What changes took place at the Zukunftskolleg in the summer term 2013? – We received excellent applications for various calls for our Funding Programmes; many new 2-year Postdoctoral and 5-year Research Fellows arrived; “former” Fellows left us, and took on challenging positions in academia. Furthermore all the Fellows were successful in raising grants, giving lectures or publishing their latest research results. Read more on the following pages.

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Concerning the Zukunftskolleg

Executive Committee

Margaret Thomas has been a new member on the Executive Committee since April 25, replacing Dominik Wöll. Together with Doris Penka, Marigrita Stolarova, Ulrich Sieberer