and an understanding of individual behavior that was previously impossible. We propose a new method for detailed insect pose estimation which aims to detect landmarks like the tips of an insect's antennae and mouthparts from a single image. We formulate this problem as inferring a mapping from the appearance of an insect to its corresponding pose. We present a unified framework that jointly learns a mapping from the local appearance and the global anatomical structure (silhouette) of an insect to its corresponding pose. Our main contribution is that we propose a data-driven approach for learning the geometric prior for modeling various insects' appearance. Combined with the discriminative power of the random forests (RF) model, our method achieves high precision landmark localization. We are evaluating this approach using three challenging datasets of insects which we will make publicly available. Experiments show that it achieves improvements over the traditional RF regression method and precision comparable to human annotators.

*This text is based on the abstract of the paper: Single-Image Insect Pose Estimation by Graph Based Geometric Models and Random Forests (with L. Duan, and O. Deussen), in: European Conference on Computer Vision, p. 217-230. Springer International Publishing: Amsterdam, 2016.*

# Department of Physics

from 11|2007 to 08|2017  
Building P



## Transport Property of Luminescent Semiconductor-Metal Hybrid Nanostructures



**Tuhin Basu**  
Fellow

at the Zukunftskolleg since 04|2015

Silicon (Si)-metal hybrid nanoscale objects with controlled dimension and desired morphology are exceptionally promising candidates for exploring fundamental physics of small systems. My primary aim in this project is to (individually) probe the electronic states of hybrid nanostructure, which consists of ultra-small luminescent Si nanoparticles (NPs) and plasmonic noble metal NP (e.g. gold or silver), by scanning tunneling microscope at extremely low temperature (~few hundreds of milli-Kelvin). We expect this hybrid nanostructure to exhibit an alteration in band structure that creates a complex and competitive decay dynamics of electrons with modified light-matter interaction. Thus, individual NP measurement allows us to find an exact correlation between the intrinsic property and the overall structural morphology of hybrid nanostructure, which is impossible in conventional bulk measurement.

In summary, this type of study allows us to engineer the electronic bandgap and the states of singular NP and hybrid nanostructure as described. Through proper engineering and integration with other nanomaterials (especially a noble metal), it will be possible to build future optoelectronic devices, energy harvesting materials, and sensing materials at nanoscale with higher flexibility and efficiency.

## Non-equilibrium Transport and Dynamic in Conventional and Topological Superconducting Contacts



**Gianluca Rastelli**

Fellow

at the Zukunftskolleg since 03|2013

My research group is interested in the physics of engineered quantum systems, such as quantum electronic systems, superconducting quantum circuits, and nanomechanical systems. Such systems are of interest because studying them can help us understand fundamental issues of the quantum-mechanical theory. We explore strategies for creating, detecting, and eventually controlling quantum states in solid state nanodevices.

The project *Non-equilibrium transport and dynamic in conventional and topological superconducting contacts* (funded by the DFG) concerns the theoretical study of quantum transport and non-equilibrium dynamics in superconducting junctions, taking into account quasiparticle effects, coupling to an electromagnetic environment, and microwave irradiation. Recent experiments have focused on investigating superconducting junctions in different kinds of nanostructures (such as atomic contacts or topological materials). Such systems are promising for realizing a new type of qubits (or quantum bits) that can be useful for future applications in quantum information and quantum processing. An important and common problem in these systems is the nonequilibrium population of the long-lived excitations (quasiparticles), which represent an intrinsic source of decoherence and dissipation. The project studies this problem in the state of the art of novel superconducting junctions including atomic point contacts, short nanowires, and topological junctions.

## Shining Light on Magnetism at the Atomic Scale



**Torsten Pietsch**

Fellow

at the Zukunftskolleg since 04|2013

Today scientists are working on the scale of just a few nanometers to produce new technologies, such as non-dissipative electronic circuits or magnetic data storage. The demand for new functional nanostructures and -materials is enormous. However, before they can be used in real-world applications, their intricate (quantum) properties must be understood from a fundamental point of view. My research focuses on novel electronic transport phenomena at the interface between different materials in nanostructures and dimensions down to the atomic scale. The electron current is a very sensitive probe for many interesting physical phenomena, such as changes in magnetization. Using electronic transport spectroscopy at very low temperatures and in strong magnetic fields, our group established that some transition metals that are non-magnetic in the bulk become magnetically ordered at the nanoscale. The emergence of a stable, magnetic order at the atomic scale opens exciting perspectives for ultra-miniaturized magnetic data storage. In hybrid atomic contacts of these transition metals with ferromagnetic elements, the dynamic interplay between spin and charge may even be used to realize a new type of spin-based microwave laser. Currently we are exploring the emission of microwave radiation driven by a spin-polarized current. This principle allows the construction of fundamentally new microwave or THz sources with high intensity and large tunability.

## Cooling Semiconductors with Lasers: When You Look Fast Enough



**Denis Seletskiy**

Fellow

at the Zukunftskolleg from 09|2013 to 04|2017

Our common experience suggests that when you illuminate a chunk of stuff with a powerful laser, it will eventually heat up and possibly melt or blow up. But quantum physics allows for the possibility to cool matter with lasers! Consider a laser with an energy level just below that necessary to cause an electron to pass from its lowest energy state to a higher one. The laser photons can "tickle" the electron to borrow the missing energy from its surroundings to complete its passage to the excited state. This energy extracted by the electron would result in a cooling of the material.

Laser cooling of solids has been demonstrated in a variety of dielectric crystals, which reach temperatures as low as -180 °C. While it has been known for some time that semiconducting crystals hold promise of reaching temperatures as low as -260 °C, researchers around the world have not been able to produce reliable cooling in these materials. To understand why, my research team applies tools of femtosecond spectroscopy to observe the laser cooling cycle in a GaAs semiconductor on its intrinsic timescales. So far, we can verify that cooling indeed happens on timescales of just a few picoseconds after the excitation and are looking further into the late times of the cooling cycle to understand the source of the unwanted heat. If we manage to isolate the origin of the parasitic processes, it will only be a question of time before we will be capable of demonstrating cryogenic cooling by tiny chips of semiconductor deposited onto desired microscopic heat sources.

## Nanoscale Control of Currents with Single-cycle Pulses

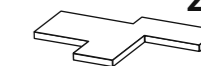


**Daniele Brida**

Fellow

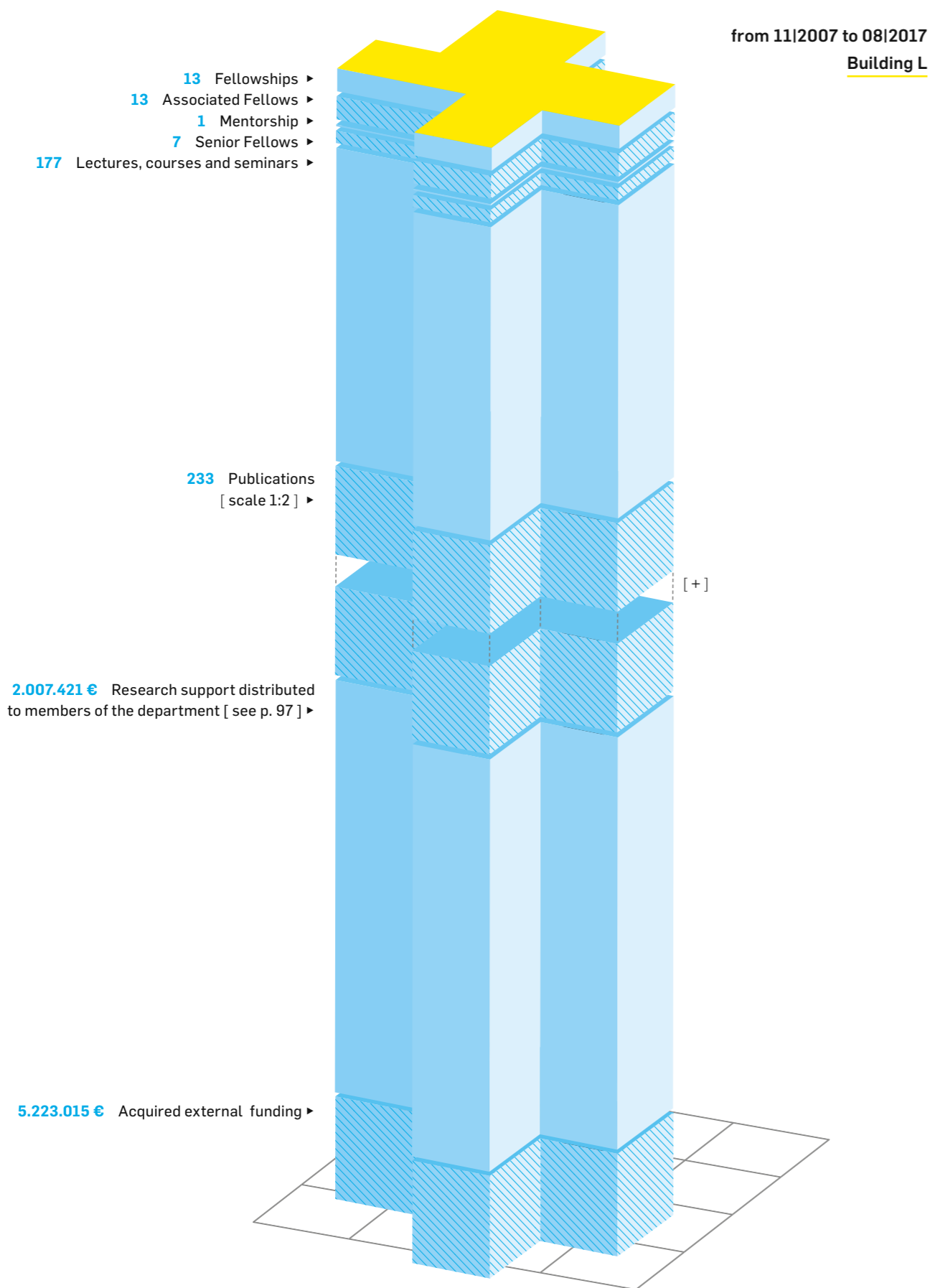
at the Zukunftskolleg since 04|2013

The ultimate goal of this project is to conduct experiments at the boundary of ultrafast optics and quantum transport, where the electric field of single-cycle light pulses controls charge current in nanojunctions. The basic concept relies on the fact that few-femtosecond optical wave packets exhibit markedly different electric field maxima and minima. These pulses need to be phase-locked to a specific and controllable electric field profile. If such radiation is focused onto a metallic gap with a nonlinear current-voltage characteristic, a net charge flow is triggered on an ultrashort timescale. Indeed, this is a completely new perspective in ultrafast sciences, since traditional spectroscopies can be performed by relying only on all-optical triggering methods. To this end, we have developed the advanced laser techniques for the generation of light pulses that approach the single-cycle temporal duration. We have also fabricated plasmonic antennas, with electric contacts and geometries that assure sub-cycle dephasing times, as nanocircuits for ultrafast quantum tunneling. With these two ingredients, we were able to obtain the first measurement of current transport triggered by light at the nanogap of plasmonic nanoantennas. Further experiments are currently being performed for the full characterization of the process.





# Department of Chemistry



## Modulating Bacterial Behavior



**Thomas Böttcher**  
Fellow

at the Zukunftskolleg since 03|2014

With the emergence of antibiotic-resistant bacterial pathogens, infectious diseases are again increasingly threatening human health. In order to infect the human host, bacteria typically coordinate their behavior via chemical signals and thereby induce the simultaneous production of life-threatening toxins, proteins that protect the bacteria from the human immune response, or certain social population behaviors which aid in the infection process, like biofilm formation or swarming motility. In my research group, we aim to reach a better understanding of the molecular processes and chemical signals involved in this coordination of behavior. This knowledge will ultimately help us to discover and design new compounds which can modulate bacterial behavior and thereby prevent or cure infectious diseases, even those caused by antibiotic-resistant pathogens. In addition, we study the diversity of chemical interaction between different species of bacteria in the human body. In this context, we are especially interested in deciphering the structures and activities of the chemical weapons which some bacteria produce against their competitors. In the future, these weapons could serve as a basis for developing novel antibiotic compounds for the treatment of infectious diseases.

## From Semiconductor Magic-size Clusters to Heterostructures



**Klaus Boldt**  
Fellow

at the Zukunftskolleg since 04|2015

When a chemist makes nanocrystals, this usually refers to a reaction between two chemicals that form an insoluble, crystalline compound. Addition of surface-binding molecules allows to control the formation of many small crystallites at the same time, which then grow to form particles a few nanometres in diameter with a narrow distribution of size and shape. However, in the early stages of particle formation so-called magic-sized clusters exhibiting a precise, molecular structure and high symmetry appear. These ultra-small clusters do not grow in a continuous fashion but rather seem to "jump" from one stable size to the next. We have shown that under special conditions these clusters can be triggered by small molecules or physical factors to release the material they are made of in a sudden burst. We employ this phenomenon to develop reactions that allow the growth of nanoparticles on the surface of other seed particles under very mild conditions, effectively creating a new interface between two materials. These have great implications on the physical and chemical properties of these heterostructures and allow the design of functional materials such as solar cells, light-emitting devices and lasers, or photo-catalysts. These are key technologies for reducing the human energy footprint.

## A Study of Novel Antibiotic Secondary Metabolites from the Yeast-Like Symbionts of Anobiid Beetles



**Soohyun Um**  
Bridge Fellow

at the Zukunftskolleg from 04|2017 to 06|2017

Insect bacterial symbioses are increasingly recognized as a ubiquitous and important aspect of insect ecology and evolution. Some systems that have been exploited for novel natural products are the symbionts of ants, termites, and bees. My overall project will deepen our understanding of symbioses between the anobiid beetles and their symbionts, *S. buchneri* and *S. Kochii*, by investigating the molecular mechanisms that influence the co-evolution of the beetles and their symbionts. Discovery of new antibiotic agents from an insect-microorganism symbiosis with ecological perspectives could provide clues to how an insect's adaptation of antibiotic-producing microbes drives the evolution of symbiotic association. Comparing phylogenetically related but different insect systems will be an especially good starting point to reach this goal. Therefore, I am searching for protective metabolites of the symbiont that are beneficial to the beetle host with novel strategies for activity-guided metabolite discovery. Beyond the clinical applications of natural products, the results of this study could provide an interesting and fundamental approach to how secondary metabolites drive the evolution of symbiotic association.

## Analysis of the Dynamics of Protein Conformations: Structural and Mechanistic Aspects of Protein Folding



**Oleksandra Kukharenko**  
Fellow

at the Zukunftskolleg since 03|2015

My project concerns the folding problem for intrinsically disordered proteins and peptides (IDPs), which are involved in neurodegenerative diseases, such as Parkinson's disease and Alzheimer's syndrome. Pathophysiological behavior of IDPs is presumably connected with conformational transitions: proteins change from their disordered state into a structurally more defined state. That is why we are concerned with characterizing the conformational space accessible to them. We perform analysis by combining molecular dynamics (MD) simulations and mathematical methods. The challenge in their dynamics for transitions between multiple different metastable configurations is slow and not accessible with classical MD. We have proposed a simulation strategy for IDPs which efficiently explores conformational space using the multidimensional scaling algorithm. The algorithm is best suited if one knows little of the conformations the system might eventually adopt and if it is very complex, i.e., while the sampling is expanding the picture of the conformational landscape of the system changes drastically. It allows one to project newly sampled areas to the known landscape to assess the expansion. At the same time, the two coordinates that the ensemble is projected into change adaptively, resulting in an optimal redistribution for evaluating sparsity and finding new points from which to expand.

## Integrated Work-Up and Catalytic Upgrading of Microalgae-Derived Oils



**Dennis Pinggen**  
Fellow

at the Zukunftskolleg since 02|2016

Microalgae offer a unique range of fatty acids of long carbon chains. These often multiple unsaturated molecules offer an interesting base as chemical substrates. The extraction of the fatty acids from the algae, however, is a major drawback. Large amounts of solvents are required, the work-up is a laborious process, and it gives low yields. One approach is to integrate the extraction with further catalytic conversions by a common and effective solvent as represented by dense carbon dioxide. This suggests itself as a medium due to its proven ability to extract lipids, and at the same time it is also miscible with further polar reagents of functionalization. The isomerizing alkoxy-carbonylation has been proven to produce linear difunctional compounds from algae lipids and will serve as a model reaction in our project. Additionally, multiple unsaturated fatty acids can be used in further reactions, such as olefin metathesis. Another approach involves the selective conversion of the multiple unsaturated fatty acids to difunctional molecules. A selective reduction of their multiple unsaturated nature to a single double bond prior to further functionalization will

allow for further processing. We will develop selective catalytic (transfer) hydrogenation routes with heterogeneous or homogeneous hydrogenation catalysis for this purpose. Ideally, we would like to integrate them into a one-pot reaction together with further functionalization.

## Pre-Nucleation Clusters in Crystallization – Relevance to Bio- and Biomimetic Mineralization



**Denis Gebauer**

Fellow

at the Zukunftskolleg since 03|2014

Precipitation from solution is a daily-life phenomenon. A prime example is the formation of limescale (incrustations) from hard waters, affecting washing machines, dishwashers, or water taps. By causing malfunctions in heating and cooling circuits, scaling also generates great costs in industry. On the other hand, nature demonstrates that this process can be controlled with an ultimate degree of fidelity, yielding biomaterials like mussel or crab shells that exhibit outstanding properties. These are due to hierarchical, sophisticated structures that are still difficult to realize in artificial materials, because the basic processes remain poorly understood in a mechanistic sense. An effective inhibition of scaling processes, e.g., also relies on such insights for the target-oriented design of detergent additives. Since bio(macro)molecules are responsible for the high level

of biological control over precipitation, there is, moreover, the great promise of the development of synthetic bio-inspired materials for advanced applications—such as earthquake-safe concrete. Altogether, this research project is designed to achieve an improved, fundamental mechanistic understanding of precipitation processes, so as to advance the various connected scientific fields.

## Mesocrystals: A Matter of Orientation



**Elena Sturm (née Rosseeva)**

Fellow

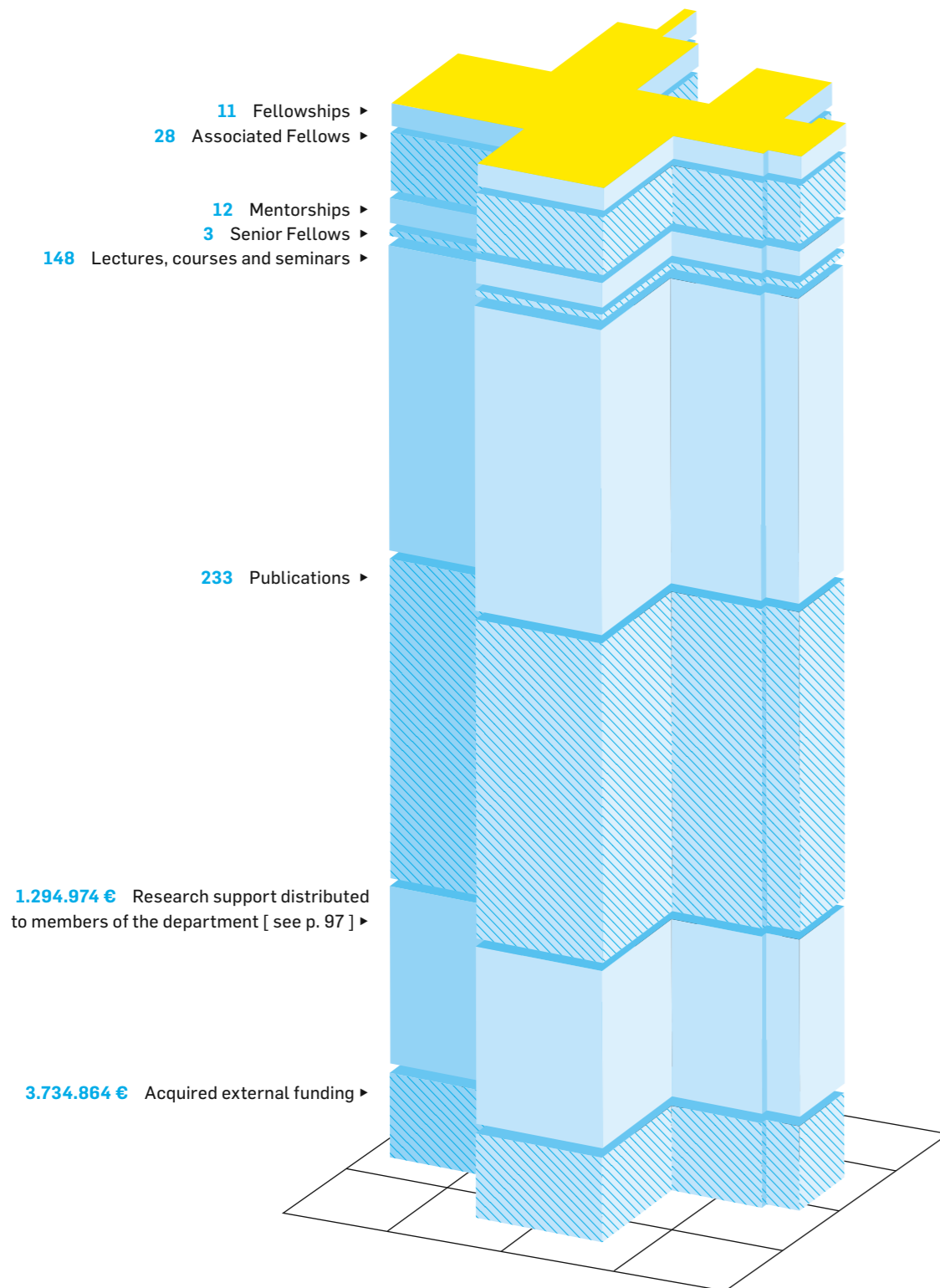
at the Zukunftskolleg since 04|2013

Mesocrystals represent one of the most fascinating examples of nanostructured materials composed by nanometer-sized building blocks with specific crystallographic orientation. In the past years, our group has investigated a large variety of inorganic-organic nanocomposite materials including biological and biomimetic materials as well as nanoparticle self-assemblies. Materials of this kind are of special interest for our group not only because of their fascinating structural and morphogenetic features but also for their interesting and promising physical properties. This research led to many successful and longstanding collaborations on this topic with several research groups from the University of Konstanz, TU Dresden, MPI CPfS, IFW Dresden, ETH Zürich, and New York University. Our research projects are also supported by the Zukunftskolleg and the DFG.

Within the past year we have obtained funding for the Zukunftskolleg interdisciplinary collaborative research project (together with Dr. T. Pietsch) and project (B1) within the recently established SFB 1214 *Anisotropic Particles as Building Blocks: Tailoring Shape, Interactions and Structures* (together with Prof. Dr. H. Cölfen, Prof. Dr. L. Schmidt-Mende).

# Department of Biology

from 11|2007 to 08|2017  
Building M



## A Small Number of Low-Abundance Bacteria Dominate Plant Species-Specific Responses during Rhizosphere Colonisation



**Michael Pester**  
Fellow

at the Zukunftskolleg since 03|2014

Plants are known to influence soil bacteria through rhizodeposits and changes in abiotic conditions. We aimed to quantify which rhizosphere bacteria are actually influenced in a plant species-specific manner and to determine the role of the disproportionately large diversity of rare biosphere bacteria (<0.1 relative abundance) in this process. For this purpose, we grew 19 herbaceous plant species from five different plant orders in a common soil substrate. Only a small number of bacterial species responded either positively (ca. 1%) or negatively (ca. 1%) to a specific plant species. On average, 91% of plant-specific positive responders comprised bacteria belonging to the rare biosphere, highlighting that low-abundance populations are metabolically active in the rhizosphere. However, we did not observe any effect of plant phylogeny on the established rhizosphere bacterial communities, neither when considering differences in the overall established rhizosphere communities nor when considering plant species-specific responders only. Our study provides a quantitative assessment of the effect of plants on their rhizosphere bacteria across multiple plant orders. Plant species-specific effects on soil bacterial communities involved only 18-111 bacterial species out of several thousands; this minority may potentially impact plant growth in plant-bacteria interactions.

The research results were published in the paper *A Small Number of Low-Abundance Bacteria Dominate Plant Species-Specific Responses during Rhizosphere Colonization* (with W. Dawson, J. Hor, M. Egert, and M. van Kleunen), in: *Frontiers in Microbiology*, 2017, 8, p. 975.



## Does Side Matter? Evolution of Genital Asymmetry in Livebearing Fishes



**Julián Torres-Dowdall**

Fellow

at the Zukunftscolleg since 08|2013

I am interested in the selective advantages that favored the evolution of biodiversity and promote its maintenance and focus in particular on the maintenance of biodiversity. I study small livebearer fish from South America. Females of these fish carry their developing embryos in their abdominal cavity, providing nutrition to them through a structure analogous to the mammalian placenta. This requires that the eggs be internally fertilized; and to do so, males use a modified fin called gonopodium as an intromittent organ. In the fish I study, the male's gonopodium is asymmetric, bending either to the left or to the right. The consequence of this is that males can only mate with females from one side. Given that copulation in these fish is always forced (there is no courtship and females always try to escape males), limiting one's possibility to only one side of the female seems paradoxical. My results suggest that asymmetry increases mating success. More interestingly, I am finding that variation in the proportion of right and left males across species is correlated to the number of sires per brood (females can carry up to 100 embryos at a time!). Thus, there is an evolutionary race between the sexes for control over who sires the next generation of fish, and the asymmetry of the genitalia appears to play an important role in it.

