



Zukunftskolleg

Newsletter

Issue 22

October 2015 - February 2016

What has been going on at the Zukunftskolleg over winter term 2015/2016? The response to various calls for our funding programs was tremendous, not only for the 2-year Postdoctoral and 5-year Research Fellowships, but also for the recently launched Independent Research Start-Up Grant (IRSG). This Newsletter also covers the results of the latest calls for the Mentorship Program, the Bridge and Doctoral Fellowships, and the Interdisciplinary Collaborative Program.

Over the last few months, the Zukunftskolleg community has welcomed new 2-year Postdoctoral and 5-year Research Fellows, Senior Fellows, Mentors and Associate Fellows. Some of the "old" Fellows left us and took on challenging positions in academia. Many Fellows were successful in obtaining grants, giving lectures or publishing their latest research results.

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On the Death of Professor Dr Dr h.c. Gerhart von Graevenitz

We mourn the loss of Gerhart von Graevenitz, who passed away on Good Friday, 2016.

He was a visionary, who understood that the future of academia lies in the young generations. He saw that we need to create the right environment, we have to give freedom, and we must provide resources in order to gain insight, communication, fantasy and novelty for outstanding research. This project filled him with passion, and he ignited us all. Starting small and against fierce resistance he created the Zentrum für Wissenschaftlichen Nachwuchs. This enterprise grew to what is now the Zukunftskolleg. Every step we take, walking the corridors of the Zukunftskolleg building, are steps he made possible. Every breath we take, we inhale his spirit, his confidence, his optimism - his joy to live and to do research, his energy to think and to talk about it, his force to move things and to create a better University.

Gerhart, we miss you, and we know: you are still here, with us.

[Press information of the University of Konstanz | No.19 March 2016](#)



Prof. Dr. Dr. h.c. Gerhart v. Graevenitz

Funding Instruments

2nd Call for Independent Research Start-Up Grant (IRSG)

(Application deadline: February 4, 2016)

This funding program aims to promote independent research by researchers at the

University of Konstanz who are in the early stages of their postdoctoral work. The Zukunftskolleg offers financial support of up to 3,000 euros for projects that help an individual applicant to attain scientific independence.

In particular, the Zukunftskolleg encouraged applications for support in establishing promising contacts to researchers at other universities and in carrying out preliminary projects intended to lead to an independent application for third-party funding.

The grant covers consumables, equipment, travel costs and student research assistants. It excludes funding for doctoral or postdoctoral positions.

The following researchers and initiatives are to be funded:

- **Hannah Burger** (Biology), Research project: "Chemical Communication and Speciation in the Bee *Taxa Colletes*," Funding: 3,060 euros
- **Daniel Münch** (Biology), Research project: "Modification of *Drosophila* Food Selection Behavior by Modulation of Labeled Line Olfactory Sensory Neurons," Funding: 2,976.80 euros
- **Geoffroy Aubry** (Physics), Research project: "Multiple Light Scattering in a Disordered Assembly of Monodisperse High Refracting Index Nanospheres," Funding: 3,000 euros
- **Tina Bögel** (Linguistics), Research project: "How Frequency Influences the Strength of Prosodic Boundaries," Funding: 2,570 euros
- **Georgiana Caltais** (Computer and Information Science), Research project: "Causality Checking in Software-Defined Networks (CSDN)," Funding: 3,000 euros
- **Amber Makowicz** (Biology), Research project: "Mechanisms of Kin Recognition in a Unisexual Fish," Funding: 3,000 euros
- **Verena Seibel** (Sociology), Funding for conducting a vignette pilot study about welfare chauvinism among immigrants, Funding: 2,878.65 euros
- **Andreas Weiler** (Computer and Information Science), Funding for designing an evaluation toolkit for Twitter event detection techniques, Funding: 2,952.72 euros



3rd Call for Interdisciplinary Collaborative Projects

(Application deadline: February 4, 2016)

The Zukunftskolleg offered up to 5 grants of up to 10,000 euros to initiate interdisciplinary collaborative research projects. The funding program aims to promote research collaboration within the Zukunftskolleg or between a Fellow of the Zukunftskolleg and other researchers. An interdisciplinary research project gives grant holders the opportunity to identify and explore new, innovative and/or risky research perspectives with neighboring disciplines and across disciplines.

The grant should facilitate expert-intensive and inspiring research, offer recipients the chance to work together with colleagues from different disciplines and to develop shared methods and topics. The grant can cover consumables, staff (student assistants) or the costs of a scientific retreat.

The following collaboration is to be funded:

- **Daniele Brida** (Physics) and **Bernard Lepetit** (Biology) with their research project: "Investigating the Major Photoprotection Mechanism of Diatoms with Ultrafast Transient Absorption Spectroscopy"



1st Call for Bridge Fellowships

(Application deadline: February 29, 2016)

The Zukunftskolleg of the University of Konstanz offers up to five Bridge Fellowships for developing and implementing individual research projects. The positions are available from June 1, 2016 to February 28, 2017 for a maximum of nine months. This funding instrument pursues three different aims:

1. To contribute to the structural development of the University of Konstanz, by financing postdoctoral fellowships for new research initiatives at the University, that are in the process of formation (e.g. collaborative research centers, research groups).
2. To enhance and develop the University's existing strengths in research by supporting postdoctoral researchers with distinctive and complementary research expertise, who can fill niches in ongoing projects.
3. To support threatened foreign researchers by giving them the opportunity to be integrated into the German academic system.

The Zukunftskolleg is endeavoring in this way to increase the focus on specific subject areas at the university and strengthen the position of junior researchers within these initiatives.

In its most recent call for Bridge Fellowships, the Zukunftskolleg received 18 applications and offers the grant to the following researchers:

- **Mohammad Adm** (Computer Sciences/Mathematics and Statistics), Research project: "Zero Forcing, Inverse Eigenvalue Problems for Graphs and Transversally Intersecting Manifolds"
- **Carolin Antos-Kuby** (Philosophy), Research project: "Forcing in Contemporary Philosophy of Set Theory"
- **Aleksandra Kosanic** (Biology), Research project: "Impacts of Climate and Land Use Change on Spread of Non-Native Plant Species across Germany"
- **Antje Strauss** (Linguistics), Research project: "The Syllable in the Light of Motor Skills and Neural Oscillations"
- **Maria Zhukova** (Literature), Research project: "TV-Discourse in Russian Film and Literature, 1960-1990"



Mentorship Program

The Mentorship Program enables postdoctoral researchers at the University of Konstanz to network with distinguished colleagues both in Germany and abroad, and to maintain these contacts. The program gives young researchers the opportunity to invite renowned scholars in their field to Konstanz for a few days as mentors, and to consolidate the cooperation by visiting their mentors in turn.

The young researcher has an opportunity to develop new projects or establish a research partnership with the mentor, to optimize grant proposals together or to identify shared areas of key research. The program is open to young researchers from all faculties at the University of Konstanz who hold a doctorate. Postdoctoral researchers at the beginning of their academic career are explicitly encouraged to apply.

The researchers admitted to the Mentorship Program in 2016 are:

- **Raul Acosta Garcia** (Sociology), Mentor: Dr. Trevor Stack, University of Aberdeen, UK
- **Anette Hautli-Janisz** (Linguistics), Mentor: Prof. Dr. Chris Reed, University of Dundee, Australia
- **Maria Infusino** (Mathematics and Statistics), Prof. Dr Tobias Kuna, University of Reading, UK
- **Tinette Schnatterer** (Politics and Public Administration), Mentor: Prof. Vincent Tiberj, Centre Emile Durkheim, Sciences Po Paris/ Bordeaux, France
- **Dmytro Sysoiev** (Chemistry), Mentor: Prof. Dr. Valentin Chebanov, National Academy of Sciences, Karazin Kharkiv National University, Ukraine
- **Eunike Wetzel** (Psychology), Mentor: Dr. Brent W. Roberts, University of Illinois, US

More information on the [Mentorship Program](#)



Call for Doctoral Fellowships

(Application deadline: February 4, 2016)

The Zukunftskolleg issued a call for applications for Doctoral Fellowships to its Fellows, to support their students who are in the final phase of their doctoral studies and work on projects conducted within the Zukunftskolleg. The grant can cover positions of up to 6 months, at 65-75% TV-L 13.

In its recent call the Zukunftskolleg offered a Doctoral Fellowship to **Derya Ciray**, Doctoral Fellow on the research project "Parameterization and Algebraic Points in O-Minimal Structures," headed by Margaret Thomas (Mathematics) and to **Francesca Raffini**, Doctoral Fellow in the Axel Meyer lab, under the supervision of Julia Torres-Dowdall (Biology).



Recent Call for 2-year ZIF and 5-year ZuKo and ZIF Fellowships

In its most recent call for 2-year Postdoctoral and 5-year Research Fellowships (the closing date for applications was May 18, 2015), the Zukunftskolleg received about 400 applications.

At its first meeting on June 29-30, the Recruitment Committee chose the finalists for the 2-year Postdoctoral Fellowships. In its second meeting on September 28, the best candidates among these finalists were offered a 2-year position. On the same day, the Committee selected the finalists for a 5-year Research Fellowship, who were invited to the "Workshop on Future Research Directions" on October 26-27.

The Zukunftskolleg offered the following Fellowships:

- **ZIF Marie Curie 2-year Postdoctoral Fellowships** (for any discipline represented at the University of Konstanz, Salary Scale 13 TV-L) for researchers in the early stage of their career to enable them to develop and carry out individual and independent research projects. This call for proposals is part of the Zukunftskolleg Incoming Fellowship Program (ZIF) and is financed by the Seventh Framework Program (FP7) Marie Curie Actions – People (co-funded by regional, national and international programs), the German Research Foundation (DFG) and the University of Konstanz. The rules and ethical principles for FP7 and the DFG guidelines apply.
- **ZIF Marie Curie 5-year Research Fellowships** (for any discipline represented at the University of Konstanz, Salary Scale 14 TV-L) to develop and carry out individual research projects. This call for proposals is part of the Zukunftskolleg Incoming Fellowship Program (ZIF) and is financed by the Seventh Framework Program (FP7) Marie Curie Actions – People (co-funding for regional, national and international programs), the German Research Foundation (DFG) and the University of Konstanz. The rules and ethical principles for FP7 and the DFG guidelines apply.



Co-Funding

The Executive Committee and the Director of the Zukunftskolleg approved 35 applications for start-up funding, student assistants, travel allowances and consumables between October 2015 and February 2016 for a total of 233,145 euros.



Events

Jour Fixe

Secrets in the Pacific

Jour Fixe talk by Christophe Sand on October 28, 2015

On Invitation from María Cruz Berrocal, Christophe Sand, Director of the Institute of Archaeology of New Caledonia and the Pacific, gave a lecture entitled "In a World of Islands: Humans, Environments and Monuments in the Old Pacific."

The Pacific covers about one third of the earth's surface. It has numerous islands divided into the archipelagos Melanesia, Polynesia and Micronesia, e.g. New Guinea is part of Melanesia and New Zealand of Polynesia. Mainly after James Cook explored the region in the late 18th century, questions arose concerning its past and how Europeans think of the Pacific. But as archaeology is still a very young field there, questions about the first impacts of humans on these islands have recently been emerging.

In his presentation, Christophe Sand addressed the archaeological perspective of the multi-millennia interactions between Pacific islanders and their restricted environments, and the very specific cultural developments on the islands that led to monumental architecture, among other interesting outcomes. He explained: "Humans settling Melanesia, Polynesia and Micronesia have naturally been intimately bound to the ocean, but also to their landscapes. The Western vision of Oceania as a lost Eden, peopled – to use the terms of Jean-Jacques Rousseau – by "noble savages" in harmony with "mother nature," has not resisted the scrutiny of archaeological discoveries. But what is often less well-perceived worldwide is the long-term impact of Oceanic settlement on each and every single island, the unique nature of the interactions between humans and their environment during the long pre-colonial history, as well as the monumentality of constructions raised by traditional cultures of the region."

The archaeologist first presented the historical context of the human settlement of the Pacific. Discovery of the Pacific began around 50,000 B.C., but settlement of the islands was facilitated by the invention of canoes from 4,000 B.C. "When you arrive alone on an island or a new landscape you have to find housing and water, you have to go hunting to feed yourself and you have to create a community. Being in contact with other people is vital when living on an island." Therefore, the settlement of particular islands is inherently associated with the existence of a network of interactions among them. Possibly as a result, Christophe Sand stated that Pacific societies were unbelievably dynamic in social and cultural terms. He also highlighted the scale of landscape transformations induced by anthropogenic impact on the islands, of which one main feature is the massive intensification of horticultural development in some archipelagos, which required construction of massive agricultural infrastructures. "This went often hand-in-hand with the construction of different types of monumental structures, whose scale gives testimony to densely populated islands and complex socio-political systems." Moreover, Sand illustrated the diversity of adaptation strategies that were developed by the Pacific islanders over time.

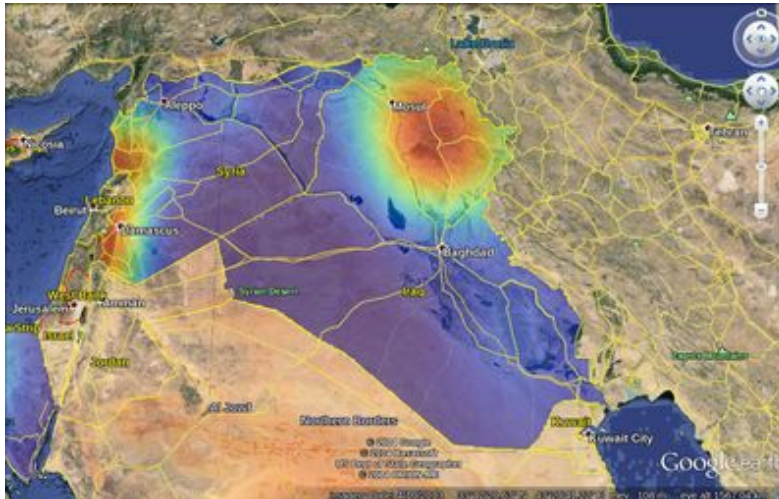
In closing, he discussed the question of what can be gathered from Pacific history in our globalized world today, since the islanders have faced and solved (or sometimes failed to solve) many of the most pressing problems affecting the world today: loss of species, soil degradation, erosion... "The old Pacific islanders had the same problems that we face now, but they preserved the landscape. Another main problem of our globalized society is the fact that solidarity does not really exist. But if you want to live in a community you need solidarity."