## Photoprotection in Diatoms



**Bernard Lepetit**

Fellow

at the Zukunftscolleg since 09|2013

Diatoms are unicellular algae inhabiting all aquatic habitats. With a contribution to 1/5 of global primary productivity, they belong to the most important primary producers on earth. One reason for the diatoms' success is their capacity to grow in turbulent waters (e.g. coasts, intertidal mudflats, upwelling regions), where they can exploit the huge amount of available nutrients. However, here light intensity changes over several orders of magnitude within minutes. Hence, the photosynthetic apparatus needs to harvest as much light as possible under low light conditions, but also to dissipate too much harvested light under high light conditions. Otherwise, the diatoms would be literally burned. A major mechanism employed by diatoms to get rid of excess light energy is to dissipate it as heat radiation via NPQ (non-photochemical fluorescence quenching). By knocking out a special antenna protein, Lhcx1, in the diatom *Phaeodactylum tricornutum*, we show that NPQ is completely absent, demonstrating the essential role of Lhcx1 for NPQ. Furthermore, we reveal that the related antenna proteins Lhcx3 and Lhcx2 provide additional NPQ capacity under prolonged high light stress, and the latter even under iron starvation. Finally, Lhcx2 and Lhcx3 can rescue NPQ capacity in the Lhcx1 knockout strain. Our findings provide new understandings about the molecular mechanism of NPQ in diatoms.

## Uncovering the Molecular Mechanisms Underlying the Repeated Evolution of Adaptive Color Patterns in Cichlid Fishes



**Claudius Kratochwil**

Fellow

at the Zukunftscolleg since 09|2013

Biologists have always been fascinated by the variation in color patterns found in nature. Coloration is an important feature in the biology of an organism and plays a key role in several fundamental ecological and evolutionary processes, such as adaptation, sexual selection, and speciation. Conspicuous phenotypes challenge molecular and developmental biologists to try to understand their origin during the development of an organism. Cichlids ("Buntbarsche") are a particularly colorful family of fishes. Body coloration plays many roles in cichlid evolution, including sexual selection and adaptation. Many of the color patterns we find in cichlids have evolved repeatedly in different species. Yet little is known about the genetic changes that are necessary to generate these traits. I focus on understanding the repeated adaptive evolution of a coloration pattern within cichlids – a particularly species-rich and phenotypically diverse family of fishes. Here, horizontal stripe patterns occur and evolved repeatedly in different lakes in the African Rift Valley. They are driven by ecological adaptations to similar habitat environments. Using targeted genome sequencing of a genomic interval identified with forward-genetics within populations and an in-depth analysis of its cellular and developmental bases, I aim to analyse the genetic and molecular basis of an ecologically well-described adaptive phenotype that evolved repeatedly within short evolutionary times.

## Mapping the Brain



**Andreas Thum**

Fellow

at the Zukunftscolleg since 09|2011

As part of her doctoral thesis, Katharina Eichler, a doctoral student under my supervision, has for the first time ever described the mushroom body connectome within the brain of fly larvae (*Drosophila melanogaster*). This constitutes a significant development in understanding the brain: The brain's mushroom body is also its memory centre, in which sensory information is collected and memory is stored. It is therefore essential for understanding the brain. Not only were we able to completely reconstruct this crucial component of the brain, but we also documented the existence of new circuit connection patterns between individual cells. The examination of this circuit will be instrumental in guiding future research on how the brain learns new things and then stores them as memories.

The research represents a significant contribution towards the overall aim of the international collaboration project led by Dr. Albert Cardona from the Janelia Research Campus: to create a complete wiring diagram of the entire brain of *Drosophila* larvae. Researchers in more than 20 labs around the world are collaborating to reconstruct all of the 10,000 nerve cells.

The research results were published in the paper *The Complete Connectome of a Learning and Memory Centre in an Insect Brain* (with K. Eichler, F. Li, A. Litwin-Kumar, Y. Park, I. Andrade, C. M. Schneider-Mizell et al.), in: *Nature*, 2017, 548(7666), p. 175-182.

## Impacts of Climate and Land-Use Change on the Spread of Non-Native Plant Species across Germany



**Sasha Kosanic**  
Bridge Fellow

at the Zukunftskolleg since 06|2016

I am a physical geographer interested in how anthropogenic drivers (i.e., climate and land-use change) affect the changes in geographical distribution of vegetation. My current research is focused on the effects of climate and land-use change on a distribution of non-native plants in Germany, and how this affects protected vs non-protected nature areas. Furthermore, I am also interested in how non-native plants impact the ecosystems and services that nature provides for us, such as soil, water, climate regulation, and recreation, thus also affecting human well-being. Recently I have been analyzing climate change and climate speed on a local scale (1km x 1km) across Germany. This study aims to provide a framework for better understanding the rate and direction of the climate change and velocity, thus allowing us to determine with more certainty whether biodiversity change should be attributed to the climate or to other anthropogenic stressors. Such detailed climate change analysis is urgently needed in order to enable appropriate mitigation and conservation strategies and save ecosystems and services provided by nature for generations to come.

## Mechanisms of Motor Control and Decision Making in Drosophila



**Tilman Triphan**  
Fellow

at the Zukunftskolleg since 02|2016

Adapting movement to a complex environment is a universal challenge. While walking on a plane requires changes in gait parameters depending on the behavioral context (e.g. running away vs. slow walking during feeding), other obstacles involve switching behavior. Fruit flies (*Drosophila melanogaster*) can cross chasms larger than step size in a stereotyped but also sophisticated behavior. The probability of climbing attempts declines with increasing gap width, which is estimated by parallax-motion vision stimuli: Closer objects appear to move faster than objects further away (like traffic signs next to the road vs. distant trees, mountain ranges, or the moon when driving). By inactivating different parts of the *Drosophila* nervous system, I identified neurons involved in distance estimation. Flies attempt to climb insurmountable chasms when these optic-lobe neurons are inactivated. When the same neurons are artificially activated, the opposite effect is visible, i.e., the flies show less climbing at easily manageable gaps. One explanation is that manipulating these neurons changes the flies' perception: inactivation makes the gap appear smaller and easier to cross. Activating the neurons makes the gap appear wider and more difficult to cross. To understand what is happening, I am looking into other cell types in the *Drosophila* visual system to understand the role of interaction partners.

## Why Do We Play?



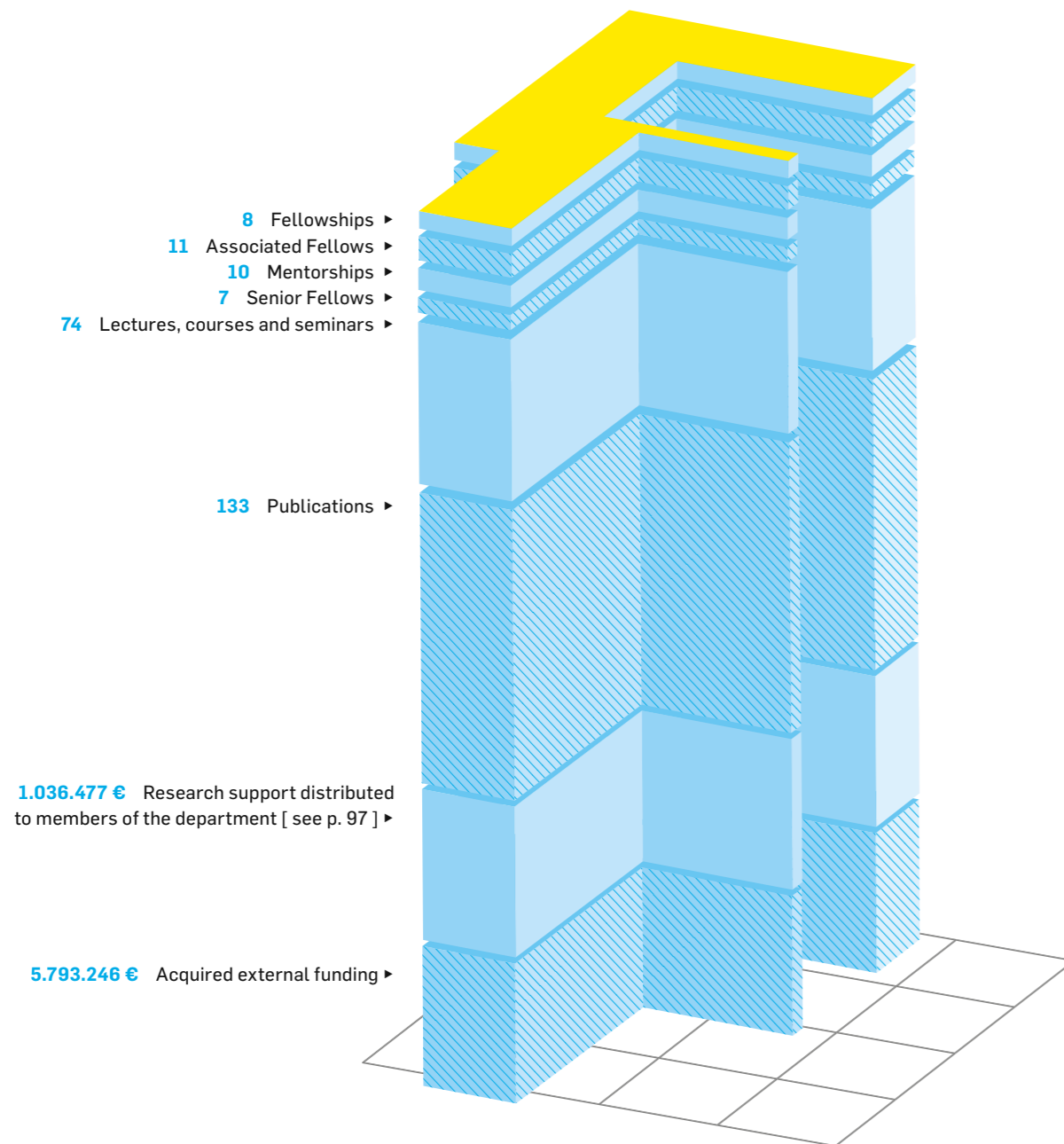
**Wolf Hütteroth**  
Fellow

at the Zukunftskolleg since 07|2014

Who apart from us is playing? What IS playing? And what is it good for? Different forms of play or play-like behavior are frequently found among vertebrates. But is play-like behavior universal, and if so, what is it good for? Surprisingly, a conclusive answer to this question is still missing. Insects need to tackle the same problems in their lives as any other animal, including us: survive and reproduce. So if play-like behavior has any evolutionary advantage (and it should, since it is connected to serious costs), did insects also exploit this trait? To examine that, I am analyzing flies over several days in an enriched environment, with free access to food and water, and voluntary access to a spinning platform – a carousel. I found that flies exposed to such an enriched environment repeatedly visit the spinning platform, and exhibit no signs of consistent aversive or appetitive place learning. They obviously learn where the moving platform is, but still choose to re-visit it even after phases of avoidance. I propose that an animal intentionally exposes its proprioceptors (body joint sensors) to external mechanical stimulation, i.e., centripetal force. This “*intentional exafference*” is then used to challenge and train self-recognition memory (i.e., “*self-awareness*”) of the organism, but in an internal state-dependent manner.

# Department of Psychology

from 11|2007 to 08|2017  
Building D



## Motor Cognition: Behavioral and Neural Principles as well as Clinical Implications



**Jennifer Randerath**  
Fellow

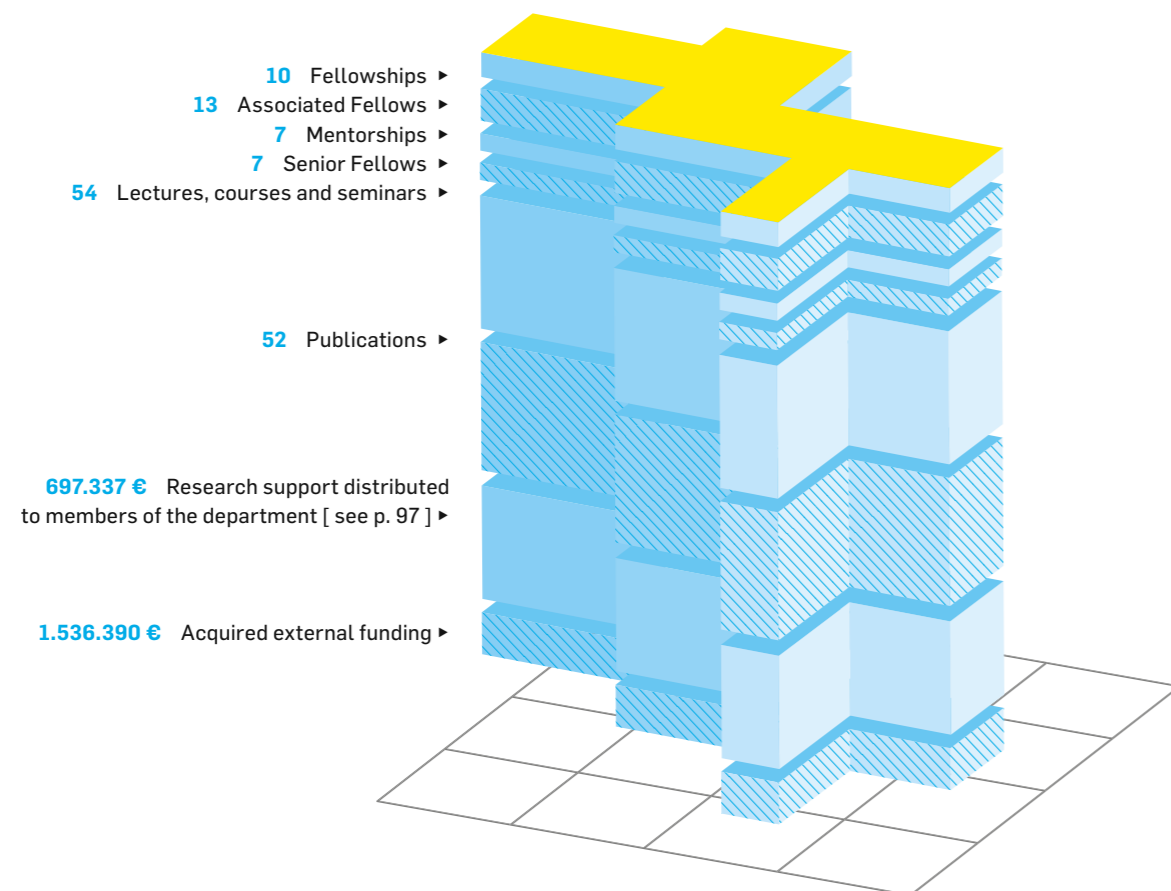
at the Zukunftskolleg since 07|2015

My group's work focuses on a complex cognitive ability that we often take for granted and make use of seemingly automatically: planning actions and interacting with objects in our environment. Our research focus is on the investigation of (a) how we use tools and objects (e.g. when preparing breakfast), (b) how we make use of rules to produce efficient movements (e.g., if the stop-light is red then hit the brake), and (c) how we detect and judge action opportunities (e.g., is this chair close enough to sit down on). The retrieval of prior knowledge, perception of object properties (e.g. shape, distance, size) and the awareness of body constraints are important factors for forming decisions such as whether my cup of coffee is within reach. However, these abilities can be affected by aging and brain injury. Changes to our body or cognitive aspects of action planning may lead to an increase in erroneous behavior and in the probability of dangerous situations and injuries. This impacts independence in activities of

daily living. My group develops and refines paradigms with the prospect of using the approaches either as diagnostic tools or for neurorehabilitation purposes to help people who have difficulties with planning actions. With our translational approach, we aim to support application transfer from the University to our society.

# Department of Philosophy

from 11|2007 to 08|2017  
Building G



## Mathematical and Transcendental Method in Ernst Cassirer's Philosophy of Science



**Francesca Biagioli**  
Fellow

at the Zukunftskolleg from 08|2014 to 06|2017

This research project investigates interactions between mathematics and philosophy that marked some of the key episodes in the history of mathematics in the second half of the nineteenth century. The proposed research topics include 1) the development of structural methodologies in nineteenth-century geometry; 2) axiomatics; and 3) the group-theoretical representation of space. These are examples of debates surrounding the use of structuralist methodologies. Recent scholarship in the history and philosophy of science has emphasized the need of further investigations of how such techniques developed in order to clarify the philosophical implications of structural mathematics. My project contributes to these studies by focusing on Ernst Cassirer's attempt to reconcile the Marburg neo-Kantian reading of Kant with modern mathematics. Following this neo-Kantian tradition, Cassirer deemed the conditions of knowledge implicit in the sciences to be conceptual presuppositions which reveal themselves historically. Not only do the new methods produce mathematical results but they reveal something important about the nature and scope of mathematical reasoning, that is, the capacity of univocally determining objects in their mutual relations. The same characteristics of mathematical reasoning shed light on the applicability of mathematics to various mathematical and empirical domains.

## Forcing in Contemporary Philosophy of Set Theory



**Carolin Antos-Kuby**  
Bridge Fellow

at the Zukunftskolleg since 07|2016

I am investigating the influence of the so-called forcing technique on philosophical questions connected to finding a unifying foundation for mathematics and set theory. In the last sixty years, set theory has changed dramatically due to the use of the forcing technique. Forcing is a mathematical tool that allows an infinite variety of models of mathematics to be built, i.e., models that attempt to describe the whole of mathematics. These models can vary significantly when answering mathematical questions like "How big is the set of real numbers?" and this poses problems for the philosophical questions connected to set theory. Current programs in the philosophy of set theory have begun to address this new situation by focusing on the results the forcing technique provides us with. In my project, I aim to widen the scope by investigating not the results of forcing but the forcing technique itself. From the different ways in which forcing can be defined mathematically to the types of forcing considered by the programs, there are various levels on which technical choices influence philosophical considerations. Ultimately, my goal is to show that forcing as a mathematical tool is not philosophically neutral but impacts the philosophical outcome of these programs.



## Fiction, Self-Knowledge and Knowledge of the Self



**Julia Langkau**

Fellow

at the Zukunftscolleg from 09|2013 to 10|2016

During my last months at the Zukunftscolleg, I prepared a paper together with Tilmann Köppe *Fiction, Self-Knowledge and Knowledge of the Self*. The claim that literary fiction is a valuable source of knowledge can be confronted with the following skeptical objection: on a standard account of the conditions for both the possession and transmission of knowledge, fiction cannot be considered a source of knowledge, for we are not justified in believing any claims from fiction. Our paper argues that the skeptic is wrong. We introduce the notion of self-knowledge, the knowledge a person has of her own conscious attitudes, and distinguish it from knowledge of the self. Both kinds of knowledge concern a person's beliefs about herself, but they differ in their precise scope and justificatory conditions. We argue that the self-knowledge one easily gains by reading fiction is an important route to knowledge of the self, which in turn is hard to obtain, and that a case can be made for literary fiction being an especially valuable source of knowledge of the self.

*Fiction, Self-Knowledge and Knowledge of the Self* (with T. Köppe), in: DIEGESIS. Interdisciplinary E-Journal for Narrative Research, 2017, 6(1), p. 46-57.

## Imagination as a Source of Knowledge



**Andrea Lailach-Hennrich**

Fellow

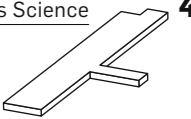
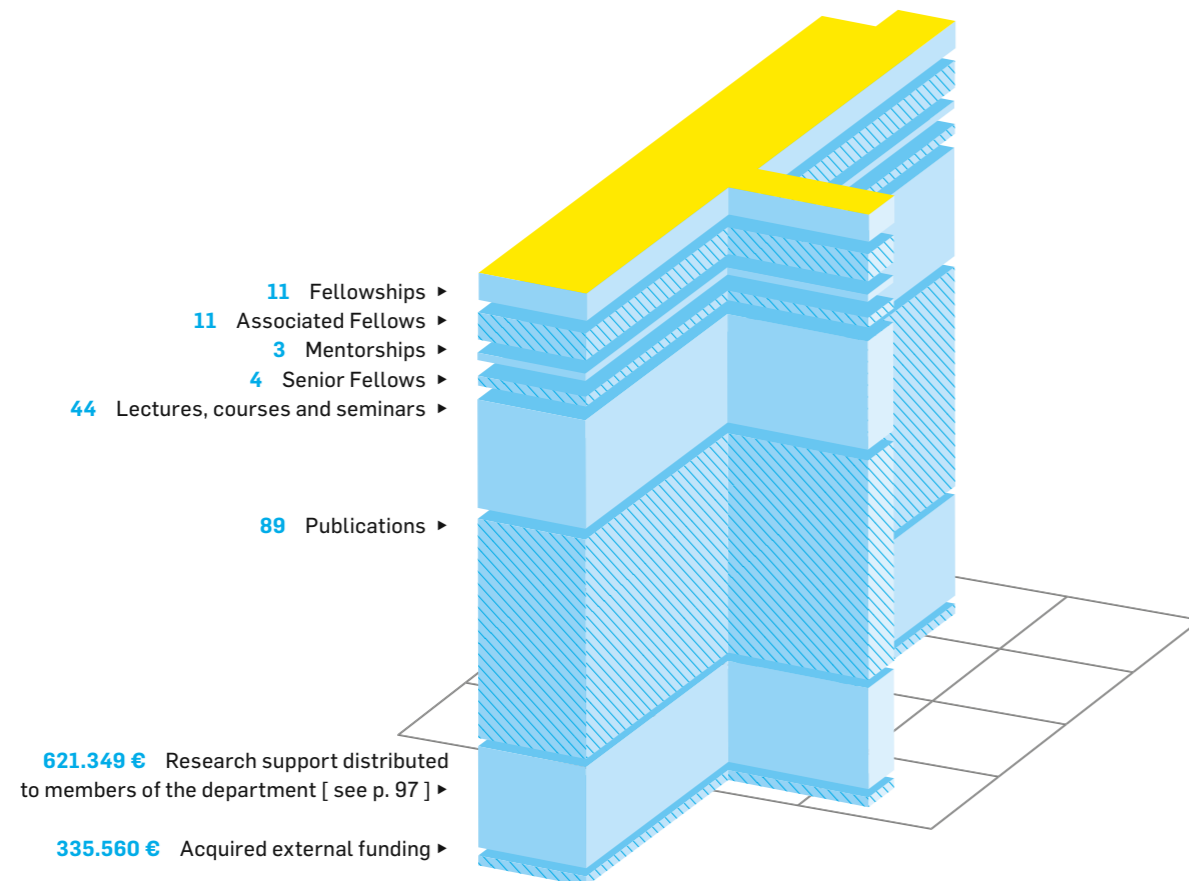
at the Zukunftscolleg since 04|2013

Imagination is traditionally believed to be a representing capacity that differs from other mental states in that it is not determined by the actual world: Imagining an apple in front of you does not require for there to be an apple at all, while perceiving or believing there is an apple in fact requires it to exist. The epistemic value of perception and belief is determined by the fact that they can give us knowledge about facts of the world. The epistemic value of imagination, on the other hand, seems to be limited to cases in which we take a content to be true in a world of make-believe or fiction. Hence, it is questionable whether we can gain knowledge through imagination. I argue that imagination indeed plays a crucial role in generating knowledge. My starting point is Kant, for whom imagination has a specific functional role. It connects sensibility (or, roughly, sense data) and understanding (or concepts). Given that cognition implies both sense data and concepts, imagination in the Kantian sense must be seen as a general condition for cognition. Introducing Kant's

account of imagination to the current debate allows me to argue that imagination can ground knowledge in different ways. One of them is that imagination enables us to perceive objects even if they are partly occluded. Since partial occlusion is a common feature of perception (the back of a three dimensional object is almost always occluded by the object itself), imagination is involved in most of our perceptions. I have argued for this claim in my paper *Perceiving the Unseen. A Kantian Approach to Amodal Perception*, ms.

# Department of History and Sociology including Empirical Educational Research and Sports Science

from 11|2007 to 08|2017  
Building E



## The Study of Early Colonialism in the Pacific: Archaeology in Small Islands, History of Global Processes



**María Cruz Berrocal**  
Fellow

at the Zukunftskolleg since 04|2013

My research in the past years has placed a lot of attention on an archaeological site in Heping Dao, Keelung, northern Taiwan, where I started working back in 2011 to study, from texts and archaeology, the Spanish 17th-century colonial times. The site has revealed a rich archaeological record spanning a sequence that encompasses most of the history of Taiwan, including its most salient landmarks. The purpose of studying this long-term sequence of habitation in Heping Dao throughout the Neolithic and the Iron Age to current times was first of all to allow us to grasp the consequences for indigenous populations of the colonial implantation. But this longue durée perspective has raised a series of interesting issues, including an understanding of cultural transformation along the Neolithic and the Iron Age, the relevance of Chinese presence in Taiwan in the pre-European period, and the archaeological comparison between the European and the Japanese colonial projects.