More information on [Christophe Sand](#)

Predicting Conflicts

Jour Fixe talk by Sebastian Schutte on November 4, 2015

The temporary decline in the number of ongoing conflicts around the world after the end of the Cold war may be coming to an end: There are continuing episodes of conflict in Sub-Saharan Africa and South Asia. The Greater Middle East also has seen a major escalation: Both Afghanistan and Iraq have experienced more than a decade of civil war following the American-led invasions, Libya, Egypt and Yemen are also experiencing civil conflicts following the 2011 Arab Spring; and finally the initially peaceful uprising against Bashar al-Assad in Syria has escalated into the most lethal conflict the region has seen in modern times.



But what keeps these conflicts going, what causes civilians to support the military actors? And could we have seen this coming? These are questions that Sebastian Schutte tries to answer in his research. In his presentation on "Explaining and Predicting Large-Scale Violence in Civil Conflicts," he gave some examples of how he approaches such questions.

"Scholars and practitioners agree that civilian loyalties play an important role in civil wars, particularly in insurgencies," he stated. "Moreover, the counterinsurgency theory assumes that violence drives these loyalties. However, the way in which violence drives loyalties is contested."

There are two general explanations: Deterrence-based explanations assume that higher levels of violence against the insurgent weakens the insurgency by increasing the collective action problem for the insurgents. It is expected that if one applies more violence, fewer individuals will work with the adversary. On the other hand, alienation-based explanations assume that only selective violence against the insurgent weakens the insurgency, while indiscriminate violence strengthens the insurgency by solving the collective action problem through selective incentives. In this case, it is expected that if more indiscriminate violence is applied, more individuals will work with the adversary.

Empirical results show a weak but important effect: Civilians tend to collaborate more with the enemy of the perpetrator after heavy arms are used. This supports the alienation-based explanation and suggests that hawkish rhetoric might backfire.



In an ongoing collaborative work with his colleague, Roos van der Haer, Sebastian Schutte tries to obtain time-variant, individual-level data on experiences and hostilities in civil wars. To gather such data, researchers rely on surveys, although they come with their own set of problems: Face-to-face surveys are costly and dangerous to implement; web-based surveys are often focused on the wealthy countries and sms-based surveys have low response rates.

For this reason, the political scientist applied an innovative approach, combining sms surveys with mobile payments (M-Pesa) and implementing a new computer system for Reimbursed Mobile Surveys (RMS). So far, the system has been used for a proof-of-principle application in India. Based on a trial with over 1,000 participants, the system has produced higher response rates for reimbursed surveys than non-reimbursed surveys. Future deployments of the system in Kenya and Afghanistan are planned.

More information on [Sebastian Schutte](#)

Is Our Eating Behavior Influenced by Social Norms?

Jour Fixe talk by Marijn Stok on November 11, 2015

Do we take into account our social environment when we decide what we eat? "Yes," says psychologist Marijn Stok. In her presentation on "Eating by the Norm: The Influence of Social Norms on Eating Behavior" she explained why. "A person-focus alone is not enough, because every individual interacts with his or her environment." Besides physical aspects, such as the portion size that has dramatically increased in the last decades, social norms play an important role in our eating behavior. Social norms are defined as "the implicit or explicit rules of a social group for the acceptable behaviors, values and beliefs of its members." Social norms stem from two main sources: A group's practices and its expectations. What group members themselves do (practices) are descriptive norms, whereas what group members expect others in the group to do are injunctive norms.

Eating by the Norm

The Influence of Social Norms on Young People's Eating Behavior



Marijn Stok

But why do social norms affect our behavior? "Behavior in social influence situations is goal-driven," says Marijn Stok, "the goal of behaving correctly and the goal of building and maintaining relationships."

The aim of her PhD thesis was to determine the effects of manipulating descriptive and injunctive social norms on eating behavior. Her target population was adolescents: A population in which norms may stimulate unhealthy rather than healthy eating, in which perceived norms are even healthier than actual behavior, and in which correcting norm perception may stimulate healthier eating. Her research question asked whether providing health-promoting peer fruit consumption norms affect adolescents' intended and actual fruit consumption.

She conducted an initial field study and showed that an injunctive norm ("A majority of high school students think other high school students should eat sufficient fruit") did not increase fruit consumption, whereas a descriptive norm ("A majority of high school students try to eat sufficient fruit themselves") did.

After having found indications that descriptive norms may be more promising in terms of improving eating behavior, she explored when and in whom descriptive social norms affect eating behavior. To do so she conducted two further studies focusing on two potential moderators of descriptive social norm effects on eating behavior: The type of descriptive social norm (majority attitude: "73% of Dutch university students eat sufficient fruit" vs. minority attitude: "Only 27% of Dutch university students eat sufficient fruit") and identification with that norm reference group.



Compared to no-norm control conditions, descriptive norms appear to influence intended and actual fruit consumption – measured by the extent to which the norm group is relevant. A minority descriptive norm combined with a high relevance of the norm group seems to have an especially detrimental effect.

In the next step, the psychologist replicated previous findings on moderators and explored how social norms affect eating behavior, i.e. by identifying underlying mechanisms. She conducted two studies focusing on three potential mediators of descriptive social norm effects on eating behavior: Self-identification, self-efficacy and attitude.

She proved that a majority descriptive norm increased self-identification, self-efficacy and positive attitudes towards vegetable intake behavior as compared to a minority descriptive norm. These changes in turn partially mediated the effect of the norm manipulation on participants' behavioral intentions. This means that norm manipulations influence health behavior (intentions) in part because they affect changes in these cognitive variables.



Finally, Marijn Stok wanted to answer another question: "Having found indications that injunctive norms may have ironic effects on eating behavior, we investigated whether there are ways of communicating injunctive norms safely." She conducted two studies focusing on the role of reactance on the effect that injunctive norms have on eating behavior: She tested a restrictive norm ("You are not allowed to...") and a suggested norm ("It may be better if you do not..."). The experiment showed that both types of norms were equally successful in preventing initial consumption. People who received a restrictive norm reported higher levels of psychological reactance than others who received a suggested norm. There was a negative after-effect of restrictive norms, but not of suggested norms. This means that when injunctive norms must be communicated, it may be better to do so in the form of a suggestion.

Marijn Stok concluded her talk and summarized: Social norms affect eating behavior. Intervening in the social norm (perception) is one potentially viable means for improving eating behavior. However, its effectiveness hinges on using an appropriate social norm, stemming from a relevant reference group, which is communicated in an appropriate manner to an appropriate target audience.

More information on [Marijn Stok](#)

A Lucky Encounter

Jour Fixe talk by Andrea Lailach-Hennrich on November 18, 2015

In her presentation on "The Workshop: Universal Knowledge. A Humanistic Idea Brought to Life," Andrea Lailach-Hennrich did not talk about her research, but rather presented the concept of a yearly workshop organized by herself and a group of friends, at which they discuss interesting topics, such as "water," "energy," "demography" or "madness" in interdisciplinary fashion. The idea behind this concept is to exchange knowledge about different topics from various scientific perspectives, based on academic skills and with the aim of passing on knowledge in correspondence with specific locations and across generations.



Three things make this workshop unique: 1. The workshop is privately organized, meaning that it is not funded by any institution and the contributions are entirely voluntary, 2. Participants choose the location for the workshop in strong connection to the topic, and 3. Besides its academic value, it also has become an integral part of the lives of many people.

The structure of the workshop is the same ever year: The participants meet and have a barbecue on Friday, present talks and vote on the next year's workshop topic, and finally gather for a dinner and a cultural event (music or movie) on Saturday. Sunday is reserved for a hike.



The first workshop took place in 2001 on the subject of "genetics." Since 2008, the location has been chosen in line with the topic. In 2008 for instance, they discussed "time" in a watch-making shop. In 2010, "communication" was debated on a TV tower, and in 2011, when the topic was "water," the participants met at a biology research station in Hiddensee on the Baltic Sea. This year they chose to talk about "luck/happiness" and went to Linum, where the massive crane migration can be seen.

The philosopher gave a short and exemplary talk, which she presented at this year's workshop about "moral luck." She stated: "The object of morality can be a person, an act or an intention. This object can be morally good or morally bad, morally wrong or right. We have moral sanctions, such as moral indignation or exclusion from the in-group. Morally assessable is what we hold a person morally responsible for, or a person's moral worth."

According to Kant, moral rules or standards apply to all rational creatures (universal validity). What is morally good (what we ought to do) does not differ for different societies or religions. What Kant means by "to be valued incomparably higher" does not depend on personal interests and inclinations. Every single subject is held responsible in the same way, that is with respect to its good will.



The control principle says that we are morally assessable only to the extent that what we are assessed for depends on factors under our control. Two people ought not to be morally assessed differently if the only other differences between them are due to factors beyond their control.

Andrea Lailach-Hennrich distinguishes varieties of moral luck: Resultant moral luck means luck in the way one's actions and projects turn out. Circumstantial moral luck is luck under the circumstances in which one finds oneself. And constitutive moral luck means luck in which one is, or in the traits and dispositions that one has.

To illustrate resultant moral luck, she told the story of the unfortunate driver: "Driver A drives from point a to b, his cell phone rings, he picks it up (without using the hands-free system). He is therefore distracted for a few seconds. He reaches his destination.

Driver B drives from point a to b, his cell phone rings, he picks it up (without using the hands-free system). He hits a child that is playing on the road."

Are they both morally assessable in the same way?



She explained: "Moral luck makes a difference: The unfortunate driver is no worse a person than the fortunate driver. But we share the intuition that he is. Since we cannot plausibly hold the fortunate driver responsible for the death of a child (as no death occurred in his case), neither can we hold the unfortunate driver morally responsible for that death. But we do.

The external reason is beyond the control of the person: Both act in the same way, they have the same starting point. The only difference is the child on the road."

And there is the dilemma: We are trapped between an intuition and a fact. The intuition is that luck must not make moral differences (for example, that luck must not affect what a person is morally responsible for). The fact is that luck does seem to make moral differences (for example, we blame the unfortunate driver more than the fortunate driver). In this case, the control principle is violated. We assess two people differently even though the reasons for our assessment lie beyond their control.

More information on [Andrea Lailach-Hennrich](#)

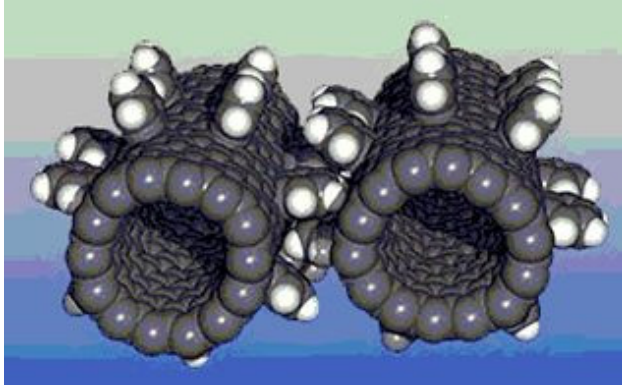
More information on the [workshops](#)

Nanomaterials Made of Silicon

Jour Fixe talk by Tuhin Shuvra Basu on November 25, 2015

Tuhin Shuvra Basu's research focuses on the smallest particles we can synthesize today: nanocrystals. In his presentation on "Size Matters: Glimpses of Some Experiments with Silicon Nanocrystal," he explained some of the basics of nanoscience and nanotechnology as well as his research into silicon nanocrystals.

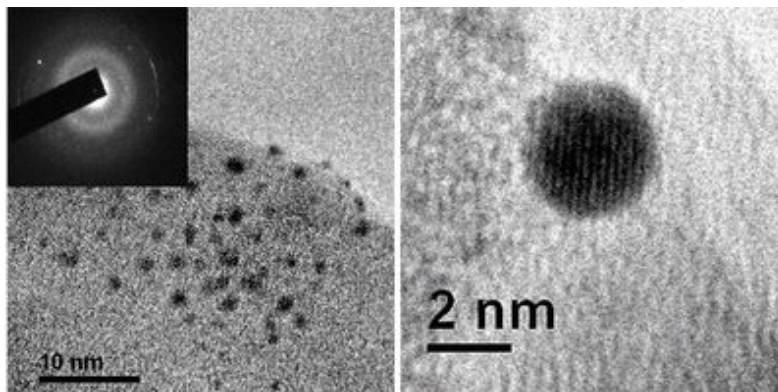
The term "nanotechnology" was coined by Professor Norio Taniguchi in 1974 and explored in greater depth by Dr. K. Eric Drexler in 1986. This technology opens the door to the new field of molecular manufacturing. Tuhin Basu is convinced that what the electronic revolution did for manipulating data, nanotechnological revolution can do for manipulating matter and juggling atoms like bits. But what is so unique about nanostructured material? One key aspect is the significant increase in the surface area to volume ratio. Materials reduced to nanoscale often show sudden changes in properties known as "quantum size effects," e.g. opaque copper becomes transparent, semiconductors like silicon can become conducting and emit light, platinum, that is inert on the bulk scale behaves like a catalyst.



The physicist presented two approaches for making nanomaterials: 1. Start with a bulk material and then break it into smaller pieces using mechanical, chemical or other forms of energy (top down approach), 2. Building things by combining smaller components, as opposed to carving them out of larger ones (bottom-,up approach). According to the physicist the quality of bottom-up nanomaterial is better than that of top-down.

Silicon is virtually the most important element for nanoelectronics, because it displays many near-ideal properties: "Its conductivity can be tuned over a very wide range – essentially from insulating to metal-like – simply by adjusting the concentration of dopant atoms in the crystal. It has the advantage of a naturally forming oxide with excellent insulating and passivating properties. Combined with sophisticated lithographic techniques, these properties make it possible to sculpt very fine and numerous electrical paths and switches into a silicon crystal. Finally, silicon is the second-most abundant material in the earth's crust and thus creates the pathway for devices."

To increase the functionality of any modern electronic device, such as computer, we must increase the level of integration of the electronic components in a single electronic chip, eventually this increases the length and decreases the cross section of metallic interconnects of those components. The usual consequence is an unmanageable heat in the electronic device. One of the key solutions can be to replace an electron by a photon for communication. In this regard, nanostructured silicon, which displays room temperature photoluminescence, may have potential application because integrating it in an existing system is usually easier. It is possible to tune the bandgap of those nanocrystals in order to achieve desired photon energy (depending on the application) by so called bandgap engineering by changing the dimension of the nanocrystal easily.