The project began as a historical archaeology research project in the narrow sense looking at the European expansion after 1492. It has since become a historical archaeology project in the broad sense: we are writing the archaeological history of a place from our days back to the deep past, a historical perspective that allows us to question the record, and history, in richer ways.

## A Tamed Society? Interspecies Interactions at the Royal Court of France, 1594-1715



**Nadir Weber**  
Fellow

at the Zukunftskolleg since 02|2016

My project aims to reconstruct patterns and representations of interactions between humans and animals at early modern princely courts. Using a communication-centred approach, I am analysing the everyday encounters of kings and nobles with companion species such as horses and dogs, but also exotic animals and game animals, as an integral part of court life. In December 2016, I co-organised an international conference entitled *Animals at Court* in Munich, which brought together specialists from different disciplines to discuss on the subject; a book resulting from the papers of the conference will be published soon. In July 2017, I co-organised a workshop on new methodological developments in the history of human-animal relations, the *Forum Tiere und Geschichte*, which was held at the University of Konstanz and which was kindly supported by the Zukunftskolleg. In my personal research, I have begun to concentrate more specifically on the lives and social roles of falcons and hawks at early modern courts – birds that were caught in the wild, tamed, and trained to serve as the rulers' hunting assistants.

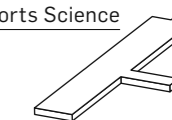
## The Influence of Emotion on Trust



**Keshun Zhang**  
Bridge Fellow

at the Zukunftskolleg since 03|2017

Trust is an essential component of social life that not only permeates interpersonal interactions but also acts as a cornerstone of economic transactions. Accumulated empirical evidence suggests that emotions elicited in one situation can have a strong impact on trust behaviors in another situation. However, the mechanisms by which emotions influence trust across situations are still unclear. In the present project, I develop a theoretical approach based on the appraisal tendency framework, which is a general theoretical model predicting emotion-specific effects on economic judgments and choices. Emotion affects basic cognitive (e.g., perceptions of control) and certainty and social processes (e.g., perceived social distance to other people), which, in turn, can influence the trust decisions people make. Applying the appraisal-tendency framework to trust decision making, I suggest that emotions activate emotion-specific tendencies affecting people's willingness to trust others. Recent research indicates that gender and social distance are two important factors that could influence the relationship between emotion and trust. I will critically test the role of gender and social distance as factors shaping the effects of emotions on trust. I will test these assumptions using the trust game.



## The Restitution of Looted Art in the Twentieth Century: Transnational and Global Perspectives



**Bianca Gaudenzi**  
Fellow

at the Zukunftskolleg since 03|2015

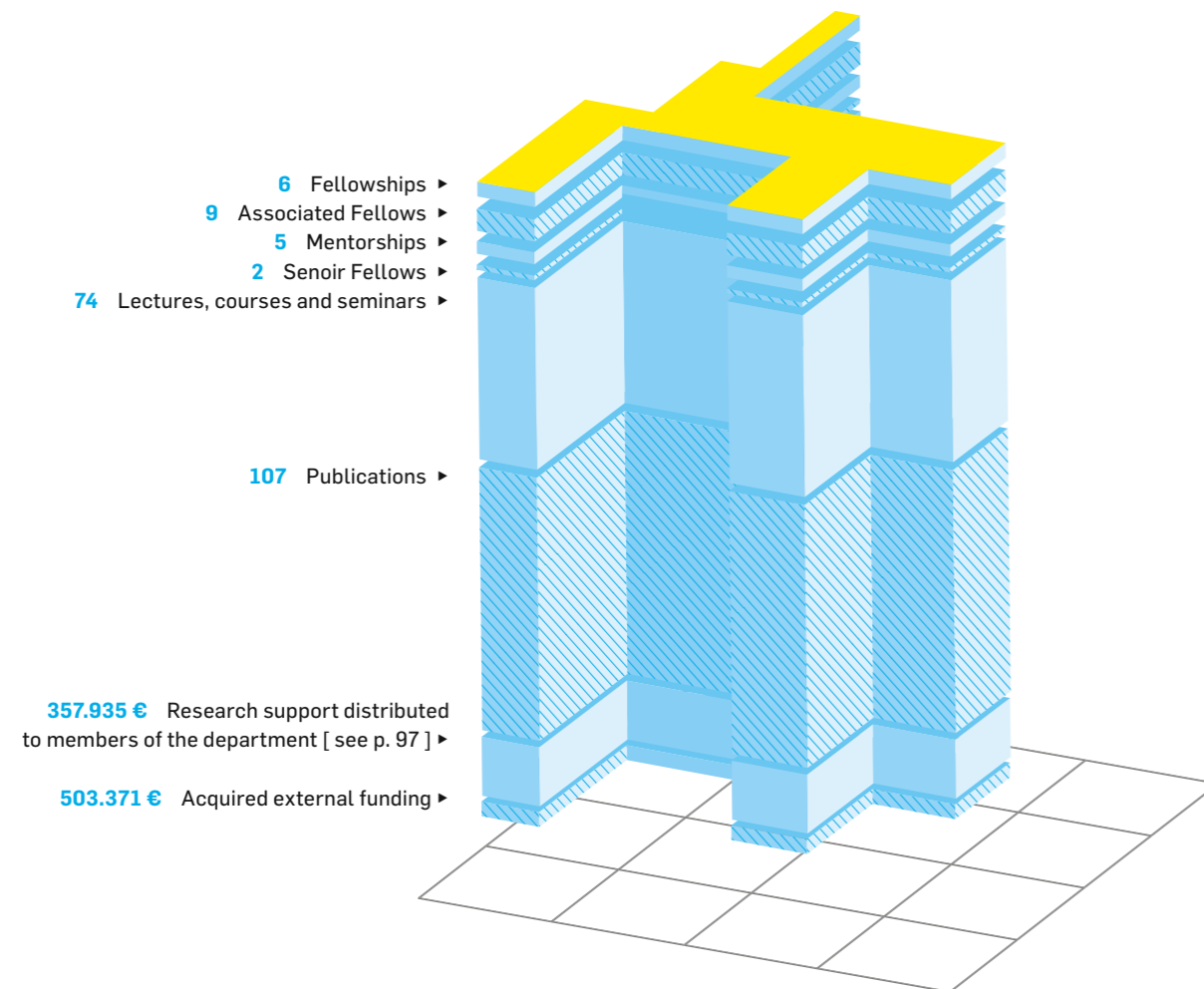
The issue of looting and restitution of artworks is increasingly present in media reports – from the disclosure of loot hauled away during the Second World War, the famous Gurlitt case, to worldwide news of the devastation of Syria's heritage, including the plundering of Palmyra's treasures. Together with Astrid Swenson (Brunel University London) and Mary-Ann Middelkoop (University of Cambridge), I edited a special issue on the topic: *The Restitution of Looted Art in the Twentieth Century: Transnational and Global Perspectives*, *Journal of Contemporary History*, 2017, 52(3). The volume is the first special issue to tackle the issue of the history of looted cultural property in transnational perspective from the end of the First World War to the present day. It brings together scholars with expertise in different geographical areas in Western, Central, and Southern Europe, the Middle East, North Africa, North America, and East Asia. The volume shows that rather than spreading in concentric circles from Europe, ideas and practices developed

in parallel – among public and private actors, state and social groups, (ex)colonised and (ex)colonisers. It argues that cultural policies consequently not only were shaped by global entanglements, but constituted a central motor of change in the construction of the new world order.

# Department of Literature including Art and Media Studies

from 11|2007 to 08|2017

Building H



**Julia Boll**  
Fellow

at the Zukunftskolleg since 03|2013

The project focusses on the theatrical representation of a taboo figure called the bare life (Agamben). This figure often appears as a victim of conflict or as someone who has been legally ostracised from or has never been part of the polis (the community of citizens with civil rights). Other examples are asylum seekers or illegal immigrants. Agamben argues that Western society is founded on a ritual by which the boundaries of the polis are marked by those included and excluded, and that the taboo status of the bare life shields it from the public. I will argue that this taboo emerges on the theatrical stage.

The project examines how the political discussion of the bare life echoes scapegoating in ancient ritual and tragedy. It explores the roots of the bare life in the depiction of the scapegoat on mediaeval stages and of the sacred/taboo figure in ancient drama, tracing its representation from its origins in classical performance up to the present day.

By analysing plays from diverse backgrounds, I will trace patterns of the depiction of the bare life across the Western sphere to come to conclusions about the parallels between the Western realm and the ancient polis as to their mutual consolidation of borders, exclusion-based citizenships, and a shared consensus on the human value of those excluded. I also explore whether the theatre is a public space where one can watch the relationship between the bare life and the community as an ethical and political question.



## Migrant Experiences of Cosmopolitanism: Everyday Practices of Belonging and Citizenship on Social Media



**Özlem Savaş**  
Bridge Fellow

at the Zukunftscolleg since 04|2017

I carry out ethnographic research projects on digital media that revolve around one central question: How do individual, private, and emotional domains of the everyday intertwine with the collective, public, and political spheres? I recently completed an ethnographic research project on practices of self and lifestyle on Facebook that explored how repertoires of the “good life” on social media are collectively created by individuals, as well as lifestyle experts, markets, and industries, and utilized in daily life to understand, constitute, and transform both individual and collective ways of being and living. My current research project focuses on digital networks of affective and cosmopolitan politics within the context of recent migration from Turkey. The recent migration of mostly academics, journalists, artists, and professionals from Turkey has engendered the emergence of social and political networks in interconnected digital and physical places. The burgeoning networks on digital media aim to create solidarity and cooperation and to establish relationships with other migrant groups and other activist groups, as well as with the digital and physical terrains of political resistance in Turkey. By using methods of activist ethnography and autoethnography, I aim to explore how digital flows and repertoires of political emotions facilitate affective and cosmopolitan forms and spaces of solidarity and politics within a diasporic context.

## Migrant Figures: Discourse, Policy and Racialized Bodies



**Leila Whitley**  
Fellow

at the Zukunftscolleg since 03|2016

My project is concerned with the question of the social production of the figure of the migrant. This means I am interested in how we culturally understand who is a migrant, and who is not a migrant. One of the departure points of the project is the idea that understanding who is a migrant is more complex than simply looking at who has migration status. For instance, as others working in similar fields have written, those who are wealthy and racialized as white rarely appear in the public imaginary as migrants. Others, however, are overrepresented in that imaginary. In terms of our contemporary moment, a particular imaginary of migrants in Europe focuses on those who cross the Mediterranean via precarious means, seeking asylum in Europe. In my project I look at how representations of this type of migration come to dominate the social imaginary, producing a certain figure of the migrant in Europe. I am interested in how this imaginary is picked up in very formal ways, so that it becomes codified in legal practices of immigration policing in Europe. This means that the project works both by examining representational acts and by looking at the ways in which these representational acts relate to policies legislating migration. As a cultural studies scholar, I work through discourse analysis and am in dialogue with other social theories of migration and bordering.

## TV Discourse in Russian Film and Literature, 1960-1990



**Maria Zhukova**  
Bridge Fellow

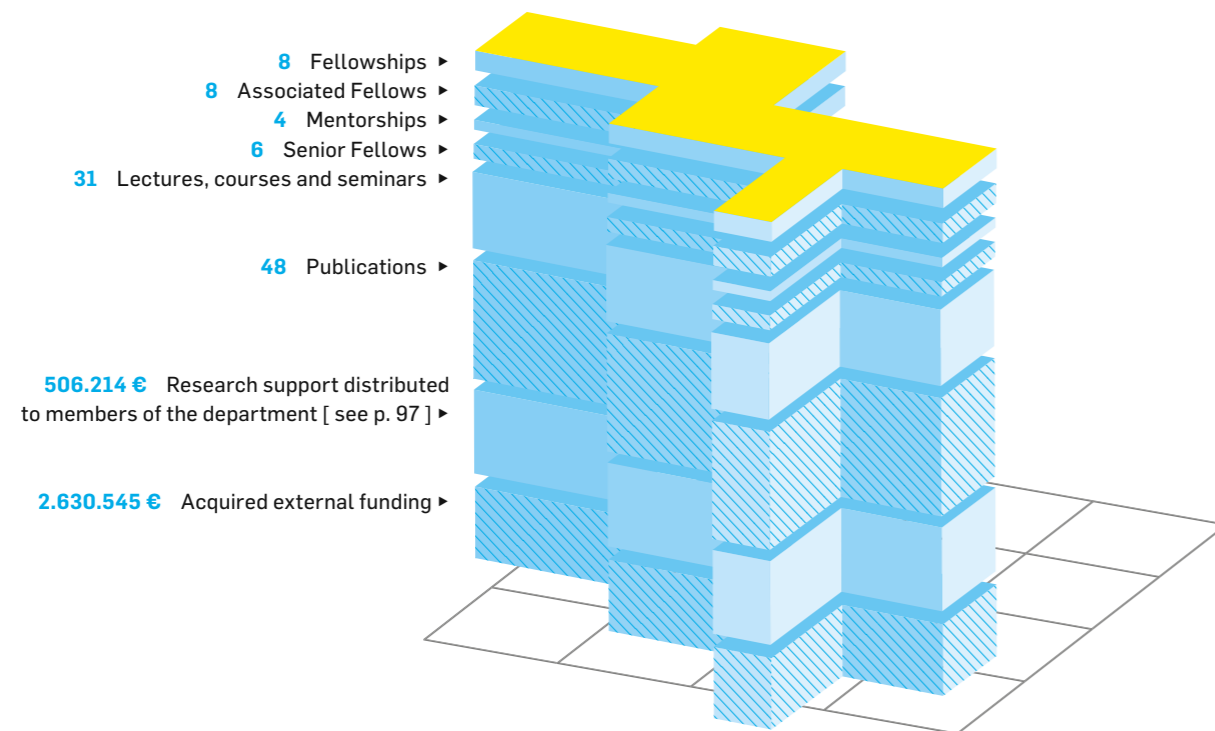
at the Zukunftscolleg since 06|2016

Our research group (Prof. Jurij Murašov, Fabian Erlenmaier, both Slavic Department) elaborated the project *Electrified Images: Discourses and Poetics of Television in Soviet and Post-Soviet Culture from the 1950s to the 2010s*. The application was submitted to the DFG in March 2017. The present group project is a pioneering research initiative. Since the 1950s, the deep cultural impact of TV as a medium has been continuously analyzed in the social sciences and humanities – from Adorno through Eco, McLuhan, and Baudrillard to Stiegler and Massumi. The project is the first literary study devoted to a systematic consideration of the way in which the semantics and pragmatics of book-based knowledge, narrative, and representation are transformed under the conditions of TV as a medium. The project emerged across boundaries of literature, history, political science, and media studies. In three sub-projects focusing on the Soviet period from the 1950s to the 1980s, the post-Soviet 1990s, and the Putin era from 2000 onwards, it explores how literature, film, and theatre seismographically register and comment upon the cultural effects of the expanding TV

medium via thematic references and formal structures. To foster new scholarly collaborations and to discuss the planned project with the world's leading experts on the matter, I organised the interdisciplinary workshop *TV images and political cultures in Russia, 1960-2010*, which took place on February, 3 and was supported by the Zukunftscolleg.

# Department of Linguistics

from 11|2007 to 08|2017  
Building G



## Fragments of Discourse



**James Griffiths**  
Fellow

at the Zukunftskolleg since 04|2016

If a speaker wishes to discard redundant words in her utterance, she often can. This use of ellipsis, which occurs in the previous sentence (the phrase “*discard redundant words*” is elided after “*can*”), is governed by interacting grammatical and discursive constraints. By examining different elliptical phenomena across languages, my research refines our understanding of what these constraints are and how they interact.

I analysed two datasets. The first contains utterances like “John kissed someone, but I don’t know who [he did *kiss*].” Here, the ellipsis site (in italics) is contained within a larger elidable phrase (bracketed). Because such utterances are judged as unacceptable, previous scholars suggest that this sentence disobeys the MaxElide constraint, which requires maximal elision whenever possible. I have shown that the MaxElide constraint makes incorrect predictions. I analyse the dataset as violating a well-known semantic constraint, which makes MaxElide redundant. The second dataset contains utterances like “*John should have been given sedatives.*” – “*Been given what?*”, the latter being a clarification fragment. With linguists from Leiden University, I conclusively demonstrated that these fragments are the elliptical counterparts to echo questions like “*He should have been given what?*” e.g. in English and Turkish. This is an important conclusion because it shows that such fragments can no longer be treated as a metalinguistic phenomenon beyond the purview of formal linguistics.

## The Role of Syllabic Rhythm for Understanding Speech in Noise



**Antje Strauss**  
Bridge Fellow

at the Zukunftskolleg since 09|2016

Listening to speech might be challenging especially with regard to hearing loss or the huge variety of environmental noise in our everyday life. Recent advances in cognitive neuroscience show that the neural activity in auditory cortices oscillates at the syllable rhythm (~4Hz) in order to achieve speech comprehension. However, it is still unclear whether these slow neural oscillations, the waxing and waning of neural excitability, are just an acoustic byproduct or whether they constitute higher-level linguistic processes. By using electroencephalography (EEG), we first investigate if and how these slow neural oscillations in the auditory cortex support the resolution of ambiguities in speech. Furthermore, we look at whether speech comprehension in noise can be improved through stimulation of temporal cortices with transcranial alternating currents (tACS). The results might be important for the development of future therapeutic interventions for clinical populations with linguistic deficits such as dyslexia as well as for elderly persons with hearing loss.

## The Semantics and Pragmatics of Superlative Modifiers



**Doris Penka**  
Fellow

at the Zukunftskolleg since 08|2008

In my research project *The semantics and pragmatics of superlative modifiers*, I investigate the meaning of expressions like “at least” and “at most”. These make a particularly interesting object of study in the field of linguistic semantics and pragmatics, as by using them a speaker generally conveys that she is ignorant about the precise value in question. This is witnessed by the fact that the sentence “I have at least two children” is an odd thing to say, since people are generally expected to know how many children they have. The ignorance inferences conveyed by superlative modifiers give rise to a number of challenges to current linguistic theories of meaning. A question that arises in particular is whether ignorance inferences are hard-wired into the semantic meaning or arise as a consequence of pragmatic reasoning. Considering a wide range of data from English and German, I argue for a pragmatic approach which builds on the insight that people engaged in conversation also draw information on the basis of what a speaker does not say. Such a pragmatic approach can account for the presence of ignorance inferences, as well as for the fact that they are systematically absent in certain linguistic contexts, for instance when “at least” is used to express a rule like “Applicants must send at least two letters of reference”.

## What is it to Ask a Question? A Formal Pragmatic Investigation of Interrogative Force



**Sven Lauer**  
Fellow

at the Zukunftskolleg since 10|2013

My Emmy Noether Junior Research Group, funded by the DFG, started its work in October 2016. The aim of the project is to develop a better understanding of interrogative sentences, such as “Is John an only child?” or “What is the formula for sulfuric acid?” The stereotypical use of such sentences is to request information: With an interrogative utterance, the speaker indicates that he does not know the answer to the question, and that he would like to know from the hearer what the answer is. And yet, there are many uses of interrogatives that do not fit this characterization, like exam questions, rhetorical questions or discussion questions. This makes us wonder what it is about interrogatives that makes them so well-suited for requesting information: Their information-requesting nature cannot be coded in their literal meaning (for if it were, interrogatives could not be used so easily for other purposes). And yet, there must be something in their grammatically-determined meaning that makes them well-suited to function as information requests in many contexts. The main aim of the project is to figure out what this something is.

## Input Factors in Multilingual Development



**Tanja Rinker**  
Fellow

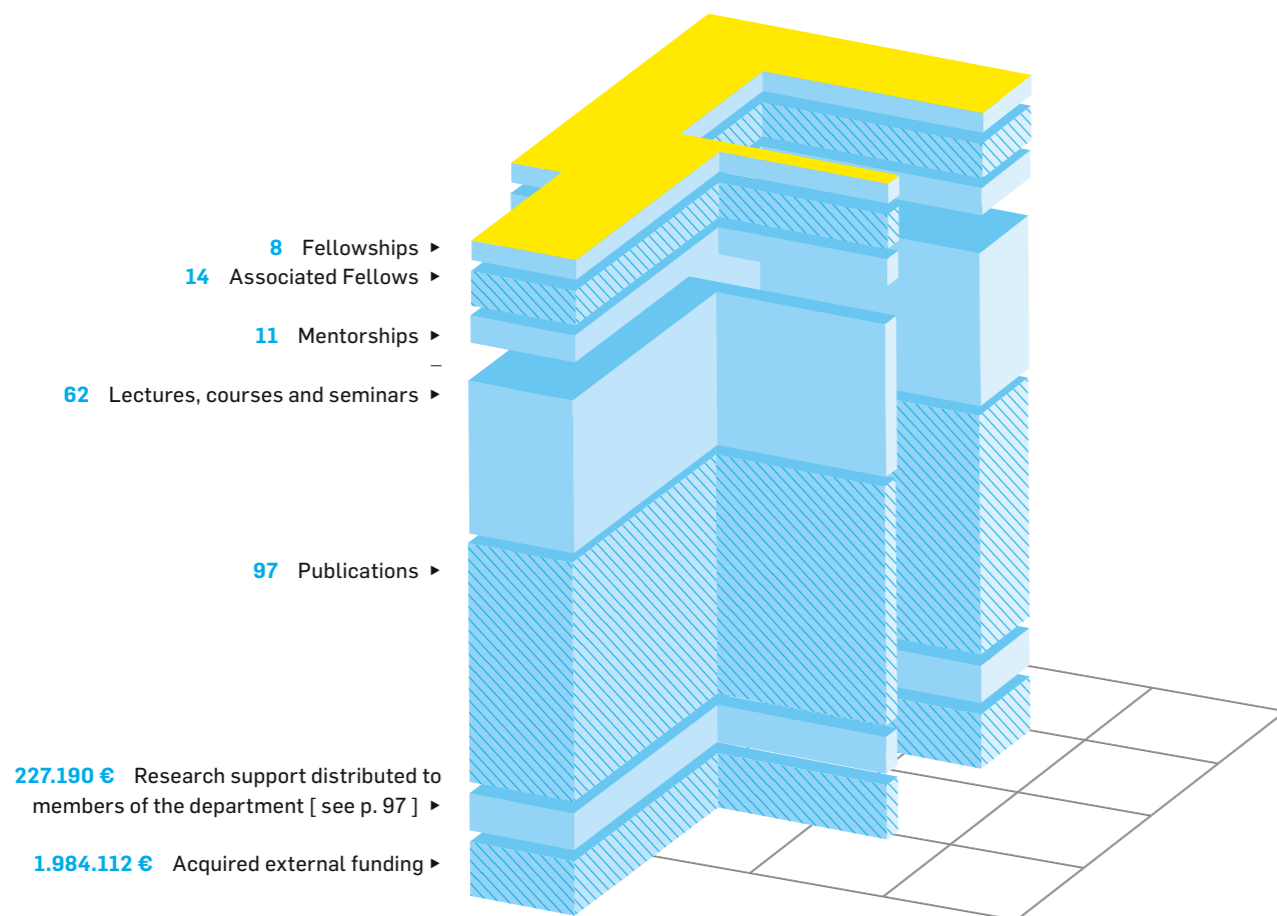
at the Zukunftskolleg since 06|2009

In two studies (Rinker, Shafer, Kiefer, Vidal, and Yu, 2017, PLoS ONE; Budde-Spengler, Rinker and Sachse, submitted, Early Childhood Research Quarterly), we investigated how the quantity or quality of the linguistic experience (e.g. parental language skills, available media) influences phonological processing or lexical development in bilingual children. At the neurophysiological level, we identified that the quantity of maternal speech has an impact on even very early perception of vowels in preschool Spanish-English children. Here any language dominance (Spanish or English) contributed positively to neuronal perception. However, in Turkish-German children of the same age the “neuronal commitment” was not that clear, as much of the input in Turkish and German was mixed. With respect to lexical development in Turkish-German children (aged 25 months), we found that their Turkish vocabulary was about three times larger than their German vocabulary. The amount of German

input by parents and siblings significantly predicted the amount of words spoken in German. However, no relationship was found with the amount of input in Turkish. Also, the quality of the German was relevant for the children’s relationship with German, as was attendance at a German-speaking day care center. Currently, we are analyzing data from Italian-German children – also with a focus on case and prepositions, as the relationship between input and grammar does not appear to be as straightforward as between other linguistic measures.

# Department of Politics and Public Administration

from 11|2007 to 08|2017  
Building D



## Grievance and Collective Violence: Opening Up the Black Box



**Janina Beiser-McGrath**  
Fellow

at the Zukunftskolleg since 04|2016

Previous research has found that ethnic groups that are politically disadvantaged or whose economic situation is far from the average in a state are more likely to take up arms against the government. This project looks at how ethnic groups' circumstances come about, how these circumstances develop into grievances, and what role governments play in this process. In collaboration with Nils Metternich (University College London), I analysed why some ethnic groups are included in government coalitions and are thus in power whilst other groups are excluded. We found that in autocracies, coalitions of ethnic groups that are similar in size are more likely to form. In collaboration with Carl-Müller Crepon and Yannick Pengl (ETH Zürich), I examined how governments distribute goods amongst different ethnic groups and how receiving goods affects individuals' perceptions of grievance. Investigating differing levels of child mortality in a number of African countries, we found that children that are not from the same ethnic group as the government have a higher chance of surviving their first year if they live in a district where the share of people with the government's ethnicity is high. Children that share the government's ethnicity, on the other hand, have a higher chance of survival than non-co-ethnic children, but only if they live in districts with fewer co-ethnics.