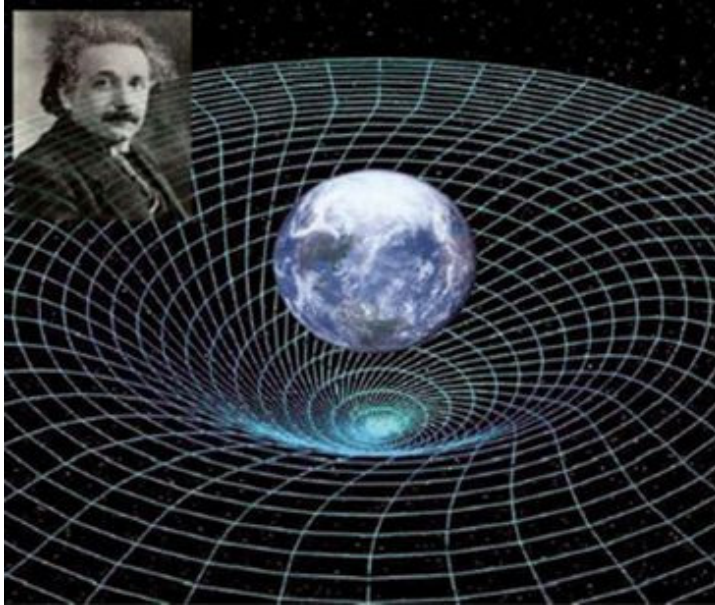
Tuhin Basu's aim is to measure the properties of silicon one-by-one. The charging energy of silicon nanocrystals usually is appreciably high and they exhibit pronounced single-electron-tunneling effects. Using tunneling spectroscopy, the conduction and the valence band states and their degeneracy can be studied separately. Measurements on the single object level show interesting results. It provides an estimation of the excitonic bandgap of individual silicon nanocrystals. Additionally, the study shows the band-structure and exciton dynamics of silicon nanoparticles on a single particle level at an extremely low temperature (300 mK). These studies will enhance the general understanding of these nanocrystals and therefore pave the way to applying them in photonic communication.

More information on [Tuhin Shuvra Basu](#)

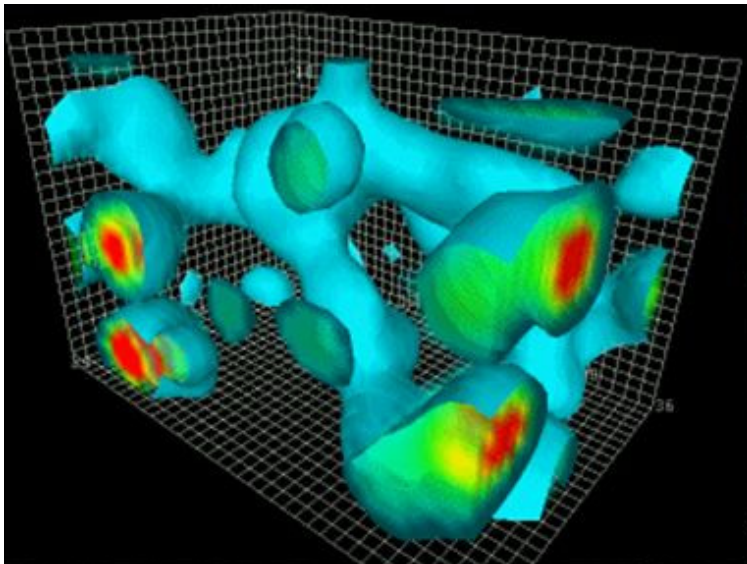
How Empty is Emptiness?

Jour Fixe talk by Denis Seletskiy on December 2, 2015

When something is empty, it is empty – we normally would assume. But Denis Seletskiy thinks somewhat differently about this idea. Together with colleagues in the Department of Physics (University of Konstanz), he recently published a paper in "Science" describing the direct observation of zero-point fluctuations in the electromagnetic field (see also [press release](#) on this subject).



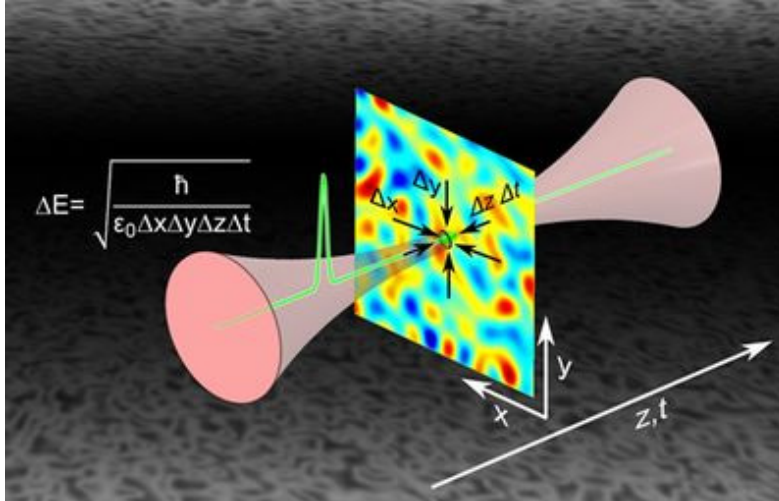
In his approach to the question, "How empty is emptiness?", Seletskiy chooses the perspective of a physicist. He begins by examining the evolution of ideas on light, beginning with the ancient Greeks and continuing through the 18th century, when successful theories of particle (Newtonian mechanics) and wave motion coexisted. It was not until the beginning of the 20th century that the concepts of the locality of a particle and the non-locality of a wave were finally unified in a single theory of quantum physics. A central pillar of that theory, namely Heisenberg's uncertainty principle, encompasses the wave-particle dualism in a statement that one cannot simultaneously measure the position and momentum of an object with arbitrary precision.



One of the consequences of the Heisenberg's uncertainty principle is that a mechanical pendulum at rest will still exhibit finite fluctuations in its position referred to as "zero-point motion" or "vacuum fluctuations." By drawing a direct analogy to the light itself, researchers have asked the question as to whether such fluctuations can be measured directly. In other words, when the lights are off, can the signals from empty space be observed? "The amount of vacuum signal depends on the measurement process itself, or more specifically: It depends on the selected length and time scales," states Denis Seletskiy. Using focused femtosecond pulses as a space-time microscope, he and his colleagues succeeded in resolving the vacuum fluctuations over the shortest space-time intervals, as reported in their article mentioned above. Large-scale

apparatus can measure classical emptiness, null; but a small space-time probe can directly observe the boiling foam of vacuum fluctuations.

Towards the end of his talk, Seletskiy exclaimed: "But there is a twist to this story!" He finished his presentation by elaborating that beyond his team's current measurements, even more profound mysteries arise when an attempt is made to conceptually unify the vacuum with the general theory of relativity. While there is no currently accepted, unified description of quantum physics and gravity, Seletskiy argues that by using recently predicted effects involving gravity and vacuum, one can attempt to model these scenarios in the laboratory.



Classical emptiness is indeed null, whereas quantum emptiness is null on average, but appears foamy when examined with a magnifying glass. However, perhaps the future meaning of emptiness (and particles) will be entirely relativistic. Denis Seletskiy hopes to be able to investigate his ideas in the near future.

More information on [Denis Seletskiy](#)

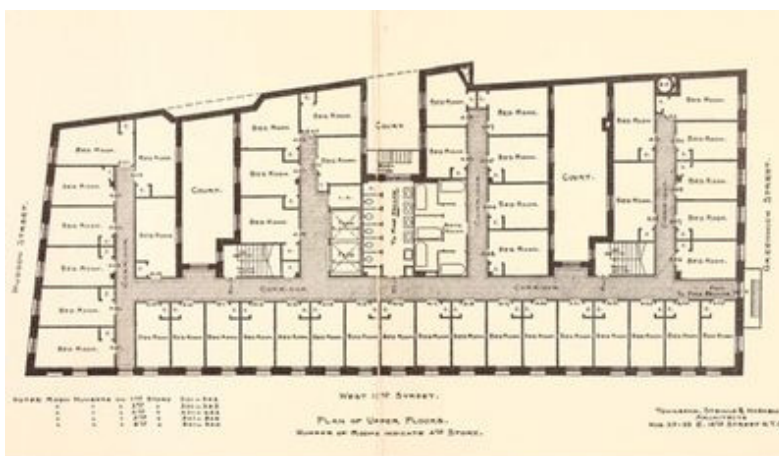
The Literary Architecture of Singleness: Methods in Narrative, Archival, and Material Analysis

Jour Fixe talk by Katherine Fama on December 9, 2015

Katherine Fama's research on the modern American novel focuses on domestic architecture and independent women. In her talk, Fama introduced her central research questions about the emergence of modern singleness: Why did single women and their new urban rental homes become a focal point of late-19th-century American fiction? How is the modern single woman historically specific? What is the relationship between modern American novels, domestic rental architecture, and the social history of the single woman? How have race, class, and culture shaped these relations?



She referred to her interdisciplinary method, noting that her project weaves three approaches together: Literary studies, social history, and vernacular architecture. Her research examines jointly the modern surge in stories of single women, the late-century demographic peak in never-married women, and the emergence of urban rental architectures like the boarding house, apartment building, and women's hotel. As a literary scholar, Fama introduced the ways in which fiction writing and reading can affect both social practice and material space. The modern novel, for example, envisioned new design forms and uses, legitimized marginal occupancy practices, and modeled new gender roles. Reciprocally, architecture affected social and literary practice. The turn-of-century rental room created new spaces of independence and cohabitation that disrupted the traditions of the family house. Fama then briefly shared a few of the challenges and successes in her research in attempting to locate rare novels and photographs of working women's rooms. She discussed the use of online archives, which provide searchable texts with which to further research terms like "spinster," "bachelor girl" and "women's hotel." She shared favorite archival texts and objects from the project and concluded that female independence and housing remain inexorably linked. She also presented a case study from her book project, which is a reconsideration of black women's rental and occupancy patterns at the turn of the twentieth century.



In conclusion, Fama returned to her research questions of the demographically significant rise in never-married women in the late nineteenth century. She argued that modern singleness was inseparable from women's new spatial independence from the family. Single women moving to the city for social and professional reasons used and shaped the city's new rental architecture of boarding houses, apartments, and hotels.

Likewise, this modern single woman and her rental home inspired a change in the late 19th-century American novel. The long-familiar form of the marriage plot was transformed by single endings, strong unmarried characters, and delayed and disrupted marriages. Fama noted the importance of race, class, and gender to this story, emphasizing that recovering accounts from the margins of society has been especially important to her project. She urged that attention should be paid to both familiar accounts and to "missing stories" that might offer new perspectives and accounts of censorship and community regulation.

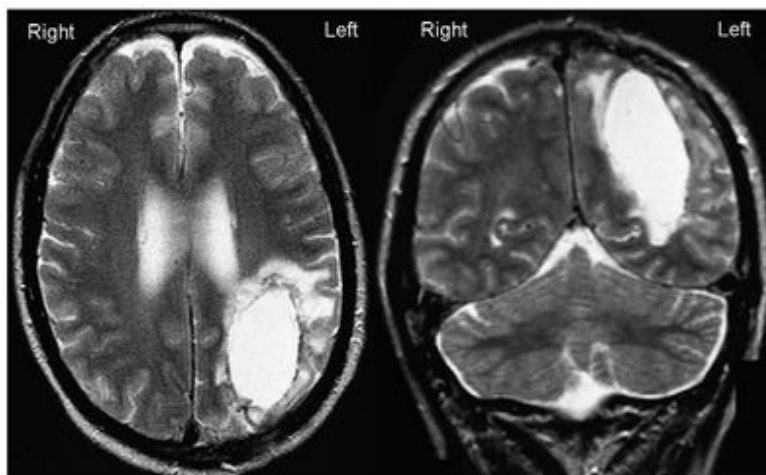
More information on [Katherine Fama](#)

Impairments after Stroke: Challenges for Diagnostics- and Rehabilitation-Research

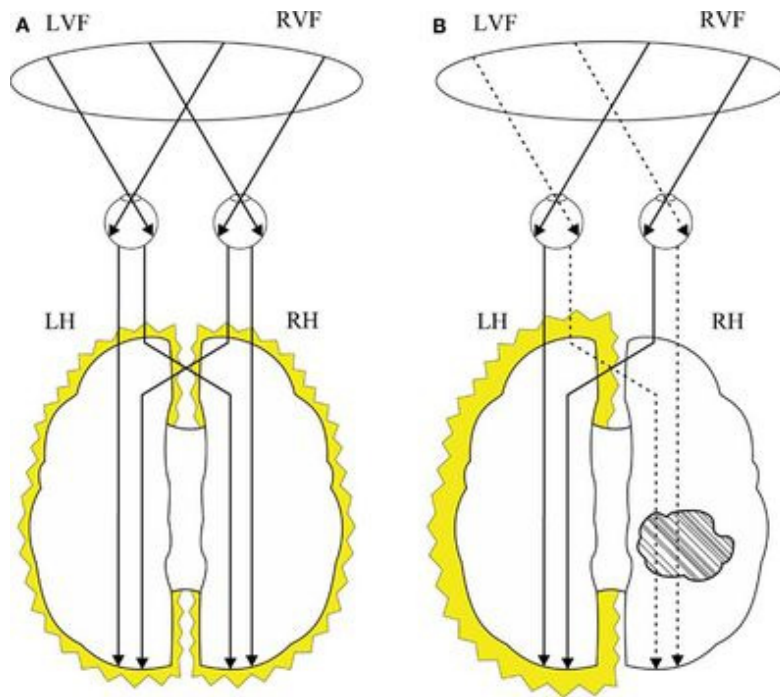
Jour Fixe talk by Jennifer Randerath on January 13, 2016

Around 200,000 to 300,000 people in Germany suffer a stroke each year. In the event of a stroke, the blood supply to the human brain is deficient. This is caused by a blockage of the arteries or internal bleeding. After a stroke, a patient may lose control of several bodily functions, depending on the damage in the area of the brain controlling these functions.

In her research as a clinical neuropsychologist, Jennifer Randerath studies the behavior and (ab-)normal bodily and cognitive functions of patients after a stroke. Some of the most frequent, major neuropsychological disorders are loss of motor functions and visual-spatial or language deficits. In certain cases, a patient may not even be aware of his or her own impairment(s).



Neuropsychologists use a wide range of tests to identify a disorder. For example, to check the ability of a patient to recognize loss of function, a self-assessment test is administered in which the patient is asked several questions, e.g. if he is able to clap or wash his hands, and also check-questions, e.g. if he is able to jump over a truck. If a patient can reasonably be suspected of having lost his visual-spatial abilities, he is asked to mark the center of a line or cross signs on a paper. Marking the wrong center or signs indicates visuo-spatial deficits. Language deficits are divided into two classical types, loss of the ability to produce language in general, like chuntering or mumbling, or loss of comprehension and production of meaningful speech. To check a patient's motor cognition, he is asked to use everyday tools, such as scissors or ladles, in their normal context, e.g. for cutting paper or serving soup from a pot to a bowl. Using the wrong tool, like a bottle opener for serving soup, indicates motor cognition deficits. To be able to predict the loss of function after brain damage, researchers analyze MR or CT-scans of the brain to localize the damaged brain area and relate this information to the lost functions.



A special challenge, both for patients, clinical staff and researchers, is the co-occurrence of deficits. For example, large-area damage to the brain's left hemisphere might affect right-side motor functions as well as language and motor cognition abilities. Damage to the right hemisphere can affect left motor functions and visuo-spatial abilities. It is important during testing to pay attention to other deficits that might as yet be undetected.

More information on [Jennifer Randerath](#)

"...diu kint, diu âne den touf ersterbent...". Unbaptized Children Between Theological Discourse and Social Practice in 12th to 16th Century Central Europe

Jour Fixe talk by Barbara Hausmair on January 20, 2016

The death of unborn or recently born infants is a challenge to any society, from prehistory to today. Archaeological sources and written records shed light on the various strategies developed by different societies and actors to handle the fact of a human's certain death.

In her talk at the Jour Fixe on January 20th, Barbara Hausmair, a medieval archeologist at the Zukunftskolleg, discussed burial practices for infants and theological considerations of the spatial dimensions of the afterlife in the Middle Ages. In medieval Christian belief, original sin – through Adam and Eve having eaten from the forbidden tree in paradise – could only be remitted by the sacrament of baptism. Therefore, children who died before baptism were not considered to be cleansed of original sin and after their death were excluded from heaven and instead confined in a separate place referred to as "Limbus Puerorum." But not only in the theological concepts of the afterlife were unbaptized children expelled from the realms of the faithful Christians.

In the Middle Ages, Christian corpses usually were buried in the churchyard, with only clergymen and higher nobility having the privilege of burial inside the church. Unbaptized persons were prohibited from being interred inside the church or the churchyard. This spatial separation evolved from theological considerations and liturgical practices that transformed the spatial structure of the church building itself into a micro-duplicate of the divine structure of the cosmos. The entrance of the church and the near-by baptistery symbolized the entrance to Christianity, while the choir embodied the heavenly kingdom itself, reserved for Christians only.

In her recent case studies on burial topography, Hausmair examined several rural churchyards in Austria and Switzerland, specifically the graves of stillborn infants or those who died very young. Osteological analyses of infant bones can reveal the age at which the babies died, for example before being carried to full term (fetus), during or shortly after birth (perinates/neonates) or in the first months of their lives (infants). However, age is not the deciding indicator of a child's status within the Christian

community: It is the place of burial itself, in relation to other graves within the cemetery but also in relation to Christian spatial concepts embodied in church architecture. The survey revealed a variety of burial practices, all of them showing strong connections to the spatial connotations of cemetery and church topography.

In the case of Bleienbaach Church in Switzerland, fetuses and neonates were predominantly buried inside the church close to the western entrance and the presumed former location of the baptismal font, a liminal area that constitutes the border between Christianity and the outside world. In Kirchlindach, mostly neonates and infants were buried next to the choir, a place where usually only priests and elites were interred. In the third case study of the infant cemetery of Göttweig, neonates and fetuses were buried next to a secluded church without burial privilege which is located on a dominant hilltop overlooking the contemporary villages. The topographical position of these burials separates them from the regular cemeteries of the Christian communities, but at the same time brings the corpses physically closer to the sky, above which - in medieval belief - heaven was thought to be located. All these cases suggest that medieval laity actively engaged with the sacred space around them in order to influence the status of their presumably unbaptized children in the afterlife, thus indicating substantial deviations from the official teachings and directives of the Church.

More information on [Barbara Hausmair](#)

Reconstructing National Identity through Cultural Property Restitution: The Austrian, Italian and West German Cases, 1945-1961

Jour Fixe talk by Bianca Gaudenzi on January 27, 2016

Fascist propaganda in the inter-war period (1922-1939) was omnipresent both in Germany and Italy. The films by Leni Riefenstahl and the "Wochenschau" reports showing speeches by Hitler or Mussolini, but also a wide range of radio and cinema commercials supported the regimes.

In her research, historian Bianca Gaudenzi focuses on advertising in both countries in the inter-war period. Her talk identified the multiple functions of propaganda advertising and the strategies of both fascist regimes for controlling and practicing them. Italy and Germany had developed similar strategies for using and controlling the production and distribution of advertising. Several national boards and inspecting authorities were established in both regimes, leading in 1940 to the establishment of the German-Italian Committee for Advertising. In 1933, a very successful International Advertising Congress took place in Rome.

Slogans like "Buy German bread to create jobs in Germany," or an Italian variation of this phrase, were used to spread the idea of autarchy. Symbols, settings and pictures changed from the Golden Twenties to styles more suitable for both regimes, such as a switch from elegant to gothic fonts. Fascist ideas and ideals were transferred to everyday products, such as in a commercial for a creamery, where bottles are seen marching and singing through Berlin. The presence and function of women changed in particular, from attractive women in commercials to smiling Hitler Girls or female workers in factories and labs, supporting the soldiers fighting at the front.

After the beginning of World War II, advertising changed again to be even more supportive. For example, a four-minute cinema commercial with the famous figure of Johanna, a German housewife printed on the front of a box of washing powder. In the commercial she proudly presents her "Kriegsauftrag" or "war assignment" to produce more and more efficient washing powder for soldiers.

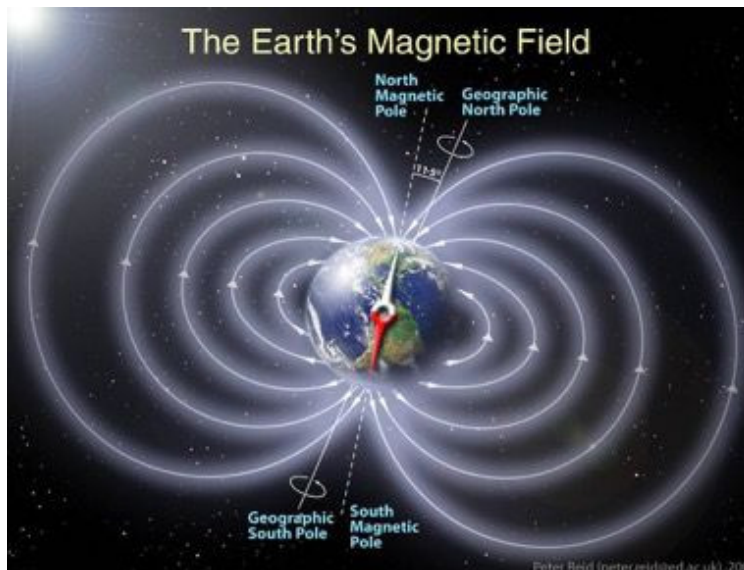
More information on [Bianca Gaudenzi](#)

Microscopic Models for Spin Based Thermo-Electric Energy Conversion on the Nanoscale

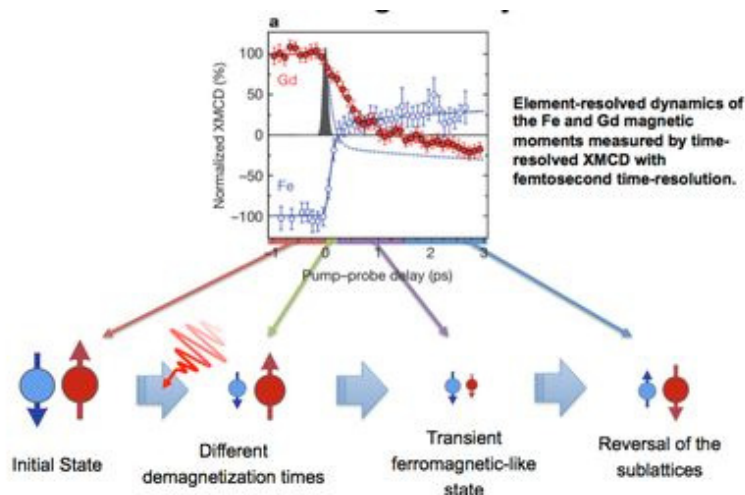
Jour Fixe talk by Unai Atxitia on February 3, 2016

Working magnetic materials are an exciting field of fundamental physics research. In his talk, physicist Unai Atxitia introduced the audience to his research on such materials and future applications of the results.

The most basic technological application of magnetic material is the magnetic compass. The polarity of the Earth's magnetic fields is defined by the North Pole, the direction of which can be detected with a compass and which is used for navigation by humans and several animals, such as migrating birds and bees. However, the polarity of the Earth is not fixed and can switch every one million years, a process that takes several hundreds of years. Generally speaking, magnets are objects that produce magnetic fields and are capable of switching their polarity.



Smaller magnets, able to switch their polarity significantly faster, are used in everyday technology, e.g. in medical research and therapy, such as magnetic resonance imaging (MRI) and non-invasive cancer therapy. They are also very important for electric motors and digital data storage. In 2013, an estimated 4.4 zettabytes (10²¹ bytes) of data were stored globally. In 2020, 440 ZB of data storage is expected to be needed. The processing of such an enormous amount of data in a timely manner requires new storage methods and fast data manipulation. However, current storage and data recording paradigms limit the speed of data storage and information processing to the nanosecond time scale.



Fundamental research on magnetism is therefore very important for developing new concepts that surpass the current limitations by exploiting alternative classes of materials and processes in magnetic memory devices. One of the main aspects is the speed at which polarity switches. In his most recent research, Unai Atxitia investigated the use of a femtosecond laser pulse to switch the polarity at the tremendous speed of one picosecond, or 0.000000000001 seconds, a thousand times faster than the current technology. The laser's energy, deposited as heat, plays a crucial role in this process.

Further basic research in this field may lead to magnetic memory devices with higher density, faster speeds and lower cost.

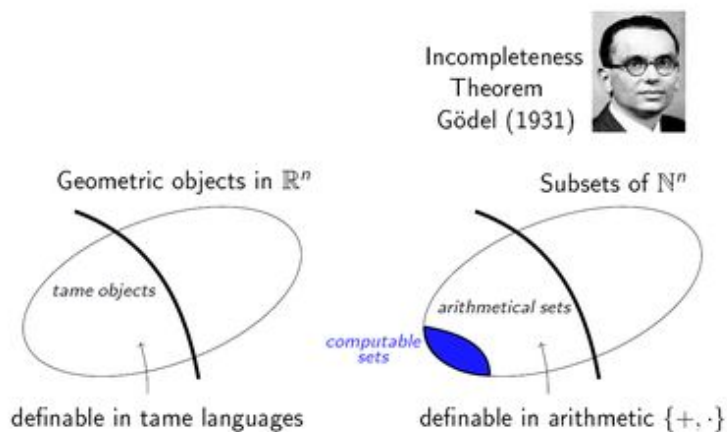
More information on [Unai Atxitia](#)

Groups Definable in Tame Expansions of O-Minimal Structures

Jour Fixe talk by Panteleimon Eleftheriou on February 10, 2016

"I am lying" – a short sentence that challenges modern logic and mathematics. In his talk, Panteleimon Eleftheriou presented fascinating aspects of logic.

His area of research is tame geometry, which is the study of mathematical objects that are definable in a tame geometric language. Tame geometry underlies Lie groups from theoretical physics and several hybrid systems from engineering control theory. His target question is whether tame groups resemble Lie groups, analogous to David Hilbert's fifth problem, which emerged with twenty-three other famous problems in 1900 and asked whether certain topological groups resemble Lie groups.



The notion of definability can be made precise in mathematical logic with the use of a specific, formal language. In logic, the notion of a formal proof of a statement can be defined from a given set of axioms. David Hilbert's twenty-three problems also included the question as to whether it is possible to axiomatize all arithmetic or even mathematics within mathematical logic. In other words, he asked for an axiomatic system from which all true mathematical statements could be derived. This axiomatization turned out to be impossible, as Kurt Gödel proved in 1931 in his Incompleteness Theorem by formalizing the Liar sentence "I am lying" within arithmetic. According to Aristotle's principle of two-valued logic, used in everyday logic, every sentence is either true or not true and only one of the two can happen. The Liar's paradox emerges if we merely state the sentence "I am lying." If that sentence is true, then it is true that I am lying, and therefore the sentence is not true. If it is not true, then it is not true that I am lying, and therefore the sentence is true. Therefore, the Liar sentence can neither be true nor not true, contradicting Aristotle's principle of two-valued logic.

- ▶ Gödel coded the Liar sentence in the language of Arithmetic, and proved that it **cannot** be decided by Arithmetic.

Byproducts: the notions of

1. coding \rightsquigarrow **computable sets** (Turing) = computers.
2. **definability** \rightsquigarrow tame geometry (a long descendant).

Question

- ▶ Can we formalize the Liar sentence
- ▶ and/or study definability

in your own discipline?

The Liar sentence contains self-reference and negation. The combination of the two is so powerful, that one cannot even state the Liar sentence. Likewise, the mathematical formalization of the Liar sentence has helped us prove that certain extreme mathematical phenomena cannot happen. For example, one cannot list the set of all real numbers, and one cannot form the set of all sets. Gödel's remarkable Incompleteness Theorem consists of coding the Liar sentence in the language of arithmetic, and proving that it cannot be proved nor disproved by arithmetic. A by-product of this coding was the

invention of the Turing machine, which is the theoretical ancestor of our current computers. Coding, in its turn, gave rise to the notion of definability, which has been employed by mathematicians ever since, among them the tame geometers.

More informations on [Panteleimon Eleftheriou](#)



Public Lectures & Events

"Flexible Pollinator Preferences: Toward a Deeper Understanding of Flower Choice"

Public lecture by Robert Raguso on October 14, 2015

Hannah Burger (Associate Fellow/Dept. of Biology) hosted a public lecture by Prof. Robert Raguso (Cornell University, USA) on the topic "Flexible Pollinator Preferences: Toward a Deeper Understanding of Flower Choice." The lecture was organized as part of the Zukunftskolleg Mentorship/MIN Program and was followed by a symposium with short talks on the topic of "Odour Communication Between Insects and Plants."

See also the full [program](#) of the symposium.



Spies, Spins and Spectra

Inaugural lecture by Malte Drescher on October 15, 2015

Malte Drescher was awarded the first Heisenberg Professorship at the University of Konstanz. He is a professor of the spectroscopy of complex systems in the department of chemistry. On October 15, he gave his inaugural lecture on "Spies, Spins and Spectra" in which he explained electron spin resonance spectroscopy as a method for analyzing the structure and dynamic of macromolecules. The Heisenberg Professorship is funded by the German Research Foundation for the duration of five years, if the university agrees to create a new professorship and guarantees payment after five years.