## Power and Norms in Social and Political Networks: A Formal Modeling Approach



**Maroussia Favre**  
Bridge Fellow

at the Zukunftskolleg since 04|2017

My research combines political science with network analysis. Power and norms are keys to explaining social and political interactions. Patterns of interactions are well described by network analysis, a methodology whose popularity has increased in recent years. But we know too little about how to incorporate the key concepts of power and norms into networks. Addressing this gap, my project is a theoretical and conceptual effort to formally combine power, norms, and networks. I start at a small scale, with pairwise interactions as building blocks of human systems, to expand and improve our understanding of larger collectives. I thus seek to contribute to the study of complex systems (in which many micro elements in interaction – particles or humans – give rise to emergent macro phenomena, such as phase transitions, socio-cultural norms, financial crashes, or revolutions) with views on "big data" or computational social science (the analysis of large datasets often gathered on online social platforms). The motivation for this interdisciplinary project is (1) to further develop existing social and political theories with formal modeling so as to increase their explanatory and predictive power; and (2) to facilitate the use of insights and computational tools from physics, mathematics, and computer science to better understand and address relevant societal questions and issues.



## Questioning the Hegemonic Potential of VET Policies in Turkey



**Ezgi Pinar**  
Bridge Fellow

at the Zukunftskolleg since 04|2017

Through my research project I would like to understand the link between Turkey's vocational education policies and its efforts to integrate itself into the global market. The core questions the project addresses are whether vocational education policies are being formulated according to the requirements of international division of labour and the extent to which these policies enable capital accumulation. My aim is to analyse the discourse of reform as well as the policies themselves, since they both work toward the same aim of constructing hegemony. Global competition and the changing production regime raises the question of the productivity and quality of the labour force, and the skills acquisition and education of the labour force is becoming a vital issue for

public policymakers. For this reason, education policies are formulated as a response to the need for maintaining a constant level of capital accumulation, and due to the existing conditions of the labour market they make sense within society. In this context, I use the term hegemony as a conceptual tool and scrutinize the hegemonic capacity of vocational education.

## Explaining and Predicting Large-scale Violence in Civil Conflicts



**Sebastian Schutte**  
Fellow

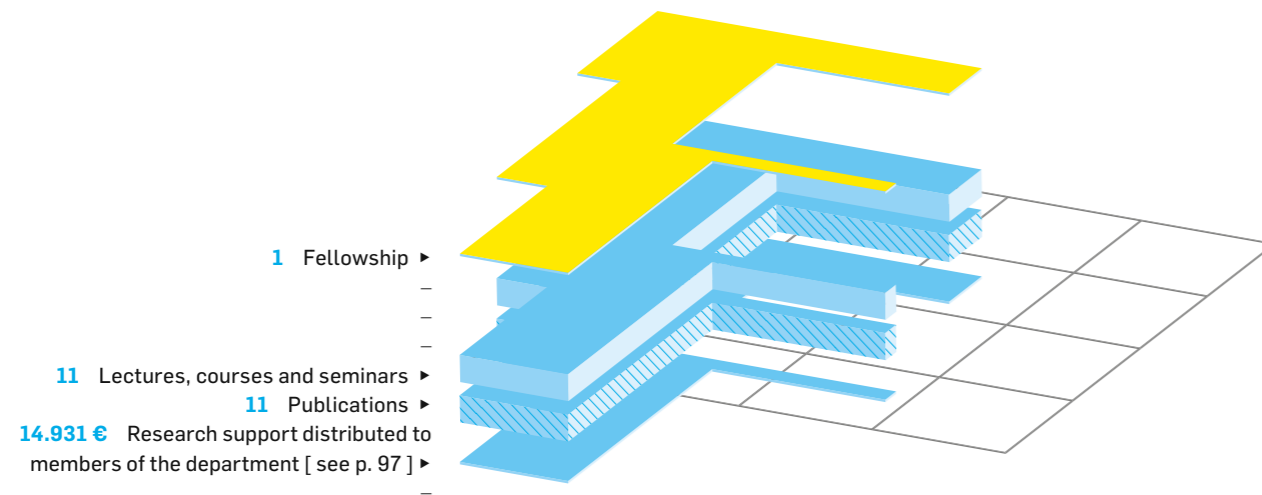
at the Zukunftskolleg since 06|2014

Several countries have experienced political violence in the past five years. In some cases – such as Lybia, Egypt, and Syria – revolutionary uprisings have given way to ethnic and religious conflicts. The overall goal of my research project at the Zukunftskolleg is to test a theory of how this transition happens. Why do some episodes of political violence cause large-scale civil wars between groups while others do not? With financial support by the German Foundation of Peace Research and the Zukunftskolleg, I collaborated with Dr. Constantin Ruhe on an ambitious survey project. We identified political conflicts that periodically stress the relationships between religious groups in India and Kenya. In both countries, we conducted electronic surveys in times of heightened political

tensions – before and after major elections. On the basis of collaboration with local partners, we were able to survey Hindus, Christians, and Muslims. Respondents were asked about their experiences with members of other communities, their outlook on politics, and their concerns for the future. Preliminary data analysis suggests that individual-level experiences, prejudice, and security concerns strongly contribute to the escalation of conflict along religious lines. Ideology and politics play a secondary role.

# Department of Law

from 11|2007 to 08|2017  
Building C



## The Judicial Dialogue in Europe



**Maria Daniela Poli**

Fellow

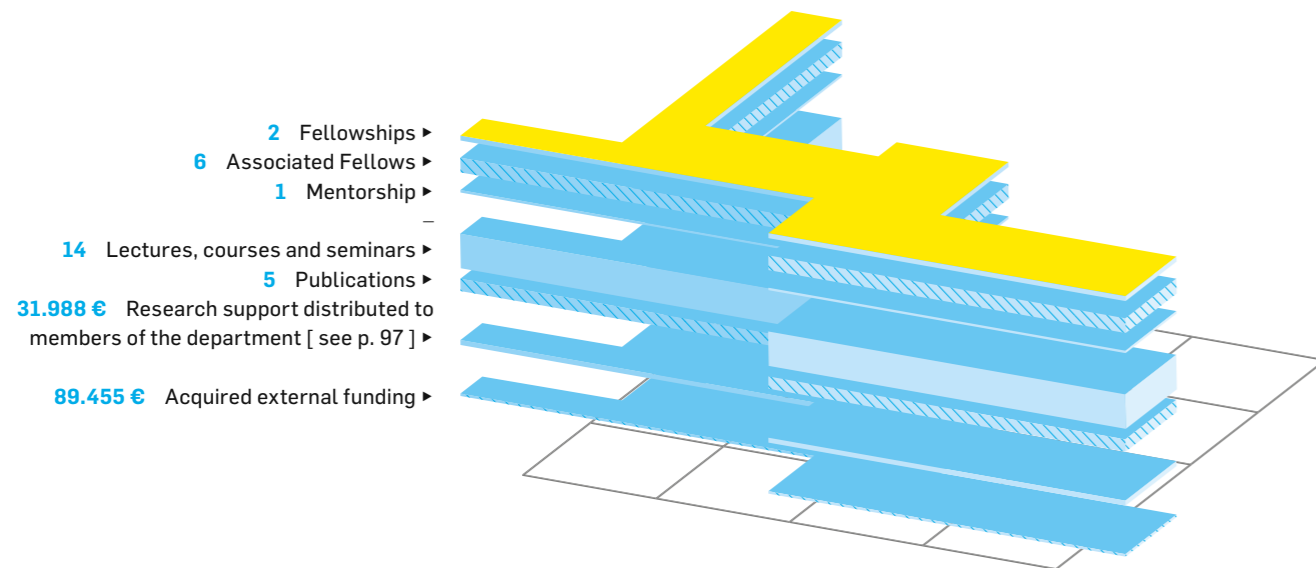
at the Zukunftskolleg since 03|2015

The increasing interdependence among different legal orders is making the role of jurisprudence ever more vital in the European constitutional space. As a consequence, the judicial dialogue is at the centre of scholarly debate. However, it is still an unclear concept, enveloped by a cloud of scepticism. Starting from the main point of criticism concerning the number of judicial conflicts, my research project aims to add clarity to the concept by analysing the nature and the dimensions of the phenomenon, with particular attention paid to the importance of the homogeneity created by judges. The question is whether the current judicial pluralism can do without a hierarchical logic, substituting a dialogical logic based on a community of values. Should we, on the basis of the

considerable potential for judicial conflicts and juridical competition, speak of a *"Babel of Courts"*? Or should we, also on the basis of the German experience, relativize the problem of the last word and speak rather of *"Courts for Babel"*, which – as Sabino Cassese suggests in his book *I tribunali di Babele* – put order into the system?

# Department of Economics

from 11|2007 to 08|2017  
Building F



## Predicting Financial Risks



**Roxana Halbleib (née Chiriac)**  
 Fellow

at the Zukunftskolleg since 10|2013

The huge financial losses many financial institutions experienced during and following the financial crisis of 2007/2008 have revealed serious pitfalls in the existing financial risk measures. My research has in the last academic year mainly focused on improving the predictability of financial risks through the development of new methodologies for measuring and forecasting them. These methodologies exploit the rich information content of high-frequency financial data, as well as the theory of stable distribution, which is the generalization of the normal to account for fat-tailedness and skewness and the theory of unifractality/multifractality applied to financial returns sampled in intrinsic/calendar time. In particular, I have focused on three directions: (1) on developing latent factor models with stable distributed errors and factors to capture the dynamics of daily financial returns, (2) on developing latent dynamic factor models with heterosce-

dasticity to capture the dynamics of the high-frequency-based daily volatility estimates, and (3) on applying the multifractal and unifractal theory for estimating the quantiles of daily returns by scaling up quantiles of intra-day returns sampled in calendar or intrinsic time. To solve the estimation difficulty of these approaches, I implement simulation-based estimation techniques that are easy to apply and provide reliable results.

# Jour Fixe



The Jour Fixe is the weekly interdisciplinary session for all Fellows from all departments. The meeting focuses on presentations of new projects and results of current projects, introduction of new junior research groups, as well as topical discussions and debates concerning higher education policies. The Fellows discuss the progress of their work, share and encounter questions from other disciplines, and explore the possibilities of interdisciplinary collaboration.





## Winter Term

### 2016

October 26

#### Opening event winter term 2016|2017

November 2

#### Ethnic Politics and Ethnic Violence: What Role Do Governments Play?

Janina Beiser-McGrath, Fellow  
Department of Politics and Public Administration

November 9

#### Proteins – Surfing on Waves

Michael Kovermann, Associated Fellow  
Department of Chemistry

November 16

#### Anthropogenic Climate Change Impact on Biodiversity

Sasha Kosanic, Bridge Fellow  
Department of Biology

November 23

#### The Teamwork of Lhcx and Xantophyll Cycle in Providing NPQ in Phaeodactylum Tricornutum

Bernard Lepetit, Fellow  
Department of Biology

November 30

#### Conceptual Change in Set Theory – Combining Mathematics, Philosophy and History

Carolin Antos-Kuby, Bridge Fellow  
Department of Philosophy

December 7

#### The World Re-Framed: Statistics and the Development of Economic Thought in Hungary from the 1770s to 1848

Maria Hidvegi, guest speaker  
Department of History, University of Konstanz

December 14

#### Jour Fixe Christmas session

### 2017

January 11

#### TV-Optics of Perestroika: The Soviet Cinema of 1985-1990 through the Prism of Television Motifs

Maria Zhukova, Bridge Fellow  
Department of Literature

January 18

#### What Generative Linguistics Can Do for Ellipsis and Why It Can

James Griffiths, Fellow  
Department of Linguistics

January 25

#### 'Babel of Courts' or 'Courts for Babel'?

Maria Daniela Poli, Fellow  
Department of Law

February 1

#### Resolving Ambiguity in Speech – The Role of Neural Oscillations for Syllable Processing

Antje Strauss, Bridge Fellow  
Department of Linguistics

February 8

#### Biomass Use and Catalyst Development to Man-made Materials

Dennis Pinggen, Fellow  
Department of Chemistry

February 15

#### A Swiss Way of Doing Advanced Study – The Collegium Helveticum

Thomas Hengartner,  
Director Collegium Helveticum

## Summer Term

### 2017

April 26

#### Opening event summer term 2017

May 3

#### Homogeneous Diet of Germans, Americans and Israelis Inferred from Stable Isotope Ratios

Elizabeth Yohannes, former Associated Fellow  
Department of Biology, University of Konstanz

May 10

#### Election of a new member of the Executive Committee

Assembly of members

May 17

#### Nanocrystals Explained through the Eye of the Fourier Transformation

Klaus Boldt, Fellow  
Department of Chemistry

May 24

#### Transgressing Directions

Grey Violet, Bridge Fellow  
Department of Mathematics and Statistics

May 31

#### Fuel in the Fire: The Effects of Anger on Risky Decision Making

Keshun Zhang, Bridge Fellow  
Department of of Empirical Educational Research

June 7

#### An Open Problem Approach to Mathematics

Patrick Speissegger, Senior Fellow  
Department of Mathematics and Statistics

June 14

#### What do Boiling Water and Society have in Common? Norms, Values and Beliefs in Social and Political Networks

Maroussia Favre, Bridge Fellow  
Department of Politics and Public Administration

June 21

#### Critical Feminist Network on Migration and Refugees

Leila Whitley, Fellow  
Department of Literature

June 28

#### English as a Lingua Franca in Academia? Between "Lost in Translation" and Globalisation

Special Session with input by  
Jennifer Randerath (Department of Psychology),  
Tanja Rinker (Department of Linguistics),  
Keshun Zhang (Department of Empirical Educational Research),  
Maroussia Favre (Department of Politics and Public Administration)

July 5

#### Making the Way Towards the Political Analysis of a Public Policy: How to Make Sense of VET Policies in Turkey

Ezgi Pinar, Bridge Fellow  
Department of Politics and Public Administration

July 12

#### Practices of Self and Lifestyle on Social Media

Özlem Savaş, Bridge Fellow  
Department of Literature

July 19

#### Why Do We Play?

Wolf Hütteroth, Fellow  
Department of Biology

July 26

#### Predict Financial Risks

Roxana Halbleib, Fellow  
Department of Economics

# Facts and Figures



**Funding Programmes**  
**Events**  
**Talks**  
**Publications**  
**Grants and Awards**  
**Lectures, Courses**  
**and Seminars**

# Funding Programmes

**The Zukunftskolleg offers its Fellows a close-knit and diverse network of support. This not only creates ideal working conditions for young scholars but also provides the best possible preparation for their academic careers. Some support measures are also open to Senior Fellows, Associated Fellows, and postdoctoral researchers at the University of Konstanz.**

## Interdisciplinary Collaborative Projects

This programme aims to promote research collaborations between junior researchers. An interdisciplinary research project gives grant holders the opportunity to identify and explore new, innovative and/or risky research perspectives with neighbouring disciplines and across disciplines.

**Maik Bieleke** (Dept. of Psychology) with **Wanja Wolff** (Dept. of Sports Science):  
*Psychological Determinants of Endurance Performance*

**Roos van der Haer** (Dept. of Politics and Public Administration) with **Tobias Hecker** (Dept. of Psychology, University of Zurich):  
*The Mediating Effect of Mental Health on the Relationship between War Exposure and Social Capital*

**Verena Krebs** (Dept. of History) with **Christoph Rolker** and **Felix Girke** (both Dept. of Sociology):  
*Embracing "Otherness": Medieval Africa – An Interdisciplinary Collaborative Project*

**Oleksandra Kukharengo** (Dept. of Chemistry) with **Lyudmila Grigoryeva** (Dept. of Mathematics and Statistics):  
*Statistical and Machine Learning in the Problems of Computational Chemistry*

**Sasha Kosanic** (Dept. of Biology) with **Karsten Lambers** (Alumnus/Department of Archaeological Sciences, Leiden University):  
*Landscape Change in the Lower Engadine and Implications for Cultural Ecosystem Services*

## Co-Funding

This programme offers financial support to co-fund the human and material resources needed for projects at the Zukunftskolleg, e.g. for student or research assistants, conferences, equipment, research trips or consumables. Listed are some examples for granted Co-Funding applications.

**Tuhin Shuvra Basu** (Dept. of Physics)  
Funding for a *Cary 60 Instrument (UV-Vis spectrophotometer)*, an ultraviolet-visible spectrophotometer, and a LABstar Glove Box MBRAUN.

**Thomas Böttcher** (Dept. of Chemistry)  
Funding for the symposium *Small Molecules and Microbes*, October 8-10, 2016, University of Konstanz.

**María Cruz Berrocal** (Dept. of History)  
Funding to conduct the research project *The Study of Early Colonialism in the Pacific: Archaeology in Small Islands, History of Global Processes*.  
Funding for a proofreader for two books to be published at the University Press Florida.

**Denis Gebauer** (Dept. of Chemistry)  
Funding for the participation in conferences such as: *Pacific-Chem* in Honolulu (USA), *the 13th International Symposium on Biomineralization BiominXIII*, Granada (Spain), and a conference in Montana (USA).

**Bianca Gaudenzi** (Dept. of History)  
Funding to cover archival research and a research visit at the Institut für Zeitgeschichte, München.

**Wolf Hütteroth** (Dept. of Biology)  
Funding for setups, fly husbandry, technical and student assistant, and master student support for his research project *Influence of Internal State Signals on Memory-Reinforcing Dopamine Cells*.  
Funding to conduct the research project *Do insects play?*

**Claudius Kratochwil** (Dept. of Biology)  
Funding to cover the 10% contribution requested from the applicants to the Elite Programm of the Baden-Württemberg Foundation.  
Funding to purchase a hybridization oven for molecular and histological work.

**Andrea Lailach-Hennrich** (Dept. of Philosophy)  
Funding for the international workshop on *Imagination and Knowledge*, September 28-29, 2017, University of Konstanz.

**Julia Langkau** (Dept. of Philosophy)  
Funding to prolongate the contract of a student assistant and for a research visit at the University of Miami.

**Bernard Lepetit** (Dept. of Biology)  
Funding to cover the 10% contribution of the home institution requested by the BW-Stiftung in order to apply within the Elite-Programme.

**Jennifer Randerath** (Dept. of Psychology)  
Funding to conduct the research project *Motivated Motor Cognition: Connecting Ideomotor Effects to Implementation Intentions*.  
Funding to build a reach apparatus in collaboration with the Wissenschaftliche Werkstätten of the University of Konstanz.

**Sebastian Schutte** (Dept. of Politics and Public Administration)  
Funding for research surveys in Kenya.  
Funding for the international workshop on *New Perspectives on the Micro-Dynamics of Political Violence*, September 21-22, 2017, University of Konstanz.

**Attila Tanyi** (Dept. of Philosophy)  
Funding for the workshop *World Government or Else?*, June 13-14, 2017, University of Konstanz and Collegium Helveticum, Zurich.

**Julian Torres Dowdall** (Dept. of Biology)  
Funding to conduct a transcriptomic analysis within the project *Effects of early life stress in patterns of gene expression in a livebearing fish*.

**Andreas Thum** (Dept. of Biology)  
Funding to cover the infrastructure usage of the Bioimaging Center and Electron Microscopy Center for his research group.

**Nadir Weber** (Dept. of History)  
Funding for the *7. Forum Tiere und Geschichte*, July 20-21, 2017, University of Konstanz.

**Leila Whitley** (Dept. of Literature)  
Funding for the establishment of the *Critical Feminist Network on Migration and Refugees* including an initial workshop in Konstanz that took place in June 2017 and support of the application for further funds to the Social Science and Humanities Research Council of Canada (SSHRC).

## Mentorship

**The Mentorship Programme enables Fellows and postdoctoral researchers at the University of Konstanz to network with distinguished colleagues both in Germany and abroad, and to maintain these contacts.**

**Geoffrey Aubry** (Dept. of Physics) and Mentor **Prof. Philippe Roux** (Institut des Sciences de la Terre, Grenoble, France)

**Stefan Fischer** (Dept. of Philosophy) and Mentor **Prof. James Lenman** (University of Sheffield, UK)

**Gisela Hilary Kopp** (Dept. of Biology) and Mentor **Hélène Morlon** (Centre National de la Recherche Scientifique, Paris, France)

**Marco Paoli** (Dept. of Biology) and Mentor **Prof. Hiroshi Nichino** (RIES Hokkaido University, Sapporo, Japan)

**Morgane Nouvian** (Dept. of Biology) and Mentor **Prof. Alison Mercer** (University of Otago, New Zealand)

**Ioanna Salvarina** (Dept. of Biology) and Mentor **Ass. Prof. Leonard Sandin** (Swedish University of Agricultural Studies, Uppsala, Sweden)

## Transdepartmental Collaborative Teaching Programme

**This programme aims to promote the development of new teaching courses and expand departmental syllabi. It gives grant holders the opportunity to explore new, innovative topics in teaching and to further develop their teaching skills and teaching approach across disciplines.**

**Michael Kovermann** (Dept. of Chemistry) in collaboration with **Bela Gipp** and **Michael Grossniklaus** (both Dept. of Computer and Information Science): *Acquiring and Handling Scientific Data for Reproducible Research*

**Dennis Pinggen** (Dept. of Chemistry) in collaboration with **Ioanna Salvarina** (Dept. of Biology): *Controversial and Critical Views on Global Environmental Issues*

## Intersectoral Cooperation Programme

**The Intersectoral Cooperative Programme aims to develop cooperation between Zukunftskolleg Fellows and the non-academic sector. Grants are given to support cooperations that foster joint research projects with industrial partners, companies, social institutions, cultural institutions, archives, public bodies, or non-profit organisations.**

**Jennifer Randerath** (Dept. of Psychology) and the **Kliniken Schmieder: Limb Apraxia after Stroke**

**Jennifer Randerath** (Dept. of Psychology) and the **Zentrum für Psychiatrie Reichenau: Limb Apraxia in Dementia**

## Independent Research Grant

**The Independent Research Grant aims to promote independent research by researchers who are in the early stages of their postdoctoral work. The Zukunftskolleg invites applications for financial support of up to EUR 3,000 for projects that help the individual applicant attain scientific independence. This funding instrument is open to postdoctoral researchers at the University of Konstanz.**

**Georgiana Caltais** (Dept. of Computer and Information Science): *Generation of Causes through Automata Learning (GCAL)*

**Doris Forster** (Dept. of Law): *The Legal History of Comparative Law – Reasons for Theory and Methods in Practice in Past, Present and Future*

**Vlad Hosu** (Dept. of Computer and Information Science): *Adaptive Crowdsourcing Strategies for Effective Quality Assessment of Large Multimedia Datasets*

**Andreas Kautt** (Dept. of Biology): *Revealing Genome-Wide Divergence at the Earliest Stages of Sympatric Speciation in Midas Cichlids by Whole-Genome-Resequencing*

**Hanhe Lin** (Dept. of Computer and Information Science): UKID: *A Large-Scale Natural Image Quality Database*

**Philip Rathgeb** (Dept. of Politics and Public Administration): *When Populism meets Capitalism: The Distributive Policy Impact of the Radical Right in Europe*

**Alexandra Zinke** (Dept. of Philosophy): *Dimensions of Doubt: On Suspending Judgment*

## Investment Programme for Research

**The Investment Programme for Research aims to improve apparatus and equipment in research.**

**Jonathan Avarao** (Dept. of Chemistry): ATR cell for FTIR

**Ye Liu** (Dept. of Chemistry): CC-505wl; E-grade "Professional"; Touchpen-Set Pilot ONE

**Dennis Pinggen** (Dept. of Chemistry): Co-Solvent Addition Module; Gas Flow Meter

**Cristina Ruiz Agudo** (Dept. of Chemistry): Freeze-drying equipment to improve existing equipment, dry chamber and pH meter

**Blair Costelloe** (Dept. of Biology): A used vehicle (Suzuki Grand Vitara 2005 or similar), Annual insurance, Administrative costs for vehicle purchase

**Einat Couzin-Fuchs** (Dept. of Biology): Locomotion compensation setup

**Bernard Lepetit** (Dept. of Biology): Horiba Fluoromax-4 fluorescence spectrometer

**Carlotta Martelli** (Dept. of Biology): Motorized micromanipulator

**Melissa Olave** (Dept. of Biology): Fisher binocular stereostepic microscope X40; fischer digital caliper; Nikon D5600 digital camera and lens; Computer for genomic data analyses; AirPort time capsule

**Marco Paoli** (Dept. of Biology): Four high-speed cameras

**Julian Torres-Dowdall** (Dept. of Biology): Portable spectrometer, optic fiber designed to be submersible up to 20 meters, light source required to calibrate the spectrometer

## Alumni Cooperation Programme

**This programme aims to support cooperations between a current and a former Fellow of the Zukunftskolleg. Grants will be given to support cooperations that foster joint research projects. The programme comes out of the credo "once a Fellow, always a Fellow" and aims at strengthening the links to our international community of Fellows. Furthermore the Alumni are actively encouraged to act as mentors for the younger generations of Fellows of the Zukunftskolleg.**

**Julia Boll** and **Leila Whitley** (both Dept. of Literature) in collaboration with **Kate Fama** (Alumna/University College Dublin), **Elliott Lash** (Alumnus/University of Maynooth) and **Emily Petermann** (Dept. of Literature): Funding to support the continuation and expansion of their Konstanz-based advanced training and discussion workshop series *The Humanities Pedagogy Workshop*



# Events

## 10|2016

*October 7*

**The Humanities Pedagogy Workshop**  
meeting and discussion of practices, books and articles on teaching and higher education, co-organised by Zukunftskolleg Fellows

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*October 10*

**Sydney Padua: The Thrilling Adventures of Lovelace and Babbage**  
group reading within the "Book Club", organised by Julia Boll (Fellow/Dept. of Literature)

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*October 19*

**Wie schreibt man die Geschichte von Mensch und Pferd?**

Zukunftskolleg Lecture by Ulrich Raulff (Director Deutsches Literaturarchiv Marbach)

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*October 29 - December 11*

**Die Straßen des Honigs**

exhibition at BildungsTURM Konstanz with photographs by Éric Tournet, organised by the Zukunftskolleg, Stadt Konstanz, Amt für Schulen, Bildung und Wissenschaft, Imkerverein Konstanz e.V.