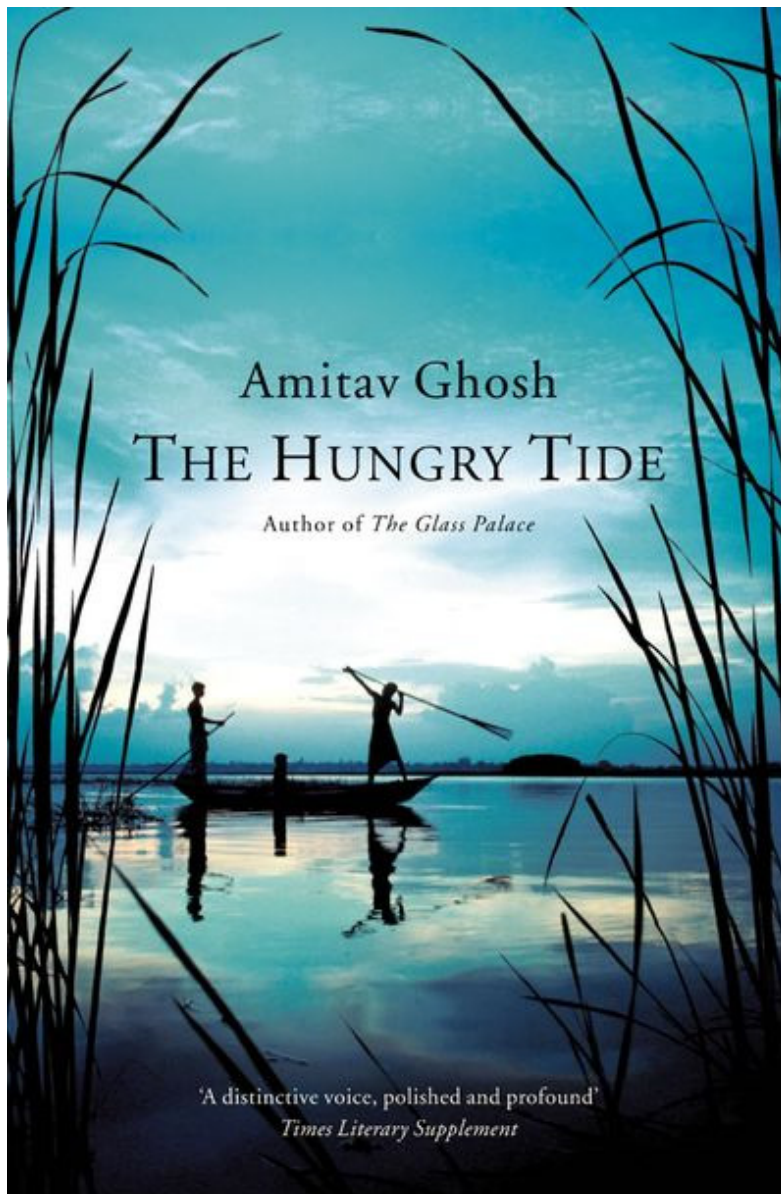
See also the [press release](#) on this event.

Fiction Meets Interdisciplinary Science

The Zukunftskolleg Book Club

"Taking a leaf out of the Fiction Meets Science's book, we have decided to look at novels that have a scientific theme in order to discuss the interdisciplinary setup of the Zukunftskolleg in the book club." This was the starting point for organizing a book club at the Zukunftskolleg in Summer Term 2015, initiated by literature scholar Julia Boll.

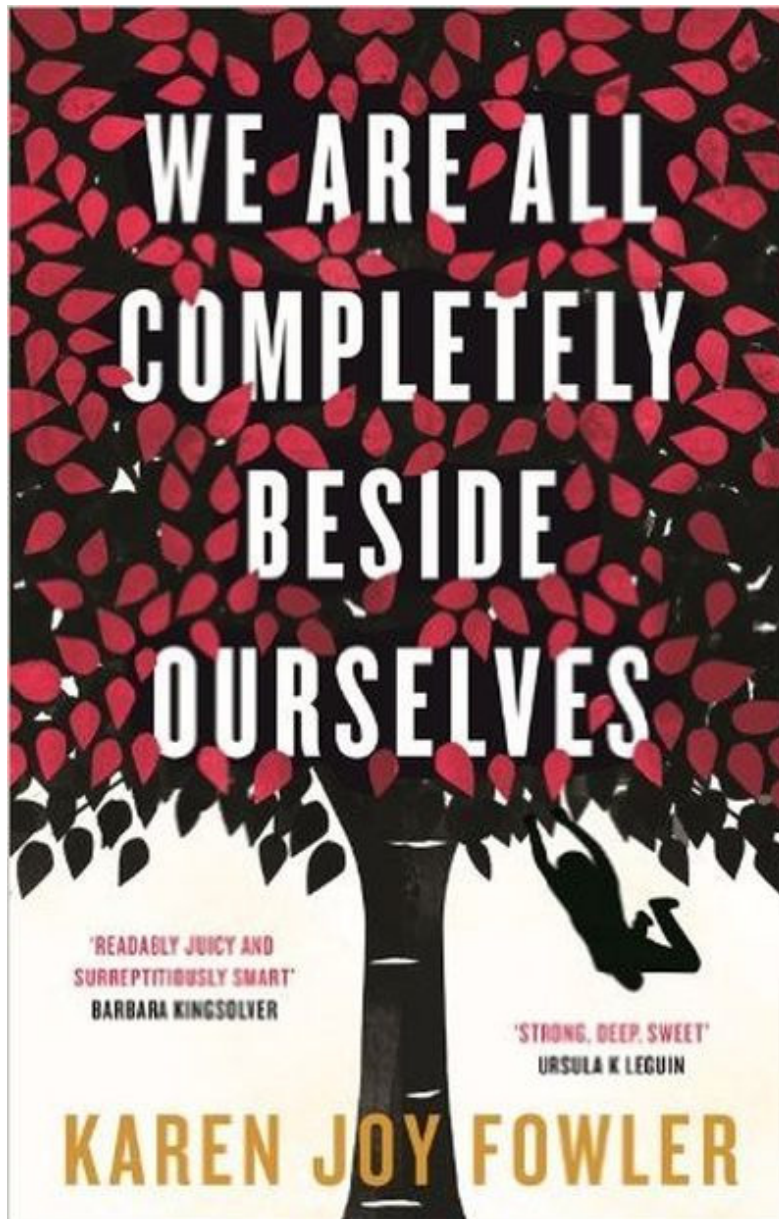
The book club met on October 29 to talk about their third novel, Amitav Ghosh's "The Hungry Tide," published by HarperCollins in 2004. "The Hungry Tide" is set in the Sundarban archipelago, a wild maze of islands and waterways on the Bay of Bengal. Piyali Roy, an Indian-American marine biologist, travels across the archipelago in search of the once common Irrawaddy dolphin. Kanai Dutt is a successful New Delhi businessman and interpreter, who has traveled to the region to retrieve his deceased uncle's journal, which recounts the history of the islands and the brutal eviction of a group of poor settlers that resulted from the government's overeager conservation efforts. In the course of their private quests and interrelating stories, Amitav Ghosh explores the volatile interfaces between ecology, sociology, and twentieth-century politics.



The book club's fourth meeting took place on January 29. The participants gathered to discuss their thoughts on Karen Joy Fowler's "We are All Completely Beside Ourselves," published by Penguin in 2013. The novel deals with our conception of personhood and humanity, memory and forgetting, which ultimately raises the question of responsibility in scientific research.

As a child, Rosemary Cooke used to talk all the time. So much so that her father - a behavioral scientist - used to tell her to start in the middle if she wanted to tell a story. Now, Rosemary has just started college and she barely talks at all. And she definitely

doesn't talk about her family. Rosemary is now an only child, but she used to have a sister the same age, and an older brother. Now, her adored older brother is a fugitive, wanted by the FBI for domestic terrorism, her once lively mother is a shell of her former self, and her clever and imperious father is a distant and brooding man. Completely missing is her sister Fern, about whom there's something unique. So now she's telling her story: A looping narrative that begins towards the end, and then goes back to the beginning. Twice.



Protein Biomarkers: Recent Developments and Perspectives for Clinical Applications

Public and Habilitation lecture by Marilena Manea on February 2, 2016

Biomarkers are substances used as measurable indicators of a particular biological state, such as a normal or a pathological biological process. Thus, they hold great promise in hospitals for diagnosing and monitoring disease progression, as well as evaluating the treatment efficiency. In her lecture, Marilena Manea presented current approaches in proteomics and immunoassays, and the challenges of their application in biomarker research. Special emphasis is on protein biomarkers with potential applications in the diagnosis of cancer and neurodegenerative diseases. Biomarkers of this kind might also contribute to a better understanding of disease biology and help in selecting suitable therapeutic strategies.



Invited Talks

Raul Acosta Garcia

"Reproduction of Hope: Photos of Urban Activism as an Affective Arena," talk at the Social and Cultural Anthropology Colloquium, University of Konstanz, Germany, December 1, 2015

Francesca Biagioli

"Continuities and Discontinuities across Theory Change: Ernst Cassirer's Relativized Conception of the A Priori," invited talk at the Lunchtime Colloquium of the Center for Philosophy of Science, University of Pittsburgh, USA, October 30, 2015

"Cassirer on Scientific Representation and the Concept of Function," talk at the conference "Neo-Kantian Perspectives on the Exact Sciences," University of Konstanz, Germany, January 22-24, 2016

"Alois Riehls wissenschaftstheoretisches Argument für die Erkennbarkeit der Dinge an sich," invited talk at the Forschungskolloquium, Technische Universität Darmstadt, Germany, February 8, 2016

Julia Boll

"The Sum of Our Parts: the Voices of the Human Genre Project," invited talk at the conference "The Poetics of Knowledge," University of Bern, Switzerland, November 6, 2015

"Wasted Lives, Drowned: Plays on the Refugee Crisis," invited lecture at Southern Adventist University, Collegedale/Tennessee, USA, November 10, 2015

"Wasted Lives, Drowned: Plays on the Refugee Crisis," lecture at "The 29th Annual Conference of SLSA (Society for Literature, Science, & the Arts): After Biopolitics" at the Center for Critical and Cultural Theory, Rice University Houston/Texas, USA, November 13, 2015

"Is Knowledge Performative? Science/Stage: an Experiment in Performance Lectures," invited talk at the conference "Doing Science: Texts, Patterns, Practices," University of Cologne, Germany, November 20, 2015

Thomas Böttcher

"Small Molecule Modulators of Bacterial Behaviour," invited talk at MPI Marburg, Germany, December 14, 2015

Daniele Brida

"On the Buildingup of Interactions in Correlated Matter," invited talk at the "Sino-German Symposium on Attosecond Photonics," Shanghai, China, Nov 16-18, 2015

Sarang Dalal

"Associating Neuromagnetic Oscillations with Perception and Awareness," talk at DANDRITE - Danish Research Institute of Translational Neuroscience, Aarhus University, Denmark, October 16, 2015

"Interactions between Oscillations in the Cerebral Cortex and the Retina," talk at the Wellcome Trust Centre for Neuroimaging, University College London, UK, November 6, 2015

Panteleimon Eleftheriou

"On O-Minimal Hilbert's Fifth Problem," talk at the Mathematics Colloquium, Department of Mathematics and Statistics, University of Konstanz, Germany, October 22, 2015

Katherine Fama

"Architectures of Marital Deferral: Edna Ferber's Mobile Homes and Serial Fictions," talk in the panel "Architecture and Narrative: The Production and Renovation of Everyday Space" (panel co-organizer) at American Studies Association Annual Meeting, Toronto, Canada, October 8, 2015

"Anzia Yeziarska's Real Home for Working Girls: From Tenement to Charity Home (and Back)," talk in the panel "Spatial Revolutions: Literature, Architecture, and Domestic Space" at the Modernist Studies Association Annual Conference, Boston, USA, November 21, 2015

Bianca Gaudenzi

"Tra propaganda e commercio: la politicizzazione dell'industria pubblicitaria nella Germania nazionalsocialista," talk at the international conference entitled "Comunicazione politica e storia contemporanea in Italia e Germania/Politische Kommunikation und Neueste Geschichte in Italien und Deutschland," University of Bologna, Italy, November 2-3, 2015

"Selling Fascism? Advertising the Future in Fascist Italy and Nazi Germany," talk at the Institut für Wirtschaft- und Sozialgeschichte, University of Göttingen, Germany, January 13, 2016

Denis Gebauer

"On the Pre-Nucleation Cluster Pathway," invited talk at the Nanocem Workshop on Nucleation and Growth, Research Center of Lafarge, Saint-Quentin, Lyon, France, October 1, 2015

"Formation of Biominerals: On the Pre-Nucleation Cluster Pathway & the Multiple Roles of Additives," invited talk at the symposium on Colloids and Surfaces in Biology and Biomaterials, Uppsala University, Uppsala, Sweden, November 4-6, 2015

"On the Pre-Nucleation Cluster Pathway," invited talk at the International Chemical Congress of the Pacific Basin Societies (PacifiChem), Honolulu, Hawaii, USA, December 15-20, 2015

"On the Pre-Nucleation Cluster Pathway," invited talk, "Crystallisation Down Under 2016 — A Molecular Scale Understanding of Crystal Growth," Curtin University (Nanochemistry Research Institute and Leverhulme Trust), Perth, Australia, January 11-12, 2016

"Pre-nucleation Clusters in Mineralization," invited talk at the Anorganisch-chemisches Kolloquium, Institut für Anorganische und Analytische Chemie, Albert-Ludwigs-Universität Freiburg, Germany, January 21, 2016

Charu Goel

"Symmetric and Even Symmetric Forms: Test Sets for Positivity and Sum of Squares Representations," invited talk at Johann Radon Institute for Computational and Applied Mathematics, Austrian Academy of Sciences, Linz, Austria, November 04, 2015

"On Sums of Squares Representations of Symmetric and Even Symmetric Forms," invited talk at the Antwerp Algebra Seminar at the University of Antwerpen, Belgium, October 09, 2015

"The analogue of Hilbert's 1888 Theorem for even symmetric forms," talk at the conference "Ordered Algebraic Structures and Related Topics" at CIRM, Marseille, France, October 13, 2015

Barbara Hausmair

"Den Terror ergraben. Was soll, kann und darf eine Archäologie des NS-Lagersystems," invited talk at the conference "Archäologie im Krieg," hosted by Deutsches Archäologisches Institut/Cluster 5, Halle/Saale, Germany, November 26-27, 2015

Michael Kovermann

"NMR Spectroscopy Reveals Catalytically Restrictive Dynamics of a High Energy Enzyme State," invited talk at the University of Zürich, Switzerland, November 11, 2015

Robert Kraus

"Freigelassenes Federwild führt zu kontinent-weiter genetischer Introgression: Die sich ändernde genetische Landschaft der Stockente (*Anas platyrhynchos*) in Europa," talk (with P. Söderquist, G. Gunnarsson, C.-G. Thulin, J. Champagnon, M. Guillemain, J. Kreisinger, H.H.T. Prins, R.P.M.A. Crooijmans, and J. Elmberg) at the "148th Annual Meeting of the German Ornithology Society (Deutsche Ornithologen Gesellschaft e.V.)," Konstanz, Germany, October 4, 2015

Oleksandra Kukharenko

"Analysis of the simulation data of intrinsically disordered peptide," talk at "Workshop on Markov Modeling and Free Energy Calculation," Freie Universität Berlin, Germany, February 22 – 26, 2016

Julia Langkau

"Knowledge from Fiction and two Kinds of Perspective Taking", invited talk at University of Miami, USA, December 10, 2015

Elliott Lash

"Non-Canonical' Subject Positions in Passive (and Intransitive) Sentences in Early Irish," talk at the "Tionól 2015," Dublin Institute for Advanced Studies, Dublin, Ireland, November 19-21, 2015

Sven Lauer

"Temporal Interpretation and the Performative Use of Modals," talk at California Universities Semantics and Pragmatics (CUSP) 8, Stanford University, USA, November 6–7, 2015

"Performative Uses and the Temporal Interpretation of Modals," talk at the 20th Amsterdam Colloquium, University of Amsterdam, Netherlands, December 16–18, 2015

Michael Pester

"The Importance of Minorities: How Sulfate Reduction in Peat Soil is Driven by Small Networks of Low-Abundance Bacteria," talk at the seminar of the Department of Environmental Microbiology, EAWAG, Dübendorf, Switzerland, November 24, 2015

Daniel Plaumann

"Positive Polynomials According to Murray Marshall," talk at the CIRM meeting entitled "Ordered Algebraic Structures," Luminy, France, October 16, 2015

"Positive Polynomials and Toric Compactifications", "talk at the Symbolic Computation Seminar, North Carolina State University, Raleigh, USA, November 12, 2015

"Positive Polynomials and the Moment Problem," talk at the Mathematisches Kolloquium, University of Osnabrück, Germany, December 2, 2015

"Toric Compactifications of Semi-Algebraic Sets," talk at the Algebra Seminar, Georgia Institute of Technology, Atlanta, USA, February 22, 2016.