## 11|2016

*November 2*

**The Humanities Pedagogy Workshop**  
meeting and discussion of practices, books and articles on teaching and higher education, co-organised by Zukunftskolleg Fellows

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*November 2*

**The Intelligence of the Bees**

public lecture by Randolf Menzel (Senior Fellow/FU Berlin) at BildungsTURM Konstanz

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*November 3*

**Teaching (under) Rape Culture**

workshop given by Josh Edelman (Manchester Metropolitan University, UK), organised by "The Humanities Pedagogy Workshop" of the Zukunftskolleg

*November 9*

**Solitärbiene und ihre Vorlieben für spezielle Blüten**

lecture by Hannah Burger (Associated Fellow/Dept. of Biology) within the exhibition "Die Straßen des Honigs" at BildungsTURM Konstanz

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*November 22*

**Teaching Literary and Critical Theory**

workshop given by Linda Tym (Southern Adventist University, USA), organised by "The Humanities Pedagogy Workshop" of the Zukunftskolleg

## 12|2016

*December 1*

**Lily King: Euphoria**

group reading within the "Book Club", organised by Julia Boll (Fellow/Dept. of Literature)

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*December 10-12*

**Mobility 2.0 – Aspirations, Challenges, Obstacles**

joint workshop of the Zukunftskolleg and the Martin Buber Society of Fellows at the Hebrew University of Jerusalem

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*December 15-16*

**Historicising Cultural Brokers: Agency and the Limits of Power, 1700 to the present**

international workshop organised by Bianca Gaudenzi (Fellow/Dept. of History)

## 01|2017

*January 16*

**Studying and Using Priority Effects in Community Assembly for Restoration of Species-Rich Grasslands**

lecture by Vicky Temperton (Leuphana University/Ecosystem Functioning and Ecosystem Services), organised by Sasha Kosanic (Bridge Fellow/Dept. of Biology)

*January 26*

**Richard Powers: Generosity – an Enhancement**

group reading within the "Book Club", organised by Julia Boll (Fellow/Dept. of Literature)

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*January 31*

**Teaching Practice as Research**

workshop given by Aneta Mancewicz (Kingston University London/School of Performance and Screen Studies), organised by "The Humanity Pedagogy Workshop" of the Zukunftskolleg

## 02|2017

*February 3*

**TV-Picture and Political Cultures in Russia, 1960-2010**

workshop organised by Maria Zhukova (Bridge Fellow/Dept. of Literature)

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*February 13*

**The Limits and Possibilities of a Politics of Listening**

lecture by Claudia Firth (Birbeck College London/Cultural and Critical Studies), organised by Leila Whitley (Fellow/Dept. of Literature) as part of the "Feminist Forum Konstanz"

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*February 14*

**Philosophers and Activists: a False Dichotomy**

workshop given by Bob Brecher (University of Brighton/CAPPE: Centre for Applied Philosophy, Politics and Ethics), organised by "The Humanity Pedagogy Workshop" of the Zukunftskolleg

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*February 16*

**Visions of Modernity: How Activists Restructured Nepali Society**

keynote lecture for the workshop "Activism, Anthropologically Speaking" (February 17), given by David Gellner (Oxford University/Social Anthropology)

*February 17*

**Activism, Anthropologically Speaking**

workshop organised by Thomas Kirsch (University of Konstanz), Rijk van Dijk (Leiden/Amsterdam) and Raúl Acosta-García (Associated Fellow/ Department of Sociology)

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*February 20*

**Call for Applications for Fellowships at the Zukunftskolleg – Department Information Event**

organised by the Zukunftskolleg

## 03|2017

*March 13-14*

**Joint meeting of the Goldsmiths Centre for Feminist Research Feminist Forum and the Konstanz Feminist Forum**

organised by Leila Whitley (Fellow/Dept. of Literature)

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*March 24-25*

**Spring plenary assembly of Die Junge Akademie**

organised by Thomas Böttcher (Fellow/Dept. of Chemistry)

## 05|2017

*May 4*

**Kinder statt Inder – The Politics of Demographic Fears in the Global North and South**

Zukunftskolleg Lecture by Shalini Randeria (Rector of the Institute for Human Sciences, Austria and Professor at the Graduate Institute Geneva, Switzerland)

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*May 10*

**Barbara Kingsolver: Flight Behavior**

group reading within the "Book Club", organised by Julia Boll (Fellow/Dept. of Literature)

## 07|2017

*July 6*

**Award Ceremony: Prize for Promotion of Junior Researchers**

awarded to Ariel Gutman (Alumnus/Dept. of Linguistics) by the City of Konstanz

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*July 7*

**Sicherheit**

Workshop co-organised by Andrea Lailach-Hennrich (Fellow/Department of Philosophy) in Lubmin

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*July 10-15*

**Popular Culture in the Arab World**

workshop organised by Tanja Rinker (Fellow/Dept. of Linguistics) and Nadeem Karabi (Martin Buber Society/Hebrew University of Jerusalem)

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*July 20-21*

**The 7th Forum on Animals and History**

organised by Nadir Weber (Fellow/Dept. of History), Aline Steinbrecher (Associated Fellow/Dept. of History) and Clemens Wischermann (University of Konstanz)

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*July 21*

**The Possibility of Moral Community**

workshop organised by Stefan Fischer (Bridge Fellow/Dept. of Philosophy) and James Lenman (University of Sheffield/Dept. of Philosophy)

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*May 18*

**Nature has Neither Kernel Nor Shell – Spinoza's Naturalistic Outlook**

guest lecture by José María Sánchez de León (Martin Buber Society/Hebrew University of Jerusalem, Israel) at the Zukunftskolleg

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*May 22*

**Modeling Causal Dependencies in Formal Semantics**

Workshop organised by Sven Lauer (Fellow/Dept. of Linguistics)

## 06|2017

*June 13-14*

**World Government or else?**

Joint workshop with the Collegium Helveticum organised by Attila Tanyi (Associated Fellow/Dept. of Philosophy, and Fellow of the Collegium Helveticum)

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*June 16*

**The Humanities Pedagogy Workshop**

Meeting and discussion of practices, books and articles on teaching and higher education with Stefanie Flores-Koulish (Loyola University Chicago) and Patrick Brugh (Loyola University Chicago)

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*June 22*

**Welcome Refugees: Feminist Speculations from Canada to Germany**

round table organised by Leila Whitley (Fellow/Dept. of Literature)

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*June 22-24*

**First Workshop of the The Critical Feminist Network on Migration and Refugees**

organised by Leila Whitley (Fellow/Dept. of Literature)

# Talks

## Mohammad Adm

### Zeros and Poles Localization of Polynomials and Rational Functions and Total Nonnegativity of Structured Matrices

5th Palestinian Conference on Modern Trends in Mathematics and Physics (PCMTMP-V), Jenin (Palestine), July 31 - August 2, 2016

### Zeros and Poles Localization of Polynomials and Rational Functions and Total Nonnegativity of Structured Matrices

(with Jürgen Garloff), 7th European Congress of Mathematics (7ECM), Berlin (Germany), July 18-22, 2016

### Application of the Cauchon Algorithm to Sign Regular Matrices

20th Conference of the International Linear Algebra Society (ILAS2016), KU Leuven (Belgium), July 11-15, 2016

## Carolin Antos-Kuby

### The History and Philosophy of Forcing

2nd Symposium of the Set-Theoretic Pluralism Network, University of Bristol (UK), June 23, 2017

## Janina Beiser-McGrath

**For Whose Benefit? How Local Ethnic Demography Shapes Political Favoritism in Africa** (with Yannick Pengl), European Political Science Association Annual Conference, Milan (Italy), June 24, 2017

### To Be on the Safe Side: Government Repression in Space and Time

American Political Science Association Annual Meeting, Philadelphia (USA), September 2016

## Francesca Biagioli

### Axioms and Intuitions in Felix Klein Structuralist Methodology

Structural Methods in 19-Century Mathematics Conference, University of Vienna (Austria), July 13-14, 2017

### Articulating Space in Terms of Transformation Groups: Helmholtz and Cassirer

"La Mesure" Seminar, University of Aix Marseille (France), June 20, 2017

### Articulating Space in Terms of Transformation Groups: Helmholtz and Cassirer

Logic and Philosophy of Science Colloquium, University of California, Irvine (US), May 26, 2017

**Ernst Cassirer's Philosophy of the Concept of Function and Nineteenth-Century Geometry** Philosophical Colloquium, University of Konstanz (Germany), February 16, 2017

### Articulating Space in Terms of Transformation Groups: Helmholtz and Cassirer

Logik Café Colloquium, University of Vienna (Austria), January 23, 2017

**Mathematik und Anschauung** Abendgespräche Kognition und Gehirn, Center for Experimental Psychology and Cognitive Science, University Giessen (Germany), January 18, 2017

### Cassirer on Scientific Representation and the Concept of Function

Philosophy Colloquium at the University of Haifa (Israel), December 13, 2016

### Arithmetization as a Tool of Discovery in Felix Klein's Research Program and Epistemological Writings

Eighth French Philosophy of Mathematics Workshop (FPMW 8), Marseille (France), November 3-5, 2016

### Structuralism and Mathematical Practice in Felix Klein's Work on Non-Euclidean Geometry

Foundations of Mathematical Structuralism, Munich Center for Mathematical Philosophy, Munich (Germany), October 12-14, 2016

### Reconsidering the Semantic View of Theories from a Historical Perspective

XII Conference of the SIFA: The Italian Society for Analytic Philosophy, UNISER – Università di Pistoia (Italy), September 5-7, 2016

## Klaus Boldt

### Effects of Grading in Core/Shell/Shell Quantum Dots

NaNax8, Braga (Portugal), July 4, 2017

### Effects of Grading in Core/Shell/Shell Quantum Dots

TU Delft (The Netherlands), May 29, 2017

### Effects of Grading in Core/Shell/Shell Quantum Dots

Bunsentagung, Kaiserslautern (Germany), May 26, 2017

**Two Temperature Extremes: Hard and Soft Shell Nanocrystals** Steinheimer Gespräche, Wiesbaden (Germany), May 18, 2017

**Semiconductor Nanocrystals with Graded Shells** ETH Zürich (Switzerland), April 27, 2017

**Magic Size Clusters, Soft Shells, and Unforgiving Quantum Dots: How Surface and Interfaces Control Nanocrystals Behaviour** University of Melbourne (Australia), October 3, 2016

## Julia Boll

**Greig and the European Crisis** invited lecture at the Scottish Universities' International Summer School, University of Edinburgh (UK), August 7, 2017

### The Monster's Quest: on Contemporary Verse Novels

21st Century Literature Research Seminar, University of Brighton (UK), March 7, 2017

### Wasted Lives, Drowned: Plays on the Refugee Crisis and the Bare Life on Stage

invited lecture at the University of Bremen (Germany), December 20, 2016

### Enforcing Political Beauty

conference: "Radical Interventions: Politics, Culture, Society" (CAPPE), University of Brighton (UK), September 7-9, 2016

## Thomas Böttcher

### Quinolones – Signals, Weapons, and Drugs?

Mikrobiologisches Kolloquium, Münster (Germany), June 12, 2017

**Meine Mikroben und Ich – Chemischer Small Talk im Darm** Lange Nacht der Wissenschaft 2017, Konstanz (Germany), May 13, 2017

**Quinolone-Derivatives and Bacterial Pathogens** Mini-Symposium BioSynthetic Strategie Towards New Antimicrobial Natural Products, Jena (Germany), March 16, 2017

**Naturstoffe und deren Derivate als Modulatoren von bakteriellem Verhalten** Chemiedozententagung 2017, Marburg (Germany), March 14, 2017

### Metal chelators and bacterial virulence

Emmy Noether Treffen, Bochum (Germany), February 24, 2017

**Chemical probes for the discovery of natural product inhibitors of bacterial enzymes** ALFF Meeting, Hegne (Germany), February 16, 2017

**Small Molecules Modulating Bacterial Population Behaviour** NanoAgents go Local (Blockseminar SFB1032), Munich (Germany), November 28, 2016

### Strategies for Combating Bacterial Infections

ASSAf-Leopoldina, New Research Perspectives on Infectious Diseases in Africa and Germany, Max Planck Institute for Infection Biology, Berlin (Germany), October 25, 2016

**Synthetic Quinolones Inhibiting Virulence of Pseudomonas** Bioorganik Symposium, Jena (Germany), September 9, 2016

## Daniele Brida

**Ultrafast Parametric Amplification at High Repetition Rate and UV Harmonics Generation** Ultrafast Optics 2017, Jackson Hole, WY (USA), October 8-13, 2017

**Optical Phase Control of Electrons Nanotunneling** Correlation Optics 2017, Chernivts (Ukraine), September 11-15, 2017

**Dispersion of the Nonlinear Susceptibility in Single Gold Nanoantennas** META'17, Incheon (South Korea), July 25-28, 2017

**Ultrafast Phenomena in Metallic Nanoantennas** German-Chinese Young Scientist Symposium on Structures and Dynamics at Surfaces, Göttingen (Germany), May 28-June 1, 2017

**Optical Phase Control of Electrons Nanotunneling** Trends in Nanoscience 2017, Kloster Irsee (Germany), March 27-30, 2017

**Optical Control of Electron Tunneling in Plasmonic Nanoantennas via Single-Cycle Pulses** ETA'16, Malaga (Spain), 2016

## María Cruz Berrocal

**The Archaeology of Global History** (with E. Hsieh), Society for American Archaeology 82nd Annual Meeting, Vancouver (Canada), March 29 - April 2, 2017

**The Church of Todos los Santos and its associated cemetery in the Spanish colony of San Salvador, Heping Dao, Taiwan (17th century)** (with Ch. Tsang), session: "The Archaeology of Global History", org. E. Hsieh and M. Cruz Berrocal, Society for American Archaeology 82nd Annual Meeting, Vancouver (Canada), March 29 - April 2, 2017

**The Archaeology of Heping Dao: From Prehistory to Modern Times** Keelung, Institute of Applied Geosciences, National Taiwan Ocean University (China), October 28, 2016

**Archaeology for the History of Colonialism in Asia-Pacific: the Spanish Colony of San Salvador, Heping Dao, Keelung, Tainan** National Cheng Kung University (China), October 7, 2016

## Panteleimon Eleftheriou

**Small Sets in Dense Pairs** Workshop on O-Minimality and Diophantine Applications, Fields Institute, Toronto (Canada), June 20, 2017

**Small Sets in Dense Pairs** Logic Seminar, University of Waterloo (Canada), June 5, 2017

**Small Sets in Dense Pairs** Oberwolfach Workshop: O-Minimality and its Applications to Number Theory and Analysis, Oberwolfach (Germany), May 5, 2017

**Small Sets in Dense Pairs** Logic Seminar, University of Lyon 1, Lyon (France), April 6, 2017

## Maroussia Favre

**Four Power Structures in Political Networks** Midwest Political Science Association (MPSA) annual meeting, panel on "Social Networks in International Relations: Theory and Applications", Chicago (USA), April 7, 2017

**Four Power Structures in Political Networks** Midwest Political Science Association (MPSA) annual meeting, Cultural Theory Working Group, Chicago (USA), April 6, 2017

## Bianca Gaudenzi

**Cultural Brokers and their Impact Revisited** international workshop "Embedding Cultural Brokers: Institutionalisation and Impact in the Arts, Sciences and Economy", University of Konstanz (Germany), July 7, 2017

**Panel I, The Axis Alliance and Geopolitics – Comment** international conference "The Axis Alliance in Global Perspective", University of Konstanz (Germany), June 7, 2017

**Panel I, Italian Fascism abroad – Comment** international workshop "Fascist brokers: Transnational networking in and beyond Europe", University of Konstanz (Germany), May 10, 2017

**Nazi Looted Art in the 20th century – the UK and Europe in Transnational Perspective**  
international conference “From Refugees to Restitu-tion: The History of Nazi Looted Art in the UK in Transnational Perspective”, Newnham College, Cambridge (UK), March 23, 2017

**Historicising Cultural Brokers – Where to Start?**  
international workshop “Historicising Cultural Brokers: Agency and the Limits of Power, 1700 to the present”, Gonville and Caius College, Cambridge (UK), December 15, 2016

## Denis Gebauer

**Formation and Inhibition of Limescale**  
External Seminar @Henkel, Düsseldorf (Germany), May 11, 2017

**Nucleation-Inspired Materials Chemistry**  
“Advances in Materials” Seminars, Institute of Materials, École Polytechnique Fédérale de Lausanne (Switzerland), February 20, 2017

**Recent Insights into the Early Stages of Mineral Formation**  
GMDM4 – The Granada-Münster Discussion Meeting 2016, University of Münster (Germany), November 24-25, 2016

**Nucleation**  
CRC 1109 Summer School 2016: “Metal Oxides and Water – Nucleation, Reactivity, and Growth”, Berlin (Germany), August 22-25, 2016

**On the Role of Pre-Nucleation Clusters in Crystallization**  
18th International Conference on Crystal Growth and Epitaxy (ICCGE18), session “Organic and Biological Crystallization (G05)”, Nagoya (Japan), August 7-12, 2016

## James Griffiths

**Beyond MaxElide: A'-Extraction from Ellipsis Sites**  
paper presented at “Cambridge SyntaxLab”, Cambridge (UK), May 2017

**Probing the PP Domain: Complex Possessive PPs in British English**  
(with Craig Sailor), paper presented at “Morphosyntactic variation in adpositions”, Cambridge (UK), May 2017

**Echo fragments: preliminary remarks**  
(with G. Güneş and A. Lipták), paper presented at “Leiden University Centre of Linguistics Comparative Syntax seminar”, Leiden (The Netherlands), April 2017

**Beyond MaxElide: A'-Extraction from Ellipsis Sites**  
paper presented at “Generative Linguistics in the Old World (GLOW) 40”, Leiden (The Netherlands), March 2017

**PPs with Gaps in**  
(with Craig Sailor), paper presented at the “91st annual meeting of the Linguistic Society of America”, Austin (USA), January 2017

**Appositions as fragments?**  
paper presented at the “Workshop on Fragments”, Saarbrücken (Germany), October 2016

**Re-characterising MaxElide**  
paper presented at the “4th annual conference for International Society for the Linguistics of English”, Poznań (Poland), September 2016

## Roxana Halbleib

**A Latent Factor Model for Realized Volatilities**  
6th Workshop Konstanz-St. Gallen on Computational Social Science, Konstanz (Germany), July 2017

**A Latent Factor Model for Realized Volatilities**  
10th Annual Society for Financial Econometrics (SoFIE) Conference at Stern School of Business, New York University (USA), June 2017

**A Latent Factor Model for Panels of Realized Volatilities**  
Conference on Computational and Financial Econometrics, Seville (Spain), December 2016

**Estimating Stable Latent Factor Models by Indirect Inference**  
“Computational Methods in Econometrics: a Workshop in Honor of Giorgio Calzolari”, Florence (Italy), October 24, 2016

**Estimating Stable Latent Factor Models by Indirect Inference**  
Statistical Week Conference, Augsburg (Germany), September 15, 2016

## Wolf Hütteroth

**Voluntary Passive Movement in Fruit Flies – is there a Role for Intentional Exafference?**  
invited lecture, Regensburg (Germany), July 27, 2017

**Voluntary Passive Movement in Fruit Flies – is there a Role for Intentional Exafference?**  
invited lecture, Göttingen (Germany), June 3, 2017

**Intentional Exafference in Fruit Flies**  
workshop “Learning and Memory: A Synthesis of Bees and Flies”, Aspet (France), June 2-4, 2017

**Intentional Exafference in Fruit Flies**  
15th Rauschholzhausen seminar – Development and Plasticity of the insect nervous system, Marburg (Germany), May 14-15, 2017

**How to Reinforce Sugar Memory – a Two-Sided Story**  
invited lecture, Charité Berlin (Germany), February 17, 2017

**Palatability and Caloric Value Reinforce Distinguishable Memories via Mushroom Body Dopamine Neurons**  
46th Society for Neuroscience meeting, San Diego (USA), November 16, 2016

## Claudius Kratochwil

**Coevolution of Coloration Patterns in Cichlid Fishes through Convergent Gene Regulatory Evolution**  
Centre for Integrative Neuroscience Tübingen (Germany), September 2016

## Andrea Lailach-Henrich

**Imaginative Experience**  
What-If Group, University of Konstanz (Germany), November 18, 2016

**Perceiving the Unseen. A Kantian Approach to Amodal Perception**  
II. International Conference on Philosophy of Mind, University of Minho (Portugal), September 2016

## Ben Lambert

**Mean Curvature Flow with a Neumann Boundary Condition**  
GK colloquium, University of Ravensburg (Germany), November 2016

## Sven Lauer

**A Puzzle About Believe: Moore's Paradox vs. Hedging Effects**  
Jour Fixe of the Research Unit “What if?”, University of Konstanz (Germany), July 18, 2017

**Prolegomena to a Unified Theory of Interrogative Force**  
Workshop on Speech Acts: Meanings, Uses, Syntactic and Prosodic Realizations, Leibniz-Center General Linguistics, Berlin (Germany), May 29-31, 2017

**Causal Necessity, Causal Sufficiency, and the Meaning of Causative Verbs**  
(with Perna Nadathur), workshop on “Modeling causality in formal semantics”, University of Konstanz (Germany), May 22, 2017

**Quantified Indicative Conditionals and the Relative Reading of Most**  
(with Perna Nadathur), California Universities Semantics and Pragmatics (CUSP) 9, University of California, Santa Cruz (USA), October 21-22, 2016

**Temporal Implicatures and World Knowledge Interact Rapidly During Sentence Comprehension**  
(poster, with Anna Czipionka), “Logic and Language in Conversation (LogiCon)”, Utrecht University (The Netherlands), September 19-20, 2016

**This Week, but not Next: Temporal Implicatures and Their Interplay with World Knowledge During Language Comprehension**  
(poster, with Anna Czipionka), “Architectures and Mechanisms for Language Processing (AMLaP)”, Bilbao (Spain), September 1-3, 2016

## Bernard Lepetit

**Using Lhcx Knockout Mutants to Study Photoprotection in Phaeodactylum tricornutum**  
IV. international conference (73. Fujihara seminar) “The Molecular Life of Diatoms”, Kobe (Japan), July 2017

**Revealing the Mysteries of Photoprotection in Diatoms by Modern Molecular Biological and Biophysical Techniques**  
invited talk for the botanical colloquium of the Friedrich Schiller Universität Jena (Germany), May 2017

**Mechanistics of Plastoquinone Pool Dependent Retrograde Signaling in Diatoms**  
invited talk for a DFG priority program round table discussion, Bielefeld (Germany), April 2017

**The Teamwork of Lhcx and Xanthophyll Cycle in Providing NPQ in Phaeodactylum Tricornutum**  
invited talk for the institutional seminar series of the Centre Algatech, The Czech Academy of Science, Trebon (Czech Republic), November 2016

**Lhcx1 Knockout Causes Loss of qE in Phaeodactylum Tricornutum**  
24th International Diatom Symposium, Quebec (Canada), August 2016

## Doris Penka

**Negative Expressions in the Standard of Equatives: The View from German**  
Landscape of Neg-Words Workshop, University of Göttingen (Germany), March 27-29, 2017

**Degree Equatives – the Same as Comparatives?**  
workshop on Equatives, University of Köln (Germany), December 15, 2016

**One Many, Many Readings**  
Sinn und Bedeutung 21, University of Edinburgh (UK), September 4-6, 2016

## Michael Pester

**Die Entstehung und Evolution (mikrobiellen) Lebens**  
habilitation lecture Molecular Geomicrobiology of Lake Nitrification seminar series, KIT, Garmisch-Patenkirchen (Germany), November 11, 2016