Michael Pokojov

"Some Aspects of Nonlinear Thermoelastic Plates," talk at the MORE seminar, Charles University in Prague, Czech Republic, October 5, 2015

"Linear Heat Equation with Delay: Ill-Posedness vs. Well-Posedness and Long-Time Behavior," talk at the MORE seminar, Charles University in Prague, Czech Republic, October 12, 2015

"A Multistep, Cluster-Based Multivariate Chart for Retrospective Monitoring of Individuals," talk at the Scientific seminar, Central Michigan University, Mt. Pleasant,

USA, October 15, 2015

"On a Parabolic-Hyperbolic Filter for Image Processing," talk at the MORE seminar, Charles University in Prague, Czech Republic, February 29, 2016

Maria Daniela Poli

"Der justizielle Pluralismus der europäischen Verfassungsgemeinschaft," talk at the Kolloquium der Öffentlichrechtler, University of Konstanz, Germany, December 2, 2015

"La Germania e la governance economica europea," talk at the congress entitled "La reforma de la gobernanza económica de la Unión Europea y el progreso de la integración política," University of Granada, Spain, December 10-11, 2015

Jennifer Randerath

"Advanced Education: Apraxie: Diagnostik und Rehabilitation," talk at the Rehaklinik Zihlschlacht, Switzerland, November 2015

Gianluca Rastelli

"Cooling a Nanomechanical Resonator Using Spin-Dependent and Superconducting Electron Transport," talk at a theoretical seminar at the Center of Quantum Science, University of Tübingen, Germany, November 20, 2015

Tanja Rinker

"Platz für viele Sprachen - individuelles Können und Klassenzimmeralltag," talk (with Janet Grijzenhout) at the Lehramtsinitiative der 38. Jahrestagung der Deutschen Gesellschaft für Sprachwissenschaft, University of Konstanz, Germany, February 2, 2016

"Zum Erhalt der Herkunftssprachen in Europa," invited talk (with Janet Grijzenhout) at the Kulturwissenschaftliches Kolleg, University of Konstanz, Germany, February 10, 2016

Sebastian Schutte

"Violence and Civilian Loyalties: Evidence from Afghanistan," talk at Social Science Colloquium Series, NYU Abu Dhabi, United Arab Emirates, October 14, 2015

"Conducting Large-Scale Reimbursed Surveys via SMS with an Application to India," talk at the study group "Dynamik von kollektiven Entscheidungen," HWK Delmenhorst, Germany, February 22, 2016

Denis Seletskiy

"Ultrafast Quantum Optics," talk at the Department Seminar, University of Washington, USA, October 23, 2015

"Sub-Cycle Quantum Optics: Direct Sampling of Vacuum Fluctuations in Experiment and Theory," (with C. Riek, A. Moskalenko, G. Burkard, A. Leitenstorfer), talk at the 18th Annual Southwest Quantum Information and Technology Workshop, Albuquerque, USA, February 18-20, 2016

"Heralding Subcycle Quantum Optics," talk at a seminar at the Center for Integrated Nanotechnology, Los Alamos National Laboratory, USA, February 23, 2016

"Fascinating Toolbox of Subcycle Photonics," talk at the Optical Science and Engineering Seminar, Physics Department, University of New Mexico, Albuquerque, New Mexico, February 25, 2016

Ulrich Sieberer

"Shadowing with Glass Figures? A Comparative Analysis of Committee Chair Powers in Western European Democracies," talk at the workshop entitled "Institutional Determinants of Legislative Coalition Management," Tel-Aviv University, Israel, November 16-19, 2015

Margarita Stolarova

"Helping and Pro-Social Development in Childhood: What Do (We Think) We Know About It Today," invited talk at the Touro College, Berlin, Germany, November 2015

"Psychologie in der Sozialen Arbeit im Spannungsfeld zwischen Individuum und Gesellschaft," invited talk at the Hochschule Ludwigshafen am Rhein, Ludwigshafen, Germany, November 2015

"Braucht da jemand Hilfe? Kognitive und emotionale Aspekte der Wahrnehmung von alltäglicher Hilfebedürftigkeit," invited talk at the University of Witten/Herdecke, Germany, January 2016

Attila Tanyi

"The Role of Reasons in Health Care Resource Allocation," "Exploring the Issues – Resource Allocation and Commissioning," talk at the AHRC research network "Medicine, Markets and Morals" 2nd meeting, Glasgow, Scotland, February 12, 2016

Margaret Thomas

"Effective Pila-Wilkie Bounds for Restricted Pfaffian Surfaces," talk at the Young Researchers' Session, Meeting "Ordered Algebraic Structures and Related Topics," Centre International de Rencontres Mathématiques, Luminy, Marseille, France, October 12-16, 2015

"The Density of Rational and Algebraic Points on Certain Pfaffian Sets," talk at the Heilbronn seminar in Number Theory, University of Bristol, UK, January 20, 2016

Zsuzsanna Török

"Territory or Nation? Scholarship and Social Hierarchies in Multiethnic Transylvania, 1890-1914," lecture at the Abteilung für Osteuropäische Geschichte, University of Heidelberg, Germany, November 3, 2015

Grey Violet

"Geometry of Univariate Stability: Continuity Argument, Symmetric Powers and Stability Theories," talk at "Séminaire de géométrie et algèbre effectives", IRMAR, Rennes, France, January 8, 2016

"Topology of Root Clustering Problems," talk at the seminar "Reelle Geometrie und Algebra," University of Konstanz, Germany, February 12, 2016



Participation in Workshops, Symposia, Conferences

Francesca Biagioli

Organizer of the conference "Neo-Kantian Perspectives on the Exact Sciences," (with Marco Giovanelli/University of Tübingen), sponsored by the Zukunftskolleg, University of Konstanz, January 22–24, 2016

Thomas Böttcher

"Falling Walls Conference," Berlin, Germany, November 8-9, 2015

Chemie Emmy Noether Treffen, Bayreuth, Germany, February 12, 2016

Monika Class

"Novel Reading and Medicine," presentation at workshop "What is Medicine" at the Centre for Medical Humanities of Zurich University, October 2015

Maité Crespo-García

"Slow-Theta Power Decreases are Beneficial for Accurate Encoding of Spatial Context in Human Navigation" (with Monika Zeiller, Claudia Leupold, Mathis Kaiser, Stefan Rampp, Gernot Kreiselmeier, Hajo Hamer and Sarang S. Dalal), in "Tübingen MEG Symposium," Tübingen, Germany, November 2-3, 2015

Maria Cruz Berrocal

Organizer of the "NAO-Workshop" (NAO: Networks Across Oceania) for members of the NAO, University of Konstanz, October 23, 2015

Panteleimon Eleftheriou

"Groups, Geometry and Combinatorics," Oberwolfach workshop in Model Theory, Oberwolfach, Germany, January 3-9, 2016

Bianca Gaudenzi

"Plundered – but by Who? Protectorate of Bohemia and Moravia and Occupied Europe in the Light of the Nazi-Art Looting," St. Agnes of Bohemia Convent, Prague, Czech Republic, October 21-22, 2015

"Neue Perspektiven der Provenienzforschung in Deutschland/New Perspectives on Provenance Research in Germany," conference for the launch of the "Deutsches Zentrum Kulturgutverluste," Jewish Museum, Berlin, Germany, November 27-28, 2015

Michael Kovermann

"Structural Basis for Catalytically Restrictive Dynamics of a High-Energy Enzyme State," talk at the conference entitled "Faltertage," Halle/Saale, Germany, October 23-25, 2015

Alumni talk at the 2nd iRTG workshop of the SFB TRR102, Lutherstadt Wittenberg, Germany, November 30 - December 1, 2015

Robert Kraus

"International Plant & Animal Genome XXIV (PAG XXIV)," San Diego, USA, January 2016

Andrea Lailach-Hennrich

Organizer of the workshop "Kant on Psychology" with Prof. Corey Dyck (University of Western Ontario), October 9, 2015

Julia Langkau

"Imagining Fictional Worlds," 2nd Philosophy meets Literary Studies Workshop, University of Hamburg, Germany, January 15, 2016?

Elliott Lash

Host of the "Wh-Doubling Workshop," funded by Zukunftscolleg Co-funding, University of Konstanz, Germany, October 8-9, 2015

"Tionól 2015," Dublin Institute for Advanced Studies, Ireland, November 19-21, 2015

Bernard Lepetit

"Experimental Model Systems" gathering, financed by the Gordon and Betty Moore Foundation, Heidelberg, Germany, January 1, 2016

Michael Pokojovy

"On Distributed Systems with Noisy Observations," AMS Fall Southeastern Sectional Meeting, Memphis, USA, October 17-18, 2015

"A Cluster-Based Outlier Detection Scheme for Multivariate Data," AMS Fall Southeastern Sectional Meeting, Memphis, USA, October 17-18, 2015

Maria Daniela Poli

"Chancen und Grenzen des Grundsatzes der Verhältnismäßigkeit," conference hosted by Prof. Dr. Oliver Lepsius, Bischofsvilla Konstanz, Germany, December 16, 2015

"Pouvoir constituant und pouvoir irritant in der postnationalen Ordnung," conference hosted by Prof. Nico Krisch, Bischofsvilla Konstanz, Germany, January 27, 2016

Tanja Rinker

Organizer of the conference "Mehrsprachigkeit in Kita und Schule: Neue Herausforderungen und neue Wege," (with Janet Grijzenhout, Svenja Kornher, Doris Edelmann), funded by the Internationale Bodensee Hochschule, Kloster Hegne, Germany, October 16, 2015

Antonio Rotolo

Invited lecturer at MediaLab UGR: "From Archaeology to Technology. La historia de un humanista en el mundo de la tecnología: el caso de Ludwig," Universidad de Granada, Spain, October 26, 2015

Nina Schneider

"The Brazilian National Truth Commission in the Context of Latin America: Local, National, and Global Perspectives," international symposium funded by the Volkswagen Foundation, Hannover-Herrenhausen, Germany, October 15-17, 2015

Denis Seletskiy

"Few-Fermion Ultrafast Dynamics in Semiconductor Quantum Dots," (with C. Hinz, B. Bauer, C. Traum, and A. Leitenstorfer), paper LW4H.3 presented at the Frontiers in Optics 2015/Laser Science XXXI (FIO/LS) 2015, San Jose, USA, October 18-22, 2015

Margarita Stolarova

"(Re)searching the Future: Young Academics in Israel and Germany," conference organized by the Martin Buber Society of Fellows, Berlin, Germany, November 26, 2015

Zsuzsanna Török

"Landeskunde – an Imperial and National Scholarship in the Habsburg Composite State," paper presented at the Annual Conference 2015 of the Collegium Carolinum "Wissenschaft und Imperium im östlichen Europa im 19. Jahrhundert," in cooperation with the Graduate School for East and Southeastern European Studies München-Regensburg, Bad Wiessee, Germany, November 5–8, 2015

Grey Violet

"Ordered Algebraic Structures and Related Topics," CIRM, Marseille, France, October 12-16, 2015



**Contributing to an
International University
Debate, Media Presence**

Francesca Biagioli

Lunchtime colloquium of the Center for Philosophy of Science, University of Pittsburgh, USA, September - December 2015

Center for Philosophy of Science reading group, University of Pittsburgh, USA, September - December 2015

Thomas Böttcher

Salon Sophie Charlotte at the Berlin-Brandenburgische Akademie der Wissenschaften, Berlin, Germany, January 23, 2016

"Hätte die Evolution auch anders laufen können?," radio interview given at "Die Profis - Das populäre Wissenschafts-Magazin," radioeins rbb (Berlin), 10:40 am, January 23, 2016

Bianca Gaudenzi

"Developments of Avenues of Research in Relations to Career Building," panel discussion at the Martin Buber Society of Fellows public event "(Re)searching the Future: Young Academics in Israel and Germany," Berlin, Germany, November 26, 2015

Charu Goel

Coordinator of the Informations- und Gesprächsplattform "Frauen in der Mathematik: Wege in Studium und Beruf" - Panelist in the roundtable discussion on the gender gap in mathematics in the "Women in Mathematics" session on October 14, 2015 during the conference "Ordered Algebraic Structures and Related Topics" at CIRM, Marseille, France, October 12-16, 2015

Michael Pokojovy

Organizing and chairing the "Fall 2015 School on Applied Mathematics and Statistics," supported by the International Office at the University of Konstanz, October 5-9, 2015, see also [here](#)

"Fall Southeastern Sectional Meeting," University of Memphis, Memphis, TN, see also [here](#)

Tanja Rinker

"Wie Mehrsprachigkeit allen Schülern hilft," online article published on October 20, 2015, see also [here](#)

Denis Seletskiy

"Signals from empty space," online article in "Science Daily," published on October 2, 2015, see also [here](#)



People

New ZIF Marie Curie 2-year Postdoctoral Fellows:

- Janina Beiser, Politics and Public Administration
- James Griffiths, Linguistics
- Denis Pinget, Chemistry
- Tilman Triphan, Biology
- Nadir Weber, History
- Leila Whitley, Literature