**Eco-Systems Biology of Microbial Dark Matter**  
Leibniz Institute DSMZ, Braunschweig (Germany), October 18, 2016

**The Cryptic Sulfur Cycle of Freshwater Ecosystems**  
seminar series at Aarhus University, Aarhus (Denmark), August 10, 2016

## Torsten Pietsch

**Proximity-Induced Josephson Effects in Superconducting Spin-Valves**  
Moscow International Symposium on Magnetism, Moscow (Russia), July 2016

**Magnetism and Transport in Alumina-Templated Hybrid Nanowires**  
EMN Prague Meeting, Prague (Czech Republic), June 2016

**Transport and Dynamics of Ferromagnetic Josephson Junctions and Superconducting Spin-Valves**  
Workshop on High-Frequency Superconducting Electronics, Björkliden (Sweden), April 2016

## Dennis Pinggen

**The Art of Presenting Science**  
workshop “How to present science”, Konstanz (Germany), July 4, 2017

**Biomass Use and Catalyst Development to Man-Made Materials**  
4. Lange Nacht der Wissenschaft, Konstanz (Germany), May 13, 2017

**Algae Lipids as a Source for Simple Building Blocks in an all Catalytic Route**  
9th workshop on “Fats and Oils as Renewable Feedstock for the Chemical Industry”, Karlsruhe (Germany), March 19, 2017

**Algae Lipids as a Source for Simple Building Blocks in an all Catalytic Route**  
Jahrestreffen Deutsche Katalytiker 50, Weimar (Germany), March 15, 2017

**The World of Chemistry, from Alchemy to Nobel Prize**  
workshop: “Mobility 2.0: Aspirations, Challenges, Obstacles”, Hebrew University, Jerusalem (Israel), December 11-12, 2016

## Maria Daniela Poli

**Mobility in the Legal Profession**  
workshop: “Mobility 2.0: Aspirations, Challenges, Obstacles”, Hebrew University, Jerusalem (Israel), December 11-12, 2016

**Der horizontale Dialog zwischen Verfassungsgerichten**  
2. Tagung junger Prozessrechtswissenschaftler: Prozessrecht in nationaler, europäischer und globaler Perspektive, Bucerius Law School, Hamburg (Germany), September 30 - October 1, 2016

**The Judicial Dialogue in Europe – Definition of a Still Unclear Concept**  
Vienna Journal on International Constitutional Law Conference 2016, Vienna University of Economics and Business (Austria), September 23, 2016

## Jennifer Randerath

**Tool Choosing Tool Using**  
DFG SPP Brainstorming Meeting, Cologne (Germany), June 30, 2017

## Gianluca Rastelli

**Ground State Cooling of a Nanomechanical Resonator by Electron Transport**  
conference: “Frontiers of Quantum and Mesoscopic Thermodynamics (FQMT'17)”, Prague (Czech Republic), July 13, 2017

**Electromechanical Effects in Quantum Dot Systems**  
Michigan State University, East Lansing (US), June 20, 2017

**Spin-Vibration Interaction in a Nanomechanical Spin-Valve**  
Spin Dynamics – Collaborative Conference, Jeju (South Korea), May 23, 2017



**Dissipation-Induced Enhancement of Quantum Fluctuations**  
DPG Spring Meeting, Dresden (Germany), March 20, 2017

**Cooling a Nanomechanical Resonator by Electron Transport in Hybrid Devices**  
conference: "Frontiers of Nanomechanical Systems (FNS), La Thuile (Italy), February 8, 2017

**Ground State Cooling a Mechanical Resonator by Spin-Dependent Transport and Andreev reflection**  
LPMCC CNRS-laboratory, Grenoble (France), December 9, 2016

**Control of Vibrational States in a Nanomechanical Resonator by Andreev Reflection**  
international conference: "Condensed Matter in Groningen", CMD26, Groningen (The Netherlands), September 9, 2016

## Tanja Rinker

**Neural Indices of Speech Perception in Bilingual Spanish-English and Turkish-German Children**  
(with V. Shafer, Y. Yu, M. Wagner), International Symposium on Bilingualism (ISB11), Limerick (Ireland), June 2017

**Maintaining Multilingualism in Early Childhood from Kindergarten to Primary School**  
(with Ramona Baumgartner), International Symposium on Bilingualism (ISB11), Limerick (Ireland), June 2017

**Multilingual Developing Turkish Children in Europe – Interdisciplinary Studies and Perspectives**  
(with K. Yaghmur), session chaired at the International Symposium on Bilingualism (ISB11), Limerick (Ireland), June 2017

**The Role of Input in Early Multilingualism**  
invited talk, Department of Linguistics, University of Edinburgh (UK), March 2017

**Advancing the European Multilingual Experience**  
invited talk, Glasgow Language Show, Glasgow (UK), March 2017

**Languages on the Move**  
workshop: "Mobility 2.0: Aspirations, Challenges, Obstacles", Hebrew University, Jerusalem (Israel), December 11-12, 2016

**Multilingualism in the School Setting**  
invited talk at Ringvorlesung Frühe Kindheit, PH Thurgau/University of Konstanz (Switzerland/Germany), November 2016

**Mehrsprachigkeit am Übergang Kita-Grundschule**  
invited talk at Ringvorlesung Frühe Kindheit, PH Thurgau/University of Konstanz (Switzerland/Germany), November 2016

**Lexical Development in Bilingual Turkish-German Children**  
8. Interdisziplinäre Tagung über Sprachentwicklungsstörungen (ISES), Heidelberg (Germany), November 2016

**The Cross-Linguistic Lexical Task**  
workshop on "Methodology and language assessment: Heritage speakers and beyond", University of Konstanz (Germany), September 2016

**The Center for Multilingualism: Case Study: Transferplattform Multilingualism in Day Care and Primary Schools**  
"Bilingualism Matters" Dissemination Meeting, Trento (Italy), September 2016

## Sebastian Schutte

**Revenge, Prejudice, and Authoritarian Thinking: Studying the Individual-Level Consequences of Political Violence in Ongoing Conflicts**  
paper presented at the "Annual Meeting of the Jan Tinbergen European Peace Science Conference", Antwerp (Belgium), June 26-28, 2017

**How Fighting over Issues Leads to Hatred towards Identities**  
paper presented at the "Annual Meeting of the American Political Science Association", Philadelphia, PA (USA), September 1-4, 2016

## Denis Seletskiy

**Quantitative Measurement of Vacuum Fluctuations in the THz Regime**  
CLEO Europe 2017, Munich (Germany), June 21-25, 2017

## Elena Sturm

**Structural Chemistry and Morphogenesis of Self-Assembled Mesocrystals: Structural and Morphogenetic aspects**  
scientific seminar (invited lecture), Molecular Design Institute at the Department of Chemistry, New York University (USA), July 26, 2017

**Structural Chemistry and Morphogenesis of Self-Assembled Mesocrystals Crystal Growth and Assembly**  
Gordon Research Conference, University of New England, Biddeford, ME (USA), June 25-30, 2017

**Structural Chemistry and Morphogenesis of Self-Assembled Mesocrystals: Structural and Morphogenetic aspects**  
scientific seminar (invited lecture), Leibniz Institute for Solid State and Materials Research, Dresden (Germany), April 25, 2017

## Margaret Thomas

**Effective Pila-Wilkie Bounds for Restricted Pfaffian Surfaces**  
Workshop "O-Minimality and Diophantine Applications", The Fields Institute for Research in Mathematical Sciences, Toronto (Canada), June 22, 2017

**Effective Pila-Wilkie Bounds for Restricted Pfaffian Surfaces**  
workshop "O-Minimality and its Applications to Number Theory and Analysis", Mathematisches Forschungsinstitut Oberwolfach (Germany), May 3, 2017

**O-Minimality, Counting Rational Points, and Pfaffian Functions**  
postdoctoral (program) seminar, Thematic Program on "Unlikely Intersections, Heights and Efficient Congruencing", The Fields Institute for Research in Mathematical Sciences, Toronto (Canada), April 13, 2017

**Smooth Parameterization in O-Minimal Structures**  
Logic Seminar, The Ohio State University, Columbus, OH (USA), April 11, 2017

**Parameterization in O-Minimal Structures**  
meeting "O-Minimality and Diophantine Geometry", University of Manchester (UK), September 7, 2016

**Parameterization in O-Minimal Structures**  
workshop "Model Theory: from Fields to Hardy Fields" (meeting dedicated to Lou van den Dries), Fields Institute, Toronto (Canada), August 4, 2016

## Grey Violet

**Geometry of the Spaces of  $\mathcal{SDS}$ -Stable Polynomials**  
Bogomolov's Laboratory of Algebraic Geometry, HSE, Moscow (Russia), May 2017

**Geometry of D-Stability Problems**  
Institute for Control Systems RAS, Moscow (Russia), April 2017

**Topology and Geometry of  $\mathcal{SDS}$ -Stability**  
Shanghai Yao Tong University, Shanghai (China), October 2016

## Nadir Weber

**Einführung and Input Interspezifische Kommunikation**  
„7. Forum Tiere und Geschichte“, University of Konstanz (Germany), July 20-21, 2017

**Fliegende Höfe: Falkenjagd und Fürstengesellschaft im 17. und 18. Jahrhundert**  
Kolloquium für Neuere Geschichte, University of Bern (Switzerland), May 6, 2017

**Gezähmte Gesellschaft? Tiere und Menschen am französischen Königshof, 1594-1715**  
Kolloquium Frühe Neuzeit, University of Gießen (Germany), January 23, 2017

**Animals at Court: Introduction**  
conference „Animals at Court“, Munich (Germany), December 10, 2016

**Escaping (in) the City: Courtly Hunting Practices in and around Seventeenth Century Paris**  
13th International Conference on Urban History of the EAUH, panel "Liminal Lives: Relations between Urban Societies and Non-human Animals (16th - 19th Century)", Helsinki (Finland), August 26, 2016

## Leila Whitley

**Panel Chair** (with input), conference: "Visual Culture and Social Inequality", University of Konstanz (Germany), July 20, 2017

**Citational Walls in Border and Migration Scholarship**  
Race, Power and Privilege in Academia", Humboldt University, Berlin (Germany), June 27-28, 2017

**Border Theory and the Borders of Theory**  
keynote plenary, Netherlands Research School of Gender Studies, Annual Research Day, Utrecht University (The Netherlands), June 2017

**Introduction to Everyday Borders**  
as part of the Postcolonial Studies Initiative film series, Utrecht University (The Netherlands), April 11, 2017

**Narratives of Harm**  
philoSOPHIA annual conference, Florida Atlantic University (USA), March 31, 2017

**Invited speaker on the "Killjoys at Work" panel**  
Critical Theory and Practice seminar series, Cambridge University (UK), March 14, 2017

**Constructing the Borders of Europe Through Gendered Bodies**  
National Women's Studies Association 37th Annual Conference: Decoloniality, Montreal/Quebec (Canada), November 2016

## Keshun Zhang

**Angry Women Are More Trusting: The Differential Effects of Perceived Social Distance on Trust Behavior**  
(with T. Goetz, S. Martiny, F. Chen and L. Haag), 15th European Congress of Psychology (ECP), Amsterdam (The Netherlands), July 11, 2017

## Maria Zhukova

**Speaking Images: TV Metaphors in Soviet Cinema**  
workshop "TV Images and Political Cultures in Russia, 1960-2010", University of Konstanz (Germany), February 3, 2017

**Mobility at the Turn of the Century: Literature and its Media**  
workshop: "Mobility 2.0: Aspirations, Challenges, Obstacles", Hebrew University, Jerusalem (Israel), December 11-12, 2016

**Television in Films of Perestroika**  
weekly Slavic colloquium, University of Konstanz (Germany), November 8, 2016



# Publications

## Mohammad Adm

**Invariance of Total Nonnegativity of a Matrix under Entry-Wise Perturbation and Subdirect Sum of Totally Nonnegative Matrices** (with J. Garloff), in: "Linear Algebra and its Applications", 2017, 514, p. 222-233. DOI: 10.1016/j.laa.2016.11.001.

**Intervals of Special Sign Regular Matrices** (with J. Garloff), in: "Linear and Multilinear Algebra", 2016, 64(7), p. 1424-1444. DOI: 10.1080/03081087.2015.1090388

**Total Nonnegativity of Matrices Related to Polynomial Roots and Poles of Rational Functions** (with J. Garloff, and J. Titi), in: "Journal of Mathematical Analysis and Applications", 2016, 434 (1), p. 780-797. DOI: 10.1016/j.jmaa.2015.08.078

**A Survey of Classes of Matrices Possessing the Interval Property and Related Properties** (with J. Garloff, and J. Titi), in: "Reliable Computing", 2016, 22, p. 1-14.

## Francesca Biagioli

**Space as a Source of Knowledge and as an Object of Research: The Transformation of the Concept of Space in the Post-Kantian Philosophy of Geometry**, in: "Space, Time, and Limits of Human Understanding" (eds. G. Ghirardi and S. Wuppuluri), p. 3-14. Springer: The Frontiers Collection, 2017.

**Space, Number, and Geometry from Helmholtz to Cassirer**. Springer: Archimedes 2016.

## Janina Beiser-McGrath

**International Information Flows, Government Response and the Contagion of Ethnic Conflict**, in: "Global Dynamics: Approaches from Complexity Science" (ed. A. Wilson), p. 214-229. Chichester: John Wiley and Sons 2016.

**Modelling Strategic Interactions in a Global Context**, in: "Approaches to Geo-Mathematical Modelling: New Tools for Complexity Science" (ed. A. Wilson), p. 293-305. Chichester: John Wiley and Sons 2016.

## Klaus Boldt

**Graded Shells in Semiconductor Nanocrystals**, in: "Zeitschrift für Physikalische Chemie" 2017, 231(1), p. 77-92. DOI: 10.1515/zpch-2016-0882

**Semiconductor-Based Nanostructures: Characterization and Properties**, in: "Hybrid Nanocrystal Architectures: Synthesis, Properties, and Applications" (ed. D. Cozzoli). London: Imperial College Press, in press.

## Julia Boll

**The Sum of Our Parts: the Voices of the Human Genre Project**, in: "European Journal of English Studies" (Special Issue: Poetry, Science, Technology, eds. Irmtraud Huber and Wolfgang Funk), forthcoming 2018.

**Making the Audience Cry: Witnessing Violence and the Ethics of Compelled Empathy**, in: "Political Performances: Theory and Practice (Vol. II)" (eds. M. Aragay, P. Botham, A. Oz, L. Peters, and J. Ramón Prado). Leiden: Brill, forthcoming 2017.

**Is Knowledge Performative? Science/Stage: an Experiment in Performance Lectures**, in: "Interdisciplinary Science Review" (Special Issue: DOIng Science, eds. N. Engelhardt and J. Hoydis), 2017.

**The Sacred Guest and the Ungrievable Sacrifice: communitas at the Theatre**, in: "Journal of Contemporary Theatre and Drama in English" (Special Issue: Theatre and Mobility", eds. K. Schmidt, N. Aghoro and N. Schneider), 2017, 5(1), p. 126-139. DOI: 10.1515/jcde-2017-0010

## Thomas Böttcher

**An Unsaturated Quinolone N-Oxide of Pseudomonas aeruginosa Modulates Growth and Virulence of Staphylococcus aureus** (with D. Szamosvári), in: "Angewandte Chemie International Edition", 2017, 56(25), p. 7271-7275.

**Ein ungesättigtes Chinolon-N-oxid von Pseudomonas aeruginosa moduliert Wachstum und Virulenz von Staphylococcus aureus** (with D. Szamosvári), in: "Angewandte Chemie", 2017, 129 (25), p. 7377-7381.

**One Enzyme, Three Metabolites: Shewanella algae Controls Siderophore Production via the Cellular Substrate Pool** (with S. Rütshlin, and S. Gunesch), in: "Cell Chemical Biology", 2017, 24(5), p. 598-604.

**Chemical Probes for Competitive Profiling of the Quorum Sensing Signal Synthase PqsD of Pseudomonas aeruginosa** (with M. Prothiwa, D. Szamosvári, and S. Glasmacher), in: "Beilstein Journal of Organic Chemistry", 2016, 12, p. 2784-2792.

**An Additive Definition of Molecular Complexity**, in: "J. Chem. Inf. Model.", 2016, 56(3), p. 462-470. DOI: 10.1021/acs.jcim.5b00723

**Dynamics of Snake-Like Swarming Behaviour of Vibrio Alginolyticus** (with H. L. Elliott, and J. Clardy), in: "Biophys. J.", 2016, 110(4), p. 981-992. DOI: 10.1016/j.bpj.2015.12.037

**An Aromatic Hydroxyamide Attenuates Multiresistant Staphylococcus Aureus Toxin Expression** (with J. Vomacka, V.S. Korotkov, B. Bauer, F. Weinandy, M.H. Kunzmann, J. Krysiak, O. Baron, K. Lorenz-Baath, and S.A. Sieber), in: "Chem. Eur. J.", 2016, 22(5), p. 1622-1630. DOI: 10.1002/chem.201503981

**Synthetic Quinolone Signal Analogues Inhibiting the Virulence Factor Elastase of Pseudomonas aeruginosa** (with D. Szamosvári, V. F. Reichle, and M. Jureschi), in: "Chem. Commun.", 2016, 52(92), p. 13421-13518. DOI: 10.1039/c6cc06295d

## Daniele Brida

**Coherent Field Transients Below 15 THz from Phase-Matched Difference Frequency Generation in 4H-SiC** (with M. P. Fischer, J. Bühler, G. Fitzky, T. Kurihara, S. Eggert, and A. Leitenstorfer), in: "Optics Letters", 2017, 42, p. 2687-2690.

**The Room Temperature Pro-drome of Charge-Order in Copper Oxides** (with S. Peli, S. Dal Conte, R. Comin, N. Membrini, A. Ronchi, P. Abrami, F. Banfi, G. Ferrini, S. Lupi, M. Fabrizio, A. Damascelli, M. Capone, G. Cerullo, and C. Giannetti), in: "Nature Physics", online first. DOI: 10.1038/nphys4112

**Sub-Cycle Optical Phase Control of Nanotransport in the Single-Electron Regime** (with T. Rybka, M. Ludwig, M. Schmalz, V. Knittel and A. Leitenstorfer), in: "Nature Photonics", 2016, 10, p. 667-670.

**Tunability and Losses of Mid-infrared Plasmonics in Heavily Doped Germanium Thin Films** (with J. Frigerio, A. Ballabio, G. Isella, E. Sakat, P. Biagioni, M. Bollani, E. Napolitani, C. Manganello, M. Virgilio, A. Grupp, M. P. Fischer, K. Gallacher, D. J. Paul, L. Baldassarre, P. Calvani, V. Giliberti, A. Nucara, and M. Ortolani), in: "Phys. Rev. B", 2016, 94(8), 085202.

**Stimulated Raman Scattering Microscopy by Nyquist Modulation of a Two-Branch Ultrafast Fiber Source** (with C. Riek, C. Kocher, P. Zirk, C. Kölbl, P. Fimpel, A. Leitenstorfer, A. Zumbusch), in: "Opt. Lett.", 2011, 41(16), p. 3731-3734.

**Optical Activation of Germanium Plasmonic Antennas in the Mid Infrared** (with M. P. Fischer, C. Schmidt, E. Sakat, J. Stock, A. Samarelli, J. Frigerio, M. Ortolani, D. J. Paul, G. Isella, A. Leitenstorfer, P. Biagioni), in: "Phys. Rev. Lett." 2016, 117, 047401.

**Time-Resolved Photoluminescence in Gold Nanoantennas** (with E. Sakat, I. Bargigia, M. Celebrano, A. Cattoni, S. Collin, M. Finazzi, C. D'Andrea, and P. Biagioni), in: "ACS Photonics", 2016, 3, p. 1489-1493.

## María Cruz Berrocal

**Historical Archaeology of Early Modern Colonialism in Asia Pacific: Vol. I. The Southwest Pacific and Oceanian Regions**, (ed. with C.-h. Tsang). Gainesville: University Press of Florida, 2017.

**Historical Archaeology of Early Modern Colonialism in Asia Pacific: Vol. II. The Asia-Pacific Region**, (ed. with C.-h. Tsang). Gainesville: University Press of Florida, 2017.

**Understanding Early Modern Colonialism** (with C.-h. Tsang), in: "Asia and the Pacific Historical Archaeology of the Early Modern Colonialism in Asia Pacific: Vol.I. The Southwest Pacific and Oceanian Regions", (ed. with C.-h. Tsang). Gainesville: University Press of Florida, 2017.

**Historiographical Absences and Archaeological Consequences: the Early Modern European Journeys in the Pacific**, in: "Historical Archaeology of the Early Modern Colonialism in Asia Pacific: Vol. I. The Southwest Pacific and Oceanian Regions", (ed. with C.-h. Tsang). Gainesville: University Press of Florida, 2017.

**Archaeologies of Early Modern Spanish Colonialism** (ed. with S. Montón, and C. Ruiz). New York: Springer 2016.

**Towards a Comparative Approach to Archaeologies of Early Modern Spanish Colonialism** (with S. Montón, and C. Ruiz), in: "Archaeologies of Early Modern Spanish Colonialism", p. 1-8. New York: Springer 2016.

**Ilha Formosa, 17th Century: Archaeology in Small Islands, History of Global Processes**, in: "Archaeologies of Early Modern Spanish Colonialism", p. 281-302. New York: Springer 2016.

## Panteleimon Eleftheriou

**On Definable Skolem Functions in Weakly O-Minimal Non-Valuational Structures** (with A. Hasson, and G. Keren), in: "Journal of Symbolic Logic", forthcoming.

## Bianca Gaudenzi

**Journal of Contemporary History** (Special Issue: The Restitution of Looted Art in the Twentieth Century, eds. B. Gaudenzi, A. Swenson and M.-A. Middelkoop), 2016, 52(3), p. 491-667.

**Looted Art and Restitution in the Twentieth Century: Towards a Global Perspective** (with A. Swenson), in "Journal of Contemporary History", 2016, 52(3), p. 491-518. DOI: 10.1177/0022009417692409

**Comprare per credere. La pubblicità in Italia dalla Belle Époque a oggi** (with E. Bini, and N. Fasce). Rome: Carocci 2016.