Fellowships ending in winter term 2015/16:

- Eleanor Coghill, Linguistics
- Sarang Dalal, Psychology

Senior Fellows and Mentors present in winter term 2015/16:

- Randolph Menzel, Biology, Freie Universität Berlin, Germany

New Associate Fellows:

- Peter Haffke, Graduate School Decision Sciences
- Jan Hausfeld, Graduate School Decision Sciences
- Anette Hautli-Janisz, Linguistics
- Andreas Heim, Graduate School Chemical Biology
- Maria Infusino, Mathematics and Statistics
- Michael Kovermann, Chemistry, by Application
- Jan Mellert, Graduate School Decision Sciences
- Tinette Schnatterer, Politics and Public Administration
- Dmytro Sysoiev, Chemistry
- Eunike Wetzel, Psychology
- Sina Zboron, Graduate School Chemical Biology



Publications

Raul Acosta Garcia

"Mexico Through a Superdiversity Lens: Already-Existing Diversity Meets New Immigration" (with Esperanza Martínez Ortiz); in: "Comparing Super-Diversity," edited by Fran Meissner and Steven Vertovec. London: Routledge

"Activismo práctico como reapropiación del conocimiento público"; in: "Comunicar ciencia en México: discursos y espacios sociales," Vol. 2, edited by Susana Herrera Lima, Carlos Enrique Orozco Martínez, and Eduardo Quijano Tenreiro, Guadalajara: ITESO

"'We are Plumbers of Democracy': A Study of Aspirations to Inclusive Public Dialogues in Mexico and its Repercussions"; in "Public Anthropology in a Borderless World," edited by S. Beck & C. Maida, p. 247-263, Oxford: Berghahn

"Diversities Old and New: Migration and Socio-Spatial Patterns in New York, Singapore, and Johannesburg"; in: "Ethnic and Racial Studies Review," edited by S. Vertovec, Basingstoke: Palgrave Macmillan, published online October 23, 2015. See also [here](#)

Unai Atxitia

"Optimal Electron, Phonon, and Magnetic Characteristics for Ultra-Low Energy Thermally Induced Magnetization Switching" (with T. A. Ostler, O. Chubykalo-Fesenko, and R. W. Chantrell); in: "Applied Physics Letters" 2015, 107, c. 192402, published online November 9, 2015. See also [here](#)

Francesca Biagioli

"Cassirer's View of the Mathematical Method as a Paradigm of Symbolic Thinking"; in: "Lectiones & Acroases Philosophicae" 8.1(2015), p. 193-223

"The Symbolic Function of Mathematics in Ernst Cassirer's Philosophy of Culture"; in: "New Europe College Yearbook" 2013-2014, p. 95-120

Thomas Böttcher

"An Additive Definition of Molecular Complexity"; published online ahead of print in: "J. Chem. Inf. Model" (2016)

"Dynamics of Snake-like Swarming Behaviour of *Vibrio Alginolyticus*" (with H. L. Elliott, and J. Clardy); in: "Biophys. J." 110(4), p. 981-992

"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, S.A); in: "Chem. Eur. J." 22(5), p. 1622-1630

"Wie Bakterien uns mit Naturstoffen krank machen" (with M. Prothiwa, D. Szamosvari); in: "Nachrichten aus der Chemie," 63(12), p. 1163-1167

Daniele Brida

"Ultrafast Pseudospin Dynamics in Graphene" (with M. Trushin, A. Grupp, G. Soavi, A. Budweg, D. De Fazio, U. Sassi, A. Lombardo, A. C. Ferrari, W. Belzig, A. Leitenstorfer); in: "Phys. Rev." B 92, 165429, published October 26, 2015, see also [here](#)

"Below-Gap Excitation of Semiconducting Single-Wall Carbon Nanotubes" (with G. Soavi, A. Grupp, A. Budweg, F. Scotognella, T. Hefner, T. Hertel, G. Lanzani, A. Leitenstorfer, G. Cerullo); in "Nanoscale" 7, 18337, published October 15, 2015, see also here DOI: 10.1039/C5NR05218A

"615-fs Pulses with 17-mJ Energy Generated by an Yb:thin-disk Amplifier at 3-kHz Repetition Rate" (with J. Fischer, A. C. Heinrich, S. Maier, J. Jungwirth, A. Leitenstorfer); in: "Optics Letters" 41 (2), p. 246-249, published January 15, 2016

Maria Cruz Berrocal

"Archaeologies of Early Modern Spanish Colonialism"; edited by M. Cruz Berrocal, S. Montón, M. Ruiz, Springer, New York, see also [here](#)

Sarang Dalal

"Bicycling and Walking are Associated with Different Cortical Oscillatory Dynamics"; in: "Frontiers in Human Neuroscience," published online 2016, see also [here](#)

Bianca Gaudenzi

"Dictators for Sale. The Commercialization of the Duce and the Führer in Fascist Italy and Nazi Germany"; in: "Rewriting German History: New Perspectives on Modern Germany," edited by Jan Rüger and Nik Wachsmann, p. 267-87, London: Palgrave Macmillan

Denis Gebauer

"pH-Dependent Schemes of Calcium Carbonate Formation in Presence of Alginates" (with Ashit Rao, Patricio Vásquez-Quitral, Maria S. Fernández, John K. Berg, Marianela Sánchez, Markus Drechsler, Andronico Neira-Carrillo, Jose L. Arias and Helmut Cölfen); in: "Cryst. Growth Des." 2016, published February 9, 2016, see also [here](#)

"The Role of Chloride Ions during the Formation of Akaganéite Revisited" (with Johanna Scheck and Tobias Lemke); in "Minerals" 2015, 5 (4), p. 778-787, published November 23, 2015, see also [here](#)

Charu Goel

"The Analogue of Hilbert's 1888 Theorem for Even Symmetric Forms" (with Salma Kuhlmann and Bruce Reznick); published online 2015, see [here](#)

Barbara Hausmair

"Spruch von den sibnen, so dem buwmeister der statt zugeho?ren zu rechtvertigen. Die ältesten Konstanzer Baugerichtsprotokolle (1452–1470)"; in: "Konstanzer Geschichts- und Rechtsquellen XLVI," edited by B. Hausmair and G. Signori, 2016, Osterfildern: Thorbecke

Wolf Hütteroth

"Novel Antennal Lobe Substructures Revealed in the Small Hive Beetle *Aethina tumida*" (with Martin Kollmann, Anna-Lena Rupenthal, Peter Neumann and Joachim Schachtner); in "Cell and Tissue Research," published online ahead of print October 24, 2015, see also [here](#)

Michael Kovermann

"Novel Sulfated Phosphoglycolipids from *Natronomonas Moolapensis*"; in: "Chem. Phys. Lipids" 2015, 191, p. 8-15, published October, 2015, see also [here](#)

"The C-terminus of Human Copper Importer, Ctr1, Acts as Binding Site and Transfers Copper to Atox1"; in: "Biophysical J." 2016, 110, p. 95-102, published January 5, 2016, see also [here](#)

Claudius Kratochwil

"Molecular Evolution of the Neural Crest Regulatory Network in Ray-Finned Fish" (with L. Geissler, I. Irisarri and A. Meyer); in: "Genome Biology and Evolution" 7 (11), p. 3033-3046, see also [here](#)

"Hoxa2 Selects Barrelette Neuron Identity and Connectivity in the Mouse Somatosensory Brainstem" (with Bechara A, Laumonerie C, Vilain N, Cankovic V, Maiorano N, Kirschmann M., Ducret S., Rijli F.M.); in: "Cell Reports" 13 (4), p. 783-797, see also [here](#)

Sven Lauer

"Performative Uses and the Temporal Interpretation of Modals"; in: "Proceedings of the 20th Amsterdam Colloquium," edited by Thomas Brochhagen, Floris Roelofsen and Nadine Theiler, published online December 10, 2015, see also [here](#)

Marilena Manea

"Studying the Tumor Growth Inhibitory Effect of Modified GnRH-III-Anthracycline Bioconjugates in Subcutaneous vs. Orthotopic Models in Vivo" (with Kapuvári B, Schulcz A, Hegedüs R, Szabó I, Manea M, Vincze B, Tóvári J, Gacs A, Tejada M, Gaál D, Mezö G.); in: "Magy Onkol" 2015, 59(4), p. 310-318, published online October 15, 2015, see also [here](#)

Daniel Plaumann

"A Relative Grace Theorem for Complex Polynomials" (with Mihai Putinar); in: "Mathematical Proceedings of the Cambridge Philosophical Society," published online February 11, 2016, see also [here](#)

Michael Pokojov

"Analysis and Numerics for an Age- and Sex-Structured Population Model" (with Yevhenii Skvarkovskiy); in: "Numerical Methods for Partial Differential Equations" 2016, 32 (2), p. 706-736, published online November 27, 2015, see also [here](#)

"A Cluster-Based Outlier Detection Scheme for Multivariate Data" (with J. Marcus Jobe); in: "Journal of the American Statistical Association" 2015, 110 (512), p. 706-736, published January 15, 2016, see also [here](#)

Maria Daniela Poli

"L'influenza del diritto tedesco sul sistema di giustizia costituzionale della Repubblica sudafricana" (title in English: "The Influence of German Law on the Constitutional Justice System of the South African Republic"); in: "VV.AA, Le trasformazioni costituzionali del secondo millennio. Scenari e prospettive dall'Europa all'Africa (e dintorni)"; Rimini, Maggioli, 2016

"Alemania y la crisis económica: fragilidad oculta y contradicciones evidentes" (title in English: "Germany and Economic Crisis: Hidden Weakness and Evident Contradictions"); in: "Revista de Derecho Constitucional Europeo" n. 24, July-December 2015, see also [here](#)

Jennifer Randerath

"Diagnostics and Training of Affordance Perception in Healthy Young Adults-Implications for Post-Stroke Neurorehabilitation" (with Frey S. H.); in: "Frontiers in Human Neuroscience" 9, 674, published January 2016, see also [here](#)

Gianluca Rastelli

"Microwave Signatures of Majorana States in a Topological Josephson Junction" (with Y. Vayrynen, W. Belzig, L. Glazman); in: "Journal Phys." Rev. B 92, 134508 (2015), published online October 12, 2015, see also [here](#)

Nina Schneider

"'Transitional Justice' and the Legacies of State Violence in Latin America" (with Marcia Esparza); Lanham: Lexington Books/Rowman & Littlefield, 2015

"Reckoning with Dictatorship in Brazil: The Double-Edged Role of Cultural-Artistic Production" (with Rebecca Atenico); in: "Latin American Perspectives" (2016)

"Transitional Justice in Brasilien"; in: "Handbuch Transitional Justice," edited by Anja Mihr, Gerd Pickel, and Susanne Pickel, Springer, 2015, see also [here](#)

"Transitional Justice: Historische Aufarbeitung und Geschichtsschreibung"; in: "Handbuch Transitional Justice," edited by Anja Mihr, Gerd Pickel, and Susanne Pickel, Springer, 2015, see also [here](#)

"Ambivalenzen der brasilianischen Vergangenheitspolitik und Erinnerungskultur"; in: "Geschichte wird gemacht: Tagungsband Weingartner Lateinamerikatage" 2015, p. 73-88, edited by J. Burghart, and St. Peters, Baden Baden: Nomos

"Transitional Criminal Justice in Post-Dictatorial and Post-Conflict Societies"; in: "Series on Transitional Justice" Vol. 18, edited by Agata Fijalkowski and Raluca Grosescu, Cambridge, Antwerp, Portland: Intersentia, 2015, Columbia ISHR's Historical Dialogues, published online February 7, 2016, see also [here](#)

Denis Seletskiy

"Paraxial Theory of Direct Electro-Optic Sampling of the Quantum Vacuum" (with A. S. Moskalenko, C. Riek, G. Burkard, and A. Leitenstorfer); in: "Phys. Rev. Lett." 115, 263601, 2015

"Free-Running Performance and Full Control of a Passively Phase-Stable Er:fiber Frequency Comb" (with D. Fehrenbacher, P. Sulzer, A. Liehl, T. Kälberer, C. Riek, A. Leitenstorfer); in: "Optica" 2, 917, 2015

"Direct Sampling of Electric-Field Vacuum Fluctuations" (with C. Riek, A. S. Moskalenko, J. F. Schmidt, P. Krauspe, S. Eckart, S. Eggert, G. Burkard, A. Leitenstorfer); in: "Science" 350, 420, 2015

Ulrich Sieberer

"Parliamentary Rule Changes in Europe: A Research Program" (with Peter Meißner, Julia F. Keh, and Wolfgang C. Müller); in: "Legislative Studies Quarterly" 2016, 41 (1)

"Lehren aus Weimar? Die erste Geschäftsordnung des Deutschen Bundestages von 1951 zwischen Kontinuität und Wandel"; in: "Zeitschrift für Parlamentsfragen" 2016

"Namentliche Abstimmungen im Deutschen Bundestag, 1949-2013" (with Henning Bergmann, Stefanie Bailer, Tamaki Ohmura, and Thomas Saalfeld); in: "Zeitschrift für Parlamentsfragen" 2016

"Hire or Fire? The Link between Cabinet Investiture and Removal in Parliamentary Democracies"; in: "Parliaments and Government Formation. Unpacking Investiture Rules," edited by Bjorn Erik Rasch, Shane Martin, and José Antonio Cheibub, p. 309-330, Oxford: Oxford University Press, 2015

Margarita Stolarova

"Children's Memory and Corgetting in Context: Some Thoughts on Reliability and Validity in Empirical Research on Child Development," a commentary in response to Liat Hasenfratz und Hiltrud Otto: "Memory and Forgetting in Children: Two Contextual Approaches"; in: "Forgetting: An Interdisciplinary Conversation," edited by Giovanni Galizia and David Shulman, The Hebrew University Magnes Press, Jerusalem, 2015, see also [here](#)

Elena Sturm

"Crystallization of Calcium Oxalate Hydrates by Interaction of Calcite Marble with

Fungus *Aspergillus Niger*" (with O. Frank-Kamenetskaya, D. Vlasov, M. Zelenskaya, K. Sazanova, A. Rusakov, R. Kniep); in: "American Mineralogist" 2015, 100, p. 2559-2565

"Mechanics of Twisted Hippuric Acid Crystals Untwisting as They Grow" (with A.G. Shtukenberg, A. Gujral, X. Cui, B. Kahr); in: "Crystengcomm" 2015, 17, p. 8817-8824

"An NMR Study of Biomimetic Fluorapatite - Gelatine Mesocrystals" (with A. Vyalikh, P. Simon, J. Buder, U. Scheler, R. Kniep); in: "Scientific Reports" 2015, p. 5