## Denis Gebauer

**Crystallization Caught in the Act with Terahertz Spectroscopy: Non-Classical Pathway for L-(+)-Tartaric Acid** (with A. Soltani, L. Duschek, B. M. Fischer, H. Cölfen, and M. Koch), in: "Chemistry – A European Journal", 2017, online first. DOI: 10.1002/chem.201702218

**Functional Prioritization and Hydrogel Regulation Phenomena Created by a Combinatorial Pearl-Associated 2-Protein Biomimetic System** (with G. Jain, M. Pendola, Y. Chieh Huang, J. Juan-Colás, S. Johnson, and J. Spencer Evans), in: "Biochemistry", 2017, 56(28), p. 3607-3618. DOI: 10.1021/acs.biochem.7b00313

**Growth of Organic Crystals via Attachment and Transformation of Nanoscopic Precursors** (with Y. Jiang, M. Kellermeier, Z. Lu, R. Rosenberg, A. Moise, M. Przybylski, and H. Cölfen), in: "Nature Communications", 2017, 8, art.-no. 15933. DOI: 10.1038/ncomms15933

**Retrosynthesis of CaCO<sub>3</sub> via Amorphous Precursor Particles Using Gastroliths of the Red Claw Lobster (Cherax quadricarinatus)** (with A. Neira-Carrillo, M. S. Fernández, G. P. Hevia, J. L. Arias, and H. Cölfen), in: "Journal of Structural Biology" 2017, 199(1), p. 46-56. DOI: 10.1016/j.jsb.2017.05.004

**A Model Sea Urchin Spicule Matrix Protein, rSpSM50, is a Hydrogelator that Modifies and Organizes the Mineralization Process** (with G. Jain, M. Pendola, Y. Chieh Huang, and J. Spencer Evans), in: "Biochemistry", 2017, 56(21), p. 2663-2675. DOI: 10.1021/acs.biochem.7b00083

**Alignment of Amorphous Iron Oxide Clusters: A Non-Classical Mechanism for Magnetite Formation** (with S. Sun, and H. Cölfen), in "Angewandte Chemie International Edition", 2017, 56(14), p. 4042-4046. DOI: 10.1002/anie.201610275

**Ausrichtung amorpher Eisenoxid-Cluster: ein nichtklassischer Mechanismus für die Magnetitbildung** (with S. Sun, and H. Cölfen), in "Angewandte Chemie", 2017, 129(14), p. 4100-4104. DOI: 10.1002/ange.201610275

### A CaCO3/Nanocellulose-Based Bioinspired Nacre-Like Material

(with M. F. Khouzani, C. Schütz, G. M. Durak, J. Fornell, J. Sort, G. Salazar-Alvarez, and L. Bergström), in: "Journal of Materials Chemistry A" 2017, 5, p. 16128-16133. DOI: 10.1039/C6TA09524K

### Water Dynamics from THz Spectroscopy Reveal the Locus of a Liquid-Liquid Binodal Limit in Aqueous CaCO3 Solutions

(with F. Sebastiani, S. L. P. Wolf, B. Born, H. Cölfen, und M. Havenith), in: "Angewandte Chemie International Edition", 2017, 56(2), p. 490-495. DOI: 10.1002/anie.201610554

**THz-Spektroskopie erlaubt Rückschlüsse auf die Wasserdynamik und die Lage einer flüssig-flüssig-binodalen Grenze in wässrigen CaCO3-Lösungen** (with F. Sebastiani, S. L. P. Wolf, B. Born, H. Cölfen, and M. Havenith), in: "Angewandte Chemie", 2017, 129(2), p. 504-509. DOI: 10.1002/ange.201610554

### Osteopontin Stabilizes Metastable States Prior to Nucleation During Apatite Formation

(with C. J. Steenberg Ibsen, and H. Birkedal), in: "Chemistry of Materials", 2016, 28(23), p. 8550-8555. DOI: 10.1021/acs.chemmater.6b01088

**A General Strategy for Colloidal Stable Ultrasmall Amorphous Mineral Clusters in Organic Solvents** (with S. Sun, and H. Cölfen), in: "Chemical Science", 2017, 8, p. 1400-1405. DOI: 10.1039/C6SC02333A

**A Nacre Protein Forms Mesoscale Hydrogels that 'Hijack' the Biominerzalization Process within a Seawater Environment** (with M. Pendola, G. Jain, Y.-C. Huang, and J. Spencer Evans), in: "CrystEngComm", 2016, 18, p. 7675-7679. DOI: 10.1039/C6CE01887D

### Polyaspartic Acid Facilitates Oxolation within Iron(III) Oxide Pre-Nucleation Clusters and Drives the Formation of Organic-Inorganic Composites

(with J. Scheck, M. Drechsler, X. Ma, M. T. Stöckl, J. Konsek, J. B. Schwaderer, S. M. Stadler, and J. J. De Yoreo), in: "Journal of Chemical Physics", 2016, 145, art.-no. 211917. DOI: 10.1063/1.4963738

**Entropy Drives Calcium Carbonate Ion Association** (with M. Kellermeier, P. Raiteri, J. K. Berg, A. Kempter, and J. D. Gale), in: "ChemPhysChem" 2016, 17(21), p. 3535-3541. DOI: 10.1002/cphc.201600653

**Distinct Short-Range Order is Inherent to Amorphous Calcium Carbonate Clusters (< 2 nm)** (with S. Sun, D. M. Chevrier, P. Zhang, and H. Cölfen), in: "Angewandte Chemie International Edition", 2016, 55(40), p. 12206-12209. DOI: 10.1002/anie.201604179

**Ausgeprägte Nahordnung in kleinen amorphen Calciumcarbonat-Clustern (<2 nm)** (with S. Sun, D. M. Chevrier, P. Zhang, and H. Cölfen), in: "Angewandte Chemie", 2016, 128(40), p. 12393-12397. DOI: 10.1002/ange.201604179

## Roxana Halbleib

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**Messen und Verstehen in der Wissenschaft – Interdisziplinäre Ansätze** ["Measuring and Understanding in Science – Interdisciplinary Approaches"] (ed. with M. Schweiker, J. Hass, and A. Novokhatko). Springer Verlag: Wiesbaden 2017.

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**Forecasting Covariance Matrices: A Mixed Approach** (with V. Voev), in: "Journal of Financial Econometrics", 2016, 4(2), p. 383-417.

## Claudius Kratochwil

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## Oleksandra Kukharenko

**An Efficient Molecular Dynamics Simulation Method for Aspartic Acid Oligomers as Prenucleation Seed** (with T. Lemke, C. Peter); In: "J. Chem. Theory Comput.", in preparation.

**Using Dimensionality Reduction to Systematically Expand Conformational Sampling of Intrinsically Disordered Proteins** (with K. Sawade, J. Steuer, and C. Peter), in: "J. Chem. Theory Comput.", 2016, 12, p. 4726-4734. DOI: 10.1021/acs.jctc.6b00503

## Andrea Lailach-Hennrich

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## Ben Lambert

**Construction of Maximal Hypersurfaces with Boundary Conditions**, in "Manuscripta Mathematica", 2017, 153(3-4), p. 431-454. DOI: 10.1007/s00229-016-0896-1

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**A Geometric Inequality for Convex Free Boundary Hypersurfaces in the Unit Ball** (with J. Scheuer), in "Proceedings of the American Mathematical Society", 2017, 145(9), p. 4009-4020.

## Sven Lauer

**Conditional Imperatives and Endorsement** (with C. Condoravdi), in: "Proceedings of NELS 47", in press.

**Quantified Indicative Conditionals and the Relative Reading of Most** (with P. Nadathur), in: "Proceedings of Sinn und Bedeutung 21", University of Edinburgh, in press.

## Bernard Lepetit

**Production of Chemicals from Microalgae Lipids-Status and Perspectives** (S. K. Hess, B. Lepetit, P. G. Kroth, and S. Mecking), in: "European Journal of Lipid Science and Technology" 2017, online first. DOI: 10.1002/ejlt.201700152

**A Fast and Reliable Strategy to Generate TALEN-Mediated Gene Knockouts in the Diatom Phaeodactylum tricornutum** (with M. Serif, K. Weißert, P. G. Kroth, C. Rio Bartulos), in: "Algal Research", 2017, 23, p. 186-195.

**The Diatom Phaeodactylum Tricornutum Adjusts NPQ Capacity in Response to Dynamic Light via Fine-Tuned Lhcx and Xanthophyll Cycle Pigment Synthesis** (with G. Gélín, M. Lepetit, S. Sturm, S. Vugrinec, A. Rogato, P. G. Kroth, A. Falciatore, and J. Lavaud), in: "New Phytologist", 2017, 214(1), p. 205-218. DOI: 10.1111/nph.14337

## Doris Penka

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**One many, many readings**, in: "Proceedings of Sinn und Bedeutung 21", University of Edinburgh 2017.

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## Michael Pester

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## Torsten Pietsch

**Self-Assembled Magnetite Mesocrystalline Films: Toward Structural Evolution from 2D to 3D Superlattices** (with J. Brunner, I. A. Baburin, S. Sturm, K. Kvashnina, A. Rossberg, S. Andreev, E. Sturm, and H. Cölfen), in: "Advanced Materials Interfaces", 2017, 4(1), 1600431. DOI: 10.1002/admi.201600431

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## Dennis Pingen

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## Maria Daniela Poli

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## Jennifer Randerath

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## Gianluca Rastelli

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## Tanja Rinker

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## Sebastian Schutte

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## Denis Seletskiy

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## Minmin Shen

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**Rain Streak Removal by Multi-Frame-Based Anisotropic Filtering** (with C. Wang, and C. Yao), in: "Multimedia Tools and Applications", 2017, 76(2), p. 2019-2038.

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## Antje Strauss

**The Syllable in the Light of Motor Skills and Neural Oscillations Language** (with J.-L. Schwartz), in: "Cognition and Neuroscience", 2017, 32(5), p. 562-569.

## Elena Sturm

**Mesocrystals: Past, Presence, Future** (with H. Cölfen) in: "Crystals" 2017, 7(7), 207. DOI: 10.3390/cryst7070207

**Self-Assembled Magnetite Mesocrystalline Films: Toward Structural Evolution from 2D to 3D Superlattices** (with J. Brunner, I. A. Baburin, S. Sturm, K. Kvashnina, A. Rossberg, T. Pietsch, S. Andreev, and H. Cölfen), in: "Advanced Materials Interfaces", 2017, 4(1), 1600431. DOI: 10.1002/admi.201600431

## Margaret Thomas

**Rational Values of Weierstrass Zeta Functions** (with G. O. Jones), in: "The Proceedings of the Edinburgh Mathematical Society", 2016, 59(4), p. 945-958.

**Ramsey Growth in Some NIP structures** (with A. Chernikov, and S. Starchenko), submitted, https://arxiv.org/abs/1609.05951.

**Effective Pila–Wilkie Bounds for Unrestricted Pfaffian Surfaces** (with G. O. Jones), submitted.

## Andreas Thum

**The Complete Connectome of a Learning and Memory Centre in an Insect Brain** (with K. Eichler, F. Li, A. Litwin-Kumar, Y.Park, I. Andrade, C. M. Schneider-Mizell, T. Saumweber, A. Huser, C. Eschbach, B. Gerber, R. D. Fetter, J. W. Truman, C. E. Priebe, L. F. Abbott, M. Zlatic, and A. Cardona), in: "Nature", 2017, 548(7666), p. 175-182. DOI: 10.1038/nature23455

**Anatomy and Behavioral Function of Serotonin Receptors in *Drosophila melanogaster* Larvae** (with A. Huser, M. Eschment, N. Güllü, K. A. N. Collins, K. Böppe, L. Pankevych, and E. Rolsing E), in: "PLoS One", 2017, 12(8), p. e0181865. DOI: 10.1371/journal.pone.0181865

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**The Olimpiad: Concordance of Behavioural Faculties of Stage 1 and Stage 3 *Drosophila* larvae**

(with M. J. Almeida-Carvalho, D. Berh, A. Braun, Y. E. Chen, K. Eichler, C. Eschbach, P. M. J. Fritsch, B. Gerber, N. Hoyer, X. Jiang, J. Kleber, C. Klämbt, C. König, M. Louis, B. Michels, A. Miroschnikov, C. Mirth, D. Miura, T. Niewalda, N. Otto, E. Paisios, M. J. Pankratz, M. Petersen, N. Ramsperger, N. Randel, B. Risse, T. Saumweber, P. Schlegel, M. Schleyer, P. Soba, S. G. Sprecher, T. Tanimura, N. Toshima, J. W. Truman, A. Yarali, and M. Zlatic), in: "J Exp Biol.", 2017, 220(Pt 13), p. 2452-2475. DOI: 10.1242/jeb.156646

## Julian Torres-Dowdall

**Rapid and Parallel Adaptive Evolution of the Visual System of Neotropical Midas Cichlid Fishes** (with M. E. R. Pierotti, A. Härer, N. Karagic, J. M. Woltering, F. Henning, K. R. Elmer, and A. Meyer), in: "Molecular Biology and Evolution", 2017. DOI: 10.1093/molbev/msx143

**The Role of Rare Morph Advantage and Conspicuousness in the Stable Gold-Dark Colour Polymorphism of a Crater Lake Midas Cichlid Fish** (with J. Golcher-Benavides, G. Machado-Schiaffino, and A. Meyer), in: "Journal of Animal Ecology", 2017, 86(5), p. 1044-1053. DOI: 10.1111/1365-2656.12693

**Gene Flow Constrains and Facilitates Genetically Based Divergence in Quantitative Traits** (with S. W. Fitzpatrick, C. A. Handelsman, E. W. Ruell, E. D. Broder, J. A. Kronenberger, D. N. Reznick, C. K. Ghalambor, L. M. Angeloni, and C. W. Funk), in: "Copeia", in press.

**The Imperiled Fish Fauna in the Nicaragua Canal Zone** (with A. Harër, and A. Meyer), in: "Conservation Biology", 2017, 31(1), p. 86-95. DOI: 10.1111/cobi.12768

**Incipient Speciation Driven by Hypertrophic Lips in Midas Cichlid Fishes?** (with G. A. Machado-Schiaffino, A. Kautt, L. Baumgarten, F. Henning, and A. Meyer), in: "Molecular Ecology" 2017, 26(8), p. 2348-2362. DOI: 10.1111/mec.14029

**Gene Flow from an Adaptively Divergent Source Causes Rescue through Genetic and Demographic Factors in two Wild Populations of Trinidadian Guppies** (with S. W. Fitzpatrick, J. C. Gerberich, L. M. Angeloni, L. L. Bailey, E. D. Broder, C. A. Handelsman, A. López-Sepulcre, D. N. Reznick, C. K. Ghalambor, and C. W. Funk), in: "Evolutionary Applications", 2016, 9(7), p. 879-891. DOI: 10.1111/eva.12356

**Incipient Sympatric Speciation in Midas Cichlid Fish from the Youngest and One of the Smallest Crater Lakes in Nicaragua Due to Differential Use of the Benthic and Limnetic Habitats?** (with A. Kautt, G. Machado-Schiaffino, and A. Meyer), in: "Ecology and Evolution", 2016, 6(15), p. 5342-5357. DOI: 10.1002/ece3.2287

## Grey Violet

**The Topology of \$D\mathcal{S}\$-Stability**, in: "Proceedings of CDC", 2016. DOI: 10.1109/CDC.2016.7798986

## Nadir Weber

**Lebende Geschenke. Tiere als Medien der frühneuzeitlichen Außenbeziehungen**, in: "Medien der Außenbeziehungen von der Antike bis zur Gegenwart" (eds. P. Hoeres and A. Tischer), p. 160-180. Köln: Böhlau, 2017.

**Protegierte und Protektoren. Asymmetrische politische Beziehungen zwischen Partnerschaft und Dominanz (16. bis frühes 20. Jahrhundert)** (ed. with T. Haug, and C. Windler), Köln/Weimar/Wien: Böhlau 2016.

**Einleitung**, in: Protegierte und Protektoren. Asymmetrische politische Beziehungen zwischen Partnerschaft und Dominanz (16. Bis früher 20. Jahrhundert), p. 9-30. Köln/Weimar/Wien: Böhlau 2016.

**Vom Nutzen einer prekären Lage. Das Fürstentum Neuchâtel, seine auswärtigen Protektoren und die preussische Distanzherrschaft (1707-1806)**, in: "Protegierte und Protektoren. Asymmetrische politische Beziehungen zwischen Partnerschaft und Dominanz (16. Bis früher 20. Jahrhundert)", p. 311-326. Köln/Weimar/Wien: Böhlau 2016.

**Animals at Court**, in: "H-Soz-u-Kult", http://www.hsozkult.de/conferencereport/id/tagungsberichte-7039, 08.03.2017

## Leila Whitley

**The Disappearance of Race: a Critique of the Use of Agamben in Border and Migration Scholarship**, in: "Borderlands", 15(2), accepted.

**Killjoy Movements**, in: "Postcolonial Public Intellectuals" (ed. S. Ponzanesi). Rowman and Littlefield: Lanham, forthcoming.

**Refuge: Canada's Journal on Refugees**, edited special issue on Intersectional Approaches to the Refugee Crisis, forthcoming spring 2018.

## Maria Zhukova

**Rashid Nugmanov's film Iгла (The Needle): 'televisionised' cinema?**, in: Television in Europe Beyond the Iron Curtain (eds. K. Bönker, J. Obertreis, and S. Grampp), p. 163-195. Cambridge: Cambridge Scholars Publishing, 2016.

**Von der Perle zum Kristall: Die Andere Seite von Alfred Kubin als kinematographische Vorlage für Die geheimnisvolle Mauer von Irina Povolockaja**, in: "Jahrbuch der Österreich-Bibliothek in St. Petersburg", 2017, 12, p. 60-71.

**O stichach i poétach v otečestvennoj kinematografii (po materialam Rossijskogo gosudarstvennogo archiva kinofotodokumentov)** ["To Poems and Poets in Russian Films"], in: "Anatomija kinoprostranstva". Peterburg: Petropolis, accepted 2016.

**Poëzija i televidenie v fil'me 'Moskva slezam ne verit'** [Poetry and Television in Film 'Moscow Do Not Believe in Tears'], in: "Chudožestvennoe slovo v prostranstve kul'tury: problemy intermedial'nosti". Ivanovo: Ivanovo, accepted 2016.

■

# Grants and Awards

## ● **Mohammad Adm**

German Academic Exchange Service (DAAD), Postdoctoral Researchers International Mobility Experience (P.R.I.M.E.) fellowship, (02/2017-07/2018)

## ● **Carolin Antos-Kuby**

Volkswagen-Stiftung, Freigeist Fellowship, 900,000 EUR (2017-2022)

Austrian Science Fund (FWF), Hertha-Firnberg position, 230,000 EUR (Carolin had to decline this position because she accepted the Freigeist Fellowship).

European Commission, Marie Skłodowska-Curie Fellowship, 170,000 EUR (since 2017)

Gleichstellungsrat, University of Konstanz, Bridge Fellowship (2017)

## ● **Tuhin Shuvra Basu**

Alexander von Humboldt-Foundation, 2-year postdoctoral fellowship including a German intensive language course (12/2016-12/2018)

## ● **Janina Beiser-McGrath**

University of Essex (UK) – Department of Government – Michael Nicholson Centre for Conflict and Cooperation, visiting fellowship (05/2016-02/2018)

## ● **Francesca Biagioli**

University of California Irvine (USA) – Department of Logic and Philosophy of Science, visiting fellowship and stipend of 8,000 USD (spring quarter 2017)

## ● **Klaus Boldt**

German Academic Exchange Service (DAAD), PPP Australia travel grant, project "Mapping Ultrafast Energy Relaxation in Semiconductor Nanocrystals" in collaboration with Prof. Trevor Smith at the University of Melbourne, 8,462 EUR (2016)

German research Foundation (DFG), funding of the project "Locally Doped Nanorods: Introducing Distance-Dependence in Excitonic Nanostructures", 214,950 EUR (since 2017)

## ● **Julia Boll**

University of Konstanz, Konstanzia Fellowship including means for co-funding, mentoring, inviting speakers, network meetings, and training, 10,000 EUR (09/2015-03/2017)

## ● **Thomas Böttcher**

Industrial sponsoring mainly by Novartis and Roche, funding for the Symposium "Small Molecules and Microbes", 6,660 EUR (2016)

University of Konstanz, Young Scholar Fund, project "Biofilm-Mineralization" in collaboration with Denis Gebauer, 24,000 EUR (2016)

German Research Foundation (DFG), Collaborative Research Center SFB 969-C06, "Bacterial Signals Influencing Cross-Species Proteostasis", 240,800 EUR (2016)

"Junge Akademie" at the Berlin-Brandenburg Academy of Sciences and Humanities (BBAW) and German National Academy of Sciences Leopoldina, elected as a member (2015-2020)

## ● **Daniele Brida**

German Research Foundation (DFG), Emmy Noether Programme, project "Femtosecond Dynamics in Layered Materials", 1,650,000 EUR (2015-2020)

## ● **María Cruz Berrocal**

Alexander von Humboldt Foundation, Humboldt Alumni Award for the project "Museum Networks: People, Itineraries and Collections" (2016-2018)

## ● **Bianca Gaudenzi**

Sotheby's London, funding for the international conference "From Refugees to Restitution: The History of Nazi Looted Art in the UK in Transnational and Global Perspective", 6,000 GBP (10/2016)

## ● **Denis Gebauer**

German Research Foundation (DFG), Co-PI in the Collaborative Research Center SFB 1214-A07, "Bifunctional Hybrid Nanoparticles via Calcium Carbonate Crystallization Driven by Engineered Protein Surfaces" with Prof. Andreas Marx, 316,400 EUR (07/2016-06/2020)

German Research Foundation (DFG), Co-PI in the Collaborative Research Center SFB 1214-A02, "The Onset of Anisotropy during Calcium Carbonate and Phosphate Mineralization" with Prof. Karin Hauser, 309,400 EUR (07/2016-06/2020)

## ● **Roxana Halbleib**

University of Konstanz, Excellence Initiative, guest lectureship for Professor Giorgio Calzolari from University of Florence (Italy), 3,000 EUR (2016)

WIN-Kolleg of the Heidelberg Academy of Sciences and Humanities, funding for the project "Analyzing, Measuring and Forecasting Financial Risks", 100,000 EUR (2014-2017)

## ● **Wolf Hütteroth**

German Research Foundation (DFG), three-year full-time research position, additional travel, conference, workshop and assistant funding for the project "Mechanisms of memory formation by caloric value", 419,050 EUR (2017-2020)

## ● **Claudius Kratochwil**

German Research Foundation (DFG), research grant, project "Evolution of Transcriptional Regulation as Motor of Morphological Diversification in Cichlid Fishes" (KR 4670/2-1), 325,600 EUR (2016-2019)

Baden-Württemberg Stiftung, Elite Program for Postdocs, "Uncovering the Molecular Mechanisms Underlying the Repeated Evolution of Adaptive Color Patterns in Cichlid Fishes", 110,000 EUR (2016-2019)

University of Konstanz, Young Scholar Fund, 23,000 EUR (2016)

German Research Foundation (DFG), Scientific Network Grant, project "The role of interaction structure in eco-evolutionary dynamics", 73,000 EUR (2016)

## ● **Oleksandra Kukharenko**

Carl Zeiss Stiftung, project "Quantitative Analyse der Linker-Histon Ubiquitinierung basierend auf molekularen Simulationsdaten", 200,000 EUR (2017-2019)

## ● **Sven Lauer**

German Research Foundation (DFG), Emmy Noether Programme, project "What Is It to Ask a Question? A Formal Pragmatic Investigation of Interrogative Force", 782,250 EUR (2016-2021)

## ● **Bernard Lepetit**

Eliteprogramm of the Baden-Württemberg Stiftung, project "Influence of Lhcx2 on acclimation to dynamic light and low iron conditions in the diatom *Phaeodactylum tricornutum*", 108,000 EUR (2017-2020)

## ● **Michael Pester**

German Research Foundation (DFG), Co-PI of the RTG "R3 – Responses to biotic and abiotic changes, Resilience and Reversibility of lake ecosystems" (since 04/2017)

## ● **Torsten Pietsch**

German Research Foundation (DFG), research grant, project "Spin- and Charge Dynamics in Ferromagnetic Josephson Junctions", 234,000 EUR (2016)

German Research Foundation (DFG), research grant "Spin- und Ladungsdynamik in Ferromagnetischen Josephson Kontakten", 235,000 EUR (03/2017)

## ● **Jennifer Randerath**

University of Konstanz, Konstanzia Fellowship (07/2017)

## ● **Gianluca Rastelli**

German Research Foundation (DFG), Collaborative Research Center SFB-767, "Time-Dependent Transport and Correlations in Electron Nanostructures", 372,000 EUR (since 2008)

German Research Foundation (DFG), research grant for one doctoral research position, project "Non-equilibrium transport and dynamics in conventional and topological superconducting Junctions", 190,000 EUR (2017-2020)

## ● **Tanja Rinker**

Baden-Württemberg Ministry for Education and Research, project leader and PI of "Supporting Academic Language Development: New Perspectives on German as a Second Language in the Classroom" with Janet Grijzenhout, 926,750 EUR (2016-2021)

European Commission, Marie Skłodowska-Curie Action Innovative Training Network (ITN), "Multi-Mind" (PhD training network), 200,000 EUR (2018-2022, consortium application)

University of Konstanz, internationalization grant for a lecture series with Janet Grijzenhout and Svenja Kornher, 5,000 EUR (2016)

Janet Grijzenhout and in cooperation with the Italian General Consulate, School Board Konstanz and Day Care Centers Konstanz, 162,800 EUR (2015-2017)

## ● **Sebastian Schutte**

Deutsche Stiftung Friedensforschung, project grant, project "Measuring Violence and Emergent Hostility in Ongoing Civil Wars: a Mobile Phone-Based Approach", 88,000 EUR (2016)

## ● **Denis Seletskiy**

German Research Foundation (DFG) and French National Research Agency (ANR) co-fund, Co-PI of the project "Probing Phonon-Matter Interactions at the Nanoscale", 390,000 EUR (2016-2019)

German Research Foundation (DFG), Co-PI in the Collaborative Research Center SFB 767 "Controlled Nanosystems: Project B02: Ultrafast Control of Few-Fermion States in Quantum Dots", 516,100 EUR (2016-2019)

National Science and Engineering Council (NSERC), Canada Research Chair in Ultrafast and Quantum Photonics (2017-2022)

National Science and Engineering Council (NSERC), Canada, discovery grant, PI of the project "Ultrafast Quantum Optics: from Fundamental Research to High-Technology Applications" (2017-2022)

## ● **Elena Sturm**

DM GmbH, research grant, project "Mineralization Precursors for the Mineralization of Hard Tooth Tissue" with Prof. Helmut Cölfen, 108,000 EUR (07/2016-06/2018)

Gebr. Brasseler GmbH and Co. KG, research grant, project "BIOFIL", part II, Machbarkeitsstudie zur Entwicklung eines biomimetischen Füllungsmaterials für kariöse Zähne (short: BIOFIL) – Synthese, Optimierung und Upscaling" Prof. Dr. Helmut Cölfen, total 200,000 EUR (05/2017-04/2019)

German Research Foundation (DFG), Collaborative Research Center SFB 1214, "Mesocrystals: Formation, Structure and Properties", 581,100 EUR (07/2016-06/2020)

## ● **Margaret Thomas**

Fields Institute Toronto (Canada), postdoctoral fellowship for the thematic program (research semester) on "Unlikely Intersections, Heights, and Efficient Congruencing", 25,000 CAD (01/2017-06/2017)

Ontario Baden-Württemberg Stiftung, faculty exchange program and visiting fellowship at McMaster University (Hamilton, Canada), 6,000 EUR (09/2017-12/2017)

## ● **Julian Torres-Dowdall**

German Research Foundation (DFG), research grant, project "Does side matter? The evolution of asymmetric genitalia in livebearing fish", 324,400 EUR (2015-2018)

University of Konstanz, Young Scholar Fund, 37,500 EUR (2016)

## ● **Nadir Weber**

Swiss National Science Foundation, printing subsidies for the volume "Protegierte und Protektoren", 9,177 CHF (01/2016)

Burggemeinde Bern, for the publication "Beobachten, Vernetzen, Verhandeln" (in press), 2,000 CHF (2017)

Fritz Thyssen Stiftung, support of the Conference "Animals at Court", 12,000 EUR (12/2016)

## ● **Leila Whitley**

British Academy, project "Cultures of Consent: Examining the complexity of sexual misconduct and power within universities" (applied with Centre for Feminist Research, Goldsmiths: Professor Lisa Blackman, Dr. Yasmin Gunaratnam, Dr. Tiffany Page), 9,947 GBP (03/2017)

Social Science and Humanities Research Council of Canada, Connection Grant, project "Critical Feminist Network on Migration and Refugees" (applied with Dr. Gada Mahrouse, Dr. Natalie Kouri-Towe, Dr. Anna Carastathis), 24,958 CAD (2017)

## ● **Keshun Zhang**

China Scholarship Council, "2016 Chinese Government Award for Outstanding Self-financed Student Abroad", 6,000 USD (2017)

The East China Normal University, "Fundamental Research Funds for the Central Universities" joint research grant with Prof. Jingyi Lu, East China Normal University, 60,000 CNY (2017)

## ● **Maria Zhukova**

Literaturarchiv Marbach, Marbach-Stipendium, grant for postdoctoral researchers, 1,425 EUR (07/2017)

■



# Lectures, Courses and Seminars

## Tuhin Shuvra Basu

**WS 2014|15-WS 2015|16:** Optical Pumping, Physikalisches Fortgeschrittenenpraktikum, tutorial

## Francesca Biagioli

**SS 2017:** Philosophy of Mathematics, seminar  
**WS 2016|17:** Kant und die Methode der Transzendentalphilosophie, seminar  
**SS 2016:** Historische Einführung in die Wissenschaftstheorie, seminar  
**SS 2016:** Unterschiedliche Auffassungen über die Aufklärung im 20. Jahrhundert: Adorno und Cassirer, seminar  
**SS 2015:** Ernst Cassirers Kulturphilosophie, seminar

## Klaus Boldt

**WS 2016|17:** Current Issues and Methods in Nanoscience, lecture  
**WS 2015|16:** Inorganic Materials and Nanotechnology, lecture

## Julia Boll

**SS 2016:** The Verse Novel: Adventures in Form, seminar  
**WS 2015|16:** A Journey through British Medieval Literature and Theatre, seminar  
**SS 2015:** Recognition in Theater, Literature and Philosophy, seminar  
**SS 2015:** British Romantic Poetry, seminar  
**SS 2015:** Science | Stage: an Experiment, seminar  
**WS 2014|15:** James Joyce, Ulysses, seminar

## María Cruz Berrocal

**SS 2015:** Philosophy of Archaeology, practical course  
**SS 2015:** Archaeology in Theory, practical course  
**SS 2015:** Archaeological colloquium

## Thomas Böttcher

**SS 2017:** Organische Chemie für Biologen, lecture  
**SS 2017:** neuere Arbeiten aus dem Gebiet der Naturisolation und Strukturaufklärung, seminar  
**SS 2017:** Naturstoffisolation und Strukturaufklärung, academic supervision  
**WS 2014|15-2016|17:** Neuere Arbeiten aus dem Gebiet der Naturstoffisolation und Strukturaufklärung, seminar  
**SS 2016:** Organische Chemie für Biologen, lecture

## Daniele Brida

**SS 2017:** Nano-optics, lecture  
**SS 2014:** Laser physics and nonlinear optics, lecture  
**SS 2013:** Ultrafast Phenomena and Femtosecond Technology, seminar

## Panteleimon Eleftheriou

**SS 2016:** Modelltheorie, seminar  
**WS 2015|16:** Topics in Model Theory, lecture

## Denis Gebauer

**SS 2017:** Auf dem Gebiet der Physikalischen Chemie: Phasenumwandlung und Kristallisation, academic supervision  
**WS 2014|15-WS 2016|17:** Kolloquium Physikalische Chemie Arbeitsgruppenübergreifendes Seminar über neuere Forschungsergebnisse, seminar  
**SS 2016:** Auf dem Gebiet der Physikalischen Chemie: Phasenumwandlung und Kristallisation, academic supervision  
**WS 2015|16:** Physikalische Chemie IV, lecture and practical course  
**SS 2015:** Auf dem Gebiet der Physikalischen Chemie: Phasenumwandlung und Kristallisation, academic supervision  
**WS 2014|15:** Physikalische Chemie IV, lecture and practical course

## James Griffiths

**WS 2016|17:** Syntax III: Topics in ellipsis, seminar

## Roxana Halbleib

**WS 2016|17:** Advances in Empirical Finance, seminar  
**WS 2016|17:** Advanced Econometrics, lecture  
**WS 2016|17:** Financial Econometrics, lecture  
**SS 2016:** Big Data in Economics and Finance, seminar  
**SS 2016:** Microeconometrics, lecture and practical course  
**WS 2014|15:** Applied Econometrics, lecture  
**WS 2014|15:** Financial Econometrics, lecture  
**WS 2014|15:** Applied Econometrics, lecture and seminar

## Wolf Hütteroth

**SS 2017:** Teil 2 Organische Entwicklungsbiologie, practical course  
**SS 2016:** Teil 2 Organische Entwicklungsbiologie, practical course  
**SS 2015:** Neurobiology, course  
**SS 2015:** Nature and Culture as false dichotomy, seminar

## Claudius Kratochwil

**WS 2016|17:** Evolutionary and Developmental Biology, seminar  
**WS 2016|17:** Methods in Biology, lecture  
**WS 2016|17:** The Arrival of the Fittest: How development changes contributes to evolution, seminar  
**SS 2016:** Genome Evolution, seminar  
**SS 2016:** Entwicklungsphysiologie, lecture  
**SS 2016:** Methods in Biology, lecture  
**WS 2015|16:** Methods in Biology, lecture  
**WS 2015|16:** Innovations in Vertebrate Evolution, seminar

**WS 2015|16:** Evolutionary and Developmental Biology, seminar  
**SS 2015:** Evolution and Zoology, seminar  
**WS 2014|15:** Evolutionary and Developmental Biology, seminar

## Andrea Lailach-Henrich

**WS 2016|17:** The Second Person. Theories of Intersubjectivity, seminar  
**SS 2016:** Edmund Husserl: Logical Investigations, seminar  
**SS 2015:** Recognition in Theatre, Literature and Philosophy, seminar

## Ben Lambert

**WS 2016|17:** Minimax Theoreme, seminar  
**SS 2016:** Funktionalanalysis, exercise group

## Bernard Lepetit

**WS 2016|17:** Modern Methods in Photosynthesis Research, lecture and practical course

## Torsten Pietsch

**WS 2016|17:** Elektronischer Transport in Nanostrukturen, lecture and practical course  
**SS 2016:** Superconductivity, tutorial and lecture  
**WS 2015|16:** Solid State Physics, lecture and practical course  
**SS 2015:** Integrated Physics Course IV, tutorial  
**WS 2014|15:** Solid State Physics, lecture and practical course

## Michael Pester

**WS 2016|17:** Molecular microbial ecology, seminar  
**WS 2016|17:** Methods in Biology, lecture  
**WS 2016|17:** Mikrobiologie, course  
**WS 2016|17:** Microbial Physiology and Ecology/Limnic Microbiology, lecture and colloquium

**SS 2016:** Molecular microbial ecology, seminar  
**WS 2015|16:** Microbial Physiology and Ecology, lecture and colloquium  
**SS 2015:** Molecular microbial ecology, seminar  
**WS 2015|16:** Mikrobiologie, course  
**WS 2015|16:** Methods in Biology, lecture  
**WS 2015|16:** Molecular microbial ecology, seminar  
**WS 2014|15:** Microbial Physiology and Ecology, lecture and colloquium  
**WS 2014|15:** Mikrobiologie, course  
**WS 2014|15:** Methods in Biology, lecture

## Maria Daniela Poli

**WS 2016|17:** Comparison of Constitutional Courts, lecture  
**WS 2015|16:** Comparison of Constitutional Courts, lecture

## Jennifer Randerath

**SS 2017:** Motor Kognition, research colloquium  
**SS 2017:** Neuropsychological assessment for patients with acquired brain injury, seminar  
**WS 2016|17:** Motor Rehabilitation Studies: Apraxie, seminar  
**SS 2016:** Current Research in Neurorehabilitation, seminar  
**SS 2016:** Einführung in die Neuropsychologie, lecture  
**SS 2016:** Motor Kognition, research colloquium  
**SS 2016:** Neuroplasticity, seminar  
**WS 2015|16:** Motor Rehabilitation Studies: Limb Apraxie, seminar  
**WS 2015|16:** Cognitive Neurorehabilitation in patients with acquired brain damage, seminar  
**WS 2015|16:** Motor Kognition, research colloquium  
**WS 2015|16:** Neuropsychological Assessments 2, seminar  
**WS 2015|16:** Neuropsychological Disorders, seminar

## Gianluca Rastelli

**SS 2017:** Quantum Coherence and Dissipation in Hybrid Quantum Systems, seminar

**WS 2014|15:** Modern Aspects of Theoretical Solid State Physics, seminar  
**WS 2014|15:** Green functions in electronic transport, lecture in the course Quantum transport (W. Belzig)  
**WS 2014|15:** Coulomb Blockade in single tunneling junctions, lecture in the course Quantum transport (W. Belzig)  
**WS 2014|15:** Superconductors and superfluids: Ginzburg-Landau, Nobel Prize seminars (F. Pauly)

## Tanja Rinker

**SS 2017:** Neuro- and psycholinguistic aspects of multilingualism  
**SS 2017:** Multilingualism and Migration, seminar  
**SS 2017:** German as a Second Language – Basics, seminar  
**WS 2016|17:** Mehrsprachigkeit in der Schule, lecture series  
**WS 2016|17:** Interdisciplinary Research Colloquium Multilingualism  
**WS 2015|16:** Second Language Acquisition, seminar  
**WS 2015|16:** Sociolinguistics, seminar  
**WS 2015|16:** Interdisciplinary Research Colloquium Multilingualism  
**WS 2014|15:** Mehrsprachigkeit in der Schule, seminar  
**WS 2014|15:** Mehrsprachigkeit| Multilingualism, lecture series  
**WS 2014|15:** Interdisciplinary Research Colloquium Multilingualism

## Sebastian Schutte

**WS 2016|17:** Perspectives on Political Violence: Top-Down vs. Bottom-Up, seminar  
**WS 2015|16:** Introduction to Geographic Event Data Analysis in R, seminar

## Denis Seletskiy

**SS 2017:** Seminar des Centrums für Angewandte Photonik, research colloquium  
**WS 2016|17:** Seminar des Centrums für Angewandte Photonik, research colloquium  
**SS 2016:** Seminar des Centrums für Angewandte Photonik, research colloquium

## Minmin Shen

**WS 2014|15:** Introduction to image processing in biology, seminar

## Elena Sturm

**WS 2015|16-WS 2016|17:** Nanochemistry and -analytics, course

## Andreas Thum

**WS 2016|17:** Neurobiology and Developmental Biology, seminar  
**SS 2016:** Advanced Course Behavioral Neurobiology, seminar  
**SS 2016:** Organische Entwicklungsphysiologie, lecture and course  
**SS 2016:** Neurobiologie und Developmental Biology, seminar  
**WS 2015|16:** Neurobiology and Developmental Biology, seminar  
**SS 2015:** Neurobiology and Developmental Biology, seminar  
**SS 2015:** Organische Entwicklungsphysiologie, lecture and course  
**SS 2015:** Advanced Course Behavioral Neurobiology, seminar  
**WS 2014|15:** Neurobiology and Developmental Biology, seminar

## Margaret Thomas

**SS 2016:** Zahlentheorie, lecture and practical course  
**WS 2014|15-SS 2016:** Modelltheorie, seminar  
**WS 2014|15:** O-Minimale Geometrie, lecture and practical course

## Julian Torres-Dowdall

**WS 2014|15:** Zoologischer Kurs

## Tilman Triphan

**SS 2017:** Teil 2 Organische Entwicklungsbiologie, practical course  
**SS 2016:** Organische Entwicklungsbiologie, practical course

## Nadir Weber

**WS 2016|17:** Republiken in der Frühen Neuzeit, course

# People and Connections



**Scientific Advisory Board  
Senior Fellows  
Associated Fellows  
Alumni**

# Scientific Advisory Board

The Scientific Advisory Board consists of internationally renowned scholars from Germany and abroad. It is appointed by the Rectorate of the University of Konstanz.

## Alexandra Brand

Regional Director of crop protection and seeds at Syngenta, Basel, Switzerland. ■ Member of the University Council, University of Konstanz.

## Michael Hannon

Professor and Chair of Chemical Biology, University of Birmingham, UK. ■ Director of the Institute of Advanced Studies, University of Birmingham, UK. ■ Director of the EPSRC Research and Training Centre in Physical Sciences for Health, University of Birmingham, UK. ■ President of the Society of Biological Inorganic Chemistry, USA.

## Henrike Hartmann

Head of the Executive Management of the Volkswagen Foundation, Hannover. ■ Membership in the board of trustees at the Max-Planck-Institute for Biology of Ageing, Munich, and for Metabolism Research, Cologne.

## Thomas Hengartner

Director of Collegium Helveticum, Zürich, Switzerland. ■ Professor of Ethnology, University of Zürich, Switzerland. ■ Vice Dean of Research of the Philosophical Faculty, University of Zürich, Switzerland.

## Jean-Baptiste Joly

Director of the Akademie Schloss Solitude, Stuttgart. ■ Honorary Professor at the School of Art Weißensee, College of Design, Berlin.

## Rainer Maria Kiesow

Professor of Law at École des hautes études en sciences sociales (EHESS), Paris, France.

## Manuela Nocker

Senior Lecturer in Organization and Sustainability, University of Essex, UK. ■ Vice President of the University Council, Free University of Bozen-Bolzano, Italy.

## Dagmar Schmieder

President of Kliniken Schmieder, Konstanz. ■ Founder of the Lurja Institute, University of Konstanz. ■ Senator of Honour, University of Konstanz.

## Dorothea Wagner

Professor for Computer Sciences, University of Karlsruhe. ■ Member of the German Research Council (Wissenschaftsrat), Köln. ■ Member of the Committee for Strategic Planning, Leibniz Gemeinschaft, Berlin.

■

# Senior Fellows

Senior Fellows are established guest scholars from the natural sciences, humanities or social sciences who join the Zukunftskolleg for a research stay and work with the Fellows. This support and inspiration is a mutual advantage, the Senior Fellows profit by the impulses provided by the younger generation and vice versa.

## Hans Adler

Department of German University of Wisconsin-Madison, USA nominated by Gunhild Berg

## Irene Albers

Peter Szondi-Institut für Allg. und Vergleichende Literaturwissenschaft Freie Universität Berlin, Germany nominated by Johanna Kißler

## Jeffrey-Alan Barrett

Department of Logic and Philosophy of Science University of California, Irvine, USA nominated by Franz Huber

## Gyorgy Buzsáki

Langone Medical Center, Neuroscience Institute New York University, New York, USA nominated by Nathan Weisz

## Alex Byrne

Department of Linguistics and Philosophy Massachusetts Institute of Technology, USA nominated by Julia Langkau and Magdalena Balcerak Jackson

## Yoram Carmeli

Department of Sociology and Anthropology University of Haifa, Israel nominated by Anna Lipphardt

## Brett Clementz

Department of Psychology University of Georgia, Athens, USA nominated by Johanna Kißler

## Cleo Condoravdi

Natural Language Theory and Technology Group NLTT/ISL, Palo Alto Research Center, CA, USA nominated by Gerhart von Graevenitz

## Marcia Esparza

Department of Criminal Justice JJAY College, New York, USA nominated by Nina Schneider

## Christoph Fehige

Institute for Philosophy Universität des Saarlandes, Saarbrücken, Germany nominated by Attila Tanyi

## Bernard Frischer

Department of Informatics / Frischer Consulting Inc. Indiana University, Bloomington, USA nominated by Karsten Lambers

## Peter Gärdenfors

Department of Philosophy LUX Lund University, Sweden nominated by Brendan Balcerak Jackson

## Julian D. Gale

Department of Chemistry Curtin University, Perth, Australia nominated by Denis Gebauer

## Daniel R. Gamelin

Department of Chemistry University of Washington, Seattle, USA nominated by Rudolf Bratschitsch

## Dimitri Ginev

Department of Philosophy University of Sofia, Bulgaria nominated by Jeff Kochan

## Leonid Glazman

Department of Physics Yale University, New Haven, USA nominated by Gianluca Rastelli

## Adelheid Godt

Department of Chemistry University of Bielefeld, Germany nominated by Malte Drescher

## Joachim Gross

Department of Psychology and CCNI University of Glasgow, UK nominated by Nathan Weisz

## David Gugerli

Department der Geistes-, Sozial- und Staatswissenschaften, ETH Zürich, Switzerland nominated by Gerhart von Graevenitz

## Joseph Y. Halpern

Department of Computer Science Cornell University, Ithaca, NY, USA nominated by Franz Huber

## Irene Heim

Department of Linguistics and Philosophy MIT, Cambridge, USA nominated by Doris Penka

## Giora Hon

Department of Philosophy University of Haifa, Israel nominated by Samuel Schindler, Helen Gunter, and Julia Jones

## Gunnar Jeschke

Department of Chemistry and Applied Biosciences EPR Research Group ETH Zürich, Switzerland nominated by Malte Drescher

## Viktor V. Kabanov

Department for Complex Matter Jozef Stefan Institute, Ljubljana, Slovenia nominated by Jure Demsar

## Paul Kiparsky

Department of Linguistics Stanford University, USA nominated by Chiara Gianollo

## Arthur Kramer

Department Psychology University of Illinois at Urbana-Champaign, USA nominated by Iris-Tatjana Kolassa

## David Leep

Department of Mathematics University of Kentucky, Lexington, USA nominated by Karim Becher

**Yaron Matras**

School of Languages, Linguistics and Cultures  
University of Manchester, UK  
nominated by Eleanor Coghill

**Jennifer McDowell**

Department of Neuroscience, Biomed Research  
Center, University of Georgia, Athens, USA  
nominated by Johanna Kißler

**Randolf Menzel**

Department of Neurobiology  
Freie Universität, Berlin, Germany  
nominated by Andreas Thum

**Gregory A. Miller**

Departments of Psychology and Medical Social  
Sciences, Northwestern University, Evanston, USA  
nominated by Johanna Kißler, Iris-Tatjana  
Kolassa, and Nathan Weisz

**Frank Moorhouse**

Freelance Author  
Sydney, Australia  
nominated by Gerhart von Graevenitz

**Paul Mulvaney**

Department of Chemistry  
University of Melbourne, Australia  
nominated by Klaus Boldt

**Robert Philibert**

Carver College of Medicine, Department of  
Psychiatry, University of Iowa, USA  
nominated by Helen Gunter

**Wilson Poon**

School of Physics and Astronomy  
The University of Edinburgh, UK  
nominated by Thomas Voigtmann

**Paul Rozin**

Department of Psychology  
University of Pennsylvania, USA  
nominated by Gudrun Sprösser

**Alexander Schellow**

Freelance Artist, Berlin, Germany  
nominated by David Ganz, and Zsuzsanna Török

**Valerie Shafer**

The Graduate School, Speech and Hearing  
Sciences, The City University of New York, USA  
nominated by Tanja Rinker

**Brian Smith**

School of Life Sciences  
Arizona State University, Tempe, USA  
nominated by Andreas Thum

**David Sobel**

Department of Philosophy  
Syracuse University, New York, USA  
nominated by Attila Tanyi

**Heike Schmoll**

Department of Politics, School and Higher  
Education Policy, responsible for the "Bildungs-  
welten" page, Frankfurter Allgemeine Zeitung  
(FAZ), Frankfurt am Main, Germany  
nominated by Gerhart von Graevenitz

**Patrick Speissegger**

Syracuse University, New York, USA  
Mc Master University, Ontario, Canada  
nominated by Margaret Thomas

**Vinod Subramaniam**

Nanobiophysics Group (NBP)  
University of Twente, Netherlands  
nominated by Malte Drescher

**Jean-Pierre Tignol**

Département de Mathématique  
Université catholique de Louvain, Belgium  
nominated by Karim Becher

**Patrick Tresset**

Department of Computing  
University of London, UK  
nominated by Giovanni Galizia

**Sandeep Verma**

Department of Chemistry  
Indian Institute of Technology Kanpur, India  
nominated by Jörg S. Hartig

**Klaus von Heusinger**

Department of German Language and Literature  
University of Cologne, Germany  
nominated by Gerhart von Graevenitz

**Sabine von Heusinger**

Department of History  
University of Cologne, Germany  
nominated by Gerhart von Graevenitz

■

# Associated Fellows

**Young researchers of the University of Konstanz who have been awarded within the Zukunftskolleg's funding programmes and Bridge Fellows are Associated Fellows of the Zukunftskolleg. Ph.D. students or part of the project staff of a Fellow as well as other cooperation partners of both Fellows and Senior Fellows can also be appointed as Associated Fellows.**

**Raul Acosta Garcia**

Department of Sociology  
Upon application, Mentorship

**Mohammad Adm**

Department of Mathematics and Statistics  
Bridge Fellowship

**Monsef Alsweis**

Department of Computer and Information Science  
Bridge Fellowship

**Carolin Antos-Kuby**

Department of Philosophy  
Bridge Fellowship

**Geoffroy Aubry**

Department of Physics  
Mentorship

**Derya Ciray**

Department of Mathematics and Statistics  
Doctoral Fellowship

**Franziska Doll**

Department of Chemistry  
Doctoral Fellowship

**Fabian Dvorak**

Department of Economics  
Doctoral Fellowship

**Maroussia Favre**

Department of Politics and Public Administration  
Bridge Fellowship

**Stefan Fischer**

Department of Philosophy  
Mentorship

**Simon Geigges**

Department of Chemistry  
Doctoral Fellowship

**Jan Hausfeld**

Department of Economics  
Doctoral Fellowship

**Barbara Hausmair**

Department of History  
Upon application

**Annette Hautli-Janisz**

Department of Linguistics  
Mentorship

**Andreas Heim**

Department of Biology  
Doctoral Fellowship

**Maria Infusino**

Department of Mathematics and Statistics  
Mentorship

**Konstantin Käppner**

Department of Politics and Public Administration  
Manfred Ulmer Scholarship, Doctoral Fellowship

**Jeff Kochan**

Department of Philosophy  
Upon application

**Gisela Hilary Kopp**

Department of Biology  
Mentorship

**Sasha Kosanic**

Department of Biology  
Bridge Fellowship

**Michael Kovermann**

Department of Chemistry  
Upon application

**Jan Mellert**

Department of Economics  
Doctoral Fellowship

**Morgane Nouvian**

Department of Biology  
Mentorship

**Marco Paoli**

Department of Biology  
Mentorship

**Ezgi Pinar**

Department of Politics and Public Administration  
Bridge Fellowship

**Francesca Raffini**

Department of Biology  
Doctoral Fellowship

**Constantin Ruhe**

Department of Politics and Public Administration  
Upon application

**Ioanna Salvarina**

Department of Biology  
Mentorship

**Özlem Savaş**

Department of Literature  
Bridge Fellowship

**Tinette Schnatterer**

Department of Politics and Public Administration  
Mentorship

**Aline Steinbrecher**

Department of History  
Upon application

**Antje Strauss**

Department of Linguistics  
Bridge Fellowship

**Katrin Stuber**

Department of Chemistry  
Manfred Ulmer Scholarship

**Dima Sysoiev**

Department of Chemistry  
Mentorship

**Attila Tanyi**

Department of Philosophy  
Upon application



**Borbála Zsuzsanna Török**  
Department of History  
Upon application

**Soohyun Um**  
Department of Chemistry  
Bridge Fellowship

**Eunike Wetzel**  
Department of Psychology  
Mentorship

# Alumni

**The origins of the Zukunftskolleg go back to the Centre for Junior Research Fellows (Zentrum für den wissenschaftlichen Nachwuchs – ZWN), which was established at the University of Konstanz in 2001. Within the scope of the Excellence Initiative, the ZWN was converted into the Zukunftskolleg in November 2007. Both Zukunftskolleg and ZWN can look back on a notable success story, as the career paths of former members show.**

**Christof Aegerter** (2006-2009)  
Lecturer and Group Leader at the Physics Institute, University of Zürich, Switzerland

**Unai Atxitia Macizo** (2014-2016)  
Researcher at the Department of Physics, Free University of Berlin, Germany

**Brendan Balcerak Jackson** (2014-2015)  
Assistant Professor at the Department of Philosophy, University of Miami, USA

**Magdalena Balcerak Jackson** (2013-2015)  
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