Attila Tanyi

"Multi-Dimensional Consequentialism and Degrees of Rightness" (with Vuko Andric); in: "Philosophical Studies" 173(3), p- 311-33, 2016

"Multi-Dimensional Consequentialism and Risk" (with Vuko Andric); in: "Ethical Theory and Moral Practice" 19 (1), p. 49-57, 2016

"On the Intrinsic Value of Genetic Integrity: A Commentary"; in: "Ethics, Policy, and Environment" 18(3), p. 248-251, 2015

"G. A. Cohen Why Socialism? címu könyvérol" (title in English: "On G. A. Cohen's Why Socialism?"); in: "Ötven könyv, amelyet minden baloldalnak ismernie kell" (title in English: "Fifty Books Everyone on the Left Should Know About"), edited by Balázs Böcskei and Miklós Sebok, Budapest: Kossuth, 2015

Margaret Thomas

"Rational Values of Weierstrass Zeta Functions" (with G. O. Jones), accepted to the Proceedings of the "Edinburgh Mathematical Society" (2014), published online December 22, 2015, see also [here](#)

Andreas Thum

"Taste Processing in *Drosophila* Larvae" (with A.A. Apostolopoulou, a. Rist); in: "Frontiers in Integrative Neuroscience" 9 (2015), published October 13, 2015, see also [here](#)

Zsuzsanna Török

"Exploring Transylvania. Geographies of Knowledge and Entangled Histories of a Multi-Ethnic Province, 1790 – 1914"; in: "National Cultivations of Culture," Brill Publishers, Leiden, 2015

Julian Torres Dowdall

"Gene Flow from an Adaptively Divergent Source Causes Rescue through Genetic and Demographic Factors in Two Wild Populations of Trinidadian Guppies" (as co-author); in: "Evolutionary Applications" 2016, published February 4, 2016, see also [here](#)

Grey Violet

"Continuity Argument Revisited: Geometry of Root Clustering via Symmetric Products"; published online December 29, 2015, see also [here](#)



Grants

Approvals

Prizes

Raul Acosta Garcia

DFG funding (315,780.00 euros) for a three year position with the project "Aspirational activism in urban Latin America"

Madeleine Bieg

Grant by Young Scholar Fund of the University of Konstanz (34,200 euros) for the project "Satis scire? Steigerung der Studien- und Fachwahlintention von Schülerinnen und Schülern in MINT-Fächern durch Information über empirische Forschungsbefunde"

Klaus Boldt

DAAD PPP Australia travel grants for 2 years for the project "Mapping Ultrafast Energy Relaxation in Semiconductor Nanocrystals," in collaboration with Prof. Dr. Trevor Smith, University of Melbourne, 8,462.00 euros

Julia Boll

DAAD Conference Travel Funding (Kongressreisen-Förderung), awarded by the German Academic Exchange Service (Deutscher Akademischer Auslandsdienst) to the amount of 2,065 euros

Konstanzia Fellowship, awarded by the University of Konstanz (BMBF Professorinnenprogramm)

DFG (German Research Foundation) Sachbeihilfe (Eigene Stelle/Own Position); "Thinking through Theatre: Bare Life on Stage," three-year full-time research position, plus travel, conference, workshop and assistant funding, 326,808 euros

Thomas Böttcher

YSF Grant (with Denis Gebauer) for the project "Biofilm Mineralization," 24,000 euros

SFB 969 "Der Einfluss von bakteriellen Metaboliten auf die Proteostase zwischen Spezies," 240,800 euros

FCI Sachkostenzuschuss "Synthetische HHQ- und PQS-derivate als Quorum Sensing Inhibitoren von Pseudomonas aeruginosa," 10,000 euros

Bianca Gaudenzi

Conference grant by the new DAAD Cambridge Research Hub, University of Cambridge, for a series of three conferences to be held in Cambridge and Konstanz in 2016-2018 on the topic of "Cultural Brokers and their Networks, 1700 to the present," for a total of 16,637 euros

Awarded, together with Dr Moritz von Brescius (Konstanz), a conference grant from the International Office, University of Konstanz, for a workshop to be held on 15-16 December 2016 at Gonville and Caius College, University of Cambridge, entitled "Historicising Cultural Brokers: Agency, Power, and Social Functioning, 18th to 21st Centuries" (tbc), for a total of 4,631 euros

Michael Kovermann

Young Scholar Fund University Konstanz for the project entitled "Quench-Flow-NMR-Studie: Studium der Konformationsdynamik und der Ligandenaffinität eines Mehrdomänenproteins," 42,000 euros

SFB969, Teilprojekt B09 for the project entitled "Multiskalensimulationen und NMR-Spektroskopie an Ubiquitinketten: Verknüpfungsschemie und Ketteneigenschaften," 220,800 euros

Claudius Kratochwil

German Research Foundation (DFG) Research Grant, "Evolution of Transcriptional Regulation as Motor of Morphological Diversification in Cichlid Fishes," 325,560 euros

Elite Program for Postdocs, Baden-Württemberg-Stiftung, "Uncovering the Molecular Mechanisms Underlying the Repeated Evolution of Adaptive Color Patterns in Cichlid

Fishes," 110,000 euros

Young Scholar Fund, University of Konstanz, "Evolution of Transcriptional Regulation as Motor of Morphological Diversification in Cichlid Fishes," 23,000 euros

Reinvestment Program, University of Konstanz (with Dr. Joost Woltering), 9,660 euros

Faculty Member of the International Max Planck Research School (IMPRS), Max Planck Institute for Ornithology

Certificate "Leadership, Management and Transfer of Knowledge," awarded by the Academic Staff Development, University of Konstanz, Germany

Robert Kraus

Young Scholar Fund University of Konstanz, Excellence Initiative for the project entitled "The Anseriformes Genome Project," 20,000 euros

Special call of the Central Administration (Max Planck Society) for application of Next Generation Sequencing, awarded for the project entitled "The Anseriformes Genome Project," 107,000 euros

Bernard Lepetit

DFG grant (Sachbeihilfe and Eigene Stelle) for the research proposal "Lhcx1 Knock-out Mutants as a Powerful Tool to Study Photoprotection in the Diatom Phaeodactylum Tricornutum," for a duration of 2 years, 266,400 euros

Jennifer Randerath

Young Scholar Fund: Start-Up 2016/2017, funded by the University of Konstanz, 50,000 euros for 3D

Gianluca Rastelli

Project C03 "Time-Dependent Transport and Correlations in Electron Nanostructure," SFB 767 from the DFG, 364 euros

Tanja Rinker

"Bildungssprache fördern: Neue Perspektiven auf Deutsch als Zweitsprache im Fachunterricht," 930,000 euros, awarded by the MWK

Fachtagung Hegne, 7960 euros awarded by the IBH

Denis Seletskiy

DFG Research Grant (co-PI with Dr. V. V. Temnov, CNRS, Le Mans, France), for the project entitled "Probing Phonon-Matter Interactions at the Nanoscale," from March 2016 - February 2019, 386,419 euros

Attila Tanyi

EURIAS Junior Research Fellowship, Collegium Helveticum, ETH and University of Zurich, project title "Consequentialism and Its Demands: The Role of Institutions," 70,000 euros



Teaching

Raul Acosta Garcia

MA blockseminar in Sociology "Political Activism," open to students from anthropology departments in Baden-Württemberg, February 5-7, 2016

Unai Atxitia

Tutor "Statistical Mechanics WS 2015/16"

Madeleine Bieg

Lecture "Bildungswissenschaften II"

Research colloquium "Empirische Bildungsforschung"

Klaus Boldt

Seminar "Anorganische Materialien und Nanotechnologie" for Nanoscience students (12 ECTS-credits)

Julia Boll

Seminar "A Journey through Medieval Literature and Theatre," honours & graduate/Haupt- und Oberseminar at the Department of Literature

Lecture "Introduction to Contemporary British & Irish Theatre" at the Department of Literature, University of Zurich, Switzerland, starting February 25, 2016

Thomas Böttcher

Seminar discussing "Neue Arbeiten aus dem Gebiet der Naturstoffisolation und Strukturaufklärung"

Sarang Dalal

Seminar "Practical Human Electrophysiology and Brain-Computer Interfaces" (co-taught with Dr. Maciej Gratkowski and Prof. Dr. Christian Wienbruch), partially supported through the Zukunftskolleg's Transdepartmental Collaborative Teaching Grant

Panteleimon Eleftheriou

Graduate course "Topics in model theory"

Denis Gebauer

Lecture "Physikalische Chemie IV" Part "Intermolekulare Wechselwirkungen," Department of Chemistry (5th semester BA Chemistry, BA Nanoscience, 2 SWS)

Michael Kovermann

Lecture for PhD course of the graduate school chemical biology "Macromolecular conformation(s) in solution" on October 2, 2015

Lecture "Physical chemistry II"

Claudius Kratochwil

Lecture series "Methods in Biology" - Lecture on "Methods for linking genotypes to phenotypes"

Lecture series "Evolution and Behavior" - Lecture on "Evolution and Development"

Seminar "Advanced Seminar in Evolutionary and Developmental Biology"

Seminar "Innovations in Vertebrate Evolution"

Robert Kraus

Course "Molecular Ecology" (2 SWS)

Journal club "Molecular Ecology" (1 SWS)

Seminar "Migration and Immuno-Ecology" (2 SWS)

Elliott Lash

Presentation on "Old Irish/Latin 9th Century Codex, Sangallensis 903" during a trip to the Stiftsbibliothek Sankt Gallen for the Hauptseminar "A Journey through Medieval Literature and Theatre" on December 11, 2015

Two part lecture "Syntactic Variation in Modern Irish Dialects" in the seminar "Dialektale Variation im Deutschen" on February 9, 2016

Marilena Manea

Advanced course "Chemical Biology of Polypeptides" at the Department of Chemistry (4 SWS)

Maria Daniela Poli

Teaching course "Comparison of Constitutional Courts" (for ERASMUS/LL.M.-students, held in English)

Jennifer Randerath

Seminar "Cognitive Neurorehabilitation in Patients with Acquired Brain Injury" (2SWS), held in English

Seminar "Neuropsychologische Störungen" (1SWS), held in German

Seminar "Neuropsychological Assessments in Patients with Acquired Brain Injury" (2SWS), held in English

Seminar "Motorische Kognition Forschungskolloquium" (2SWS), held in German

Workshop "Motor Rehabilitation Studies: Limb Apraxia" (4 hrs), held in German

Gianluca Rastelli

Problem classes (tutorials) "Advanced Quantum Mechanics"

Tanja Rinker

Course "Sociolinguistics"

Course "Second Language Acquisition"

Sebastian Schutte

Compact course "Introduction to Geographic Event Data Analysis"

Ulrich Sieberer

Seminar "Institutional Design and Institutional Change in Western Democracies"

Margarita Stolarova

Interdisciplinary project seminar "Helfen und Lernen: gesellschaftliches Engagement, Fachkompetenz, Projektmanagement und persönliche Weiterentwicklung vereinen" (4 SWS, 6 ECTS)

Seminar "Lernen für Lehrer oder wie bringe ich meine Schüler dazu zu wollen, was sie sollen?" (2 SWS, 4 ECTS)

Lectureship "Psychologie, Soziologie und wissenschaftliches Arbeiten für angehende Erzieherinnen und Erzieher"

Elena Sturm

Practical course and seminars (and lecture on "Electron Microscopy") in the Course for Master students "Nanochemistry and –analytic"

Attila Tanyi

UG modules involving seminars and lectures in Ethics, Political Philosophy, Frontiers of Ethics, Business Ethics, held at the University of Liverpool, UK

Andreas Thum

Seminar "Neurobiology and Developmental Biology," Bachelor and Master level

Zsuzsanna Török

MA colloquium "Wissenschaft und politische Macht: Ungarn in der Habsburgermonarchie, 1867-1918" at the Institute for Historical Research, Eastern European History, University of Zürich, Switzerland



Careers

Francesca Biagioli

Elected member of the Nominations and Elections Committee of the International Society for the History of Philosophy of Science (HOPOS), 2015 – 2017

Julia Boll

Three-year full time research position, funded by the DFG (German Research Foundation), with her project "Thinking through Theatre: The Bare Life on Stage," starting April 2016

Joanna Chojnicka

Four-year Research Fellow at the Faculty of Linguistics and Literary Studies of the University of Bremen, Germany, with her project "Strategies of Constructing Femininity, Masculinity and Sexual Identity in German, Latvian and Polish Social Media Discourses," financed by the program "Independent Projects for Post-Docs" of the University's Central Research Development Fund (Zentrale Forschungsförderung)

Sarang Dalal

Associate Professorship (tenure-track position) at the Center of Functionally Integrative Neuroscience at Aarhus University, Denmark, starting March 2016

Malte Drescher

Heisenberg Professor for "Spectroscopy of Complex Systems" at the department of chemistry, University of Konstanz, funded by the German Research Foundation for the duration of five years. Inaugural lecture on "Spies, Spins and Spectra" on October 15, 2015

Ariel Gutman

Software Engineer at Google as part of group dealing with Natural Language Processing, i.e. the computational handling of human language, starting December 2015

Philip Leifeld

Professorship as Senior Lecturer in Quantitative Research Methods at the School of Social and Political Sciences, the University of Glasgow, Scotland, starting July 2016

Daniel Plaumann

Appointed Professor for Algebra and its Applications at TU Dortmund, Germany, starting April 1, 2016

Michael Pokojovy

Postdoctoral Research Fellow at Mathematical Institute, Charles University in Prague, Czech Republic, since September 1, 2015

Postdoctoral Research Fellow at the Department of Mathematics, Karlsruhe Institute of Technology, Germany, since April 1, 2016

Julia Langkau

Fellowship at the University of Zurich (Forschungskredit der Universität Zürich), November 2015 -April 2016

Elliott Lash

Postdoctoral Researcher on the ERC funded project "Chronologicon Hibernicum" at the National University of Ireland Maynooth, starting in May 2016

Sven Lauer

Stand-in Assistant at the Department of English Philology, Georg-August-University Göttingen, Germany, April - October 2016

Jennifer Randerath

Stand-in/Visiting Professor (W2), Clinical Neuropsychology, University of Konstanz, October 2015 - April 2016

Tanja Rinker

Stand-in Professorship in English Linguistics at the Department of Linguistics, University of Konstanz, Germany, Winterterm 2015/16

Nina Schneider

Senior Research Fellow at the Global South Study Center (GSSC) University of Cologne

Margarita Stolarova

Stand-in positions as Junior Research Group Leader and Junior Professor Empirical Education Research, University of Konstanz

Lectureship for Early Childhood Development and Education at the Deutsche Angestellten Akademie, Singen

Roland Weierstall

Professorship for Clinical Psychology/Psychotherapy at the Medical School in Hamburg, Germany, since October 2015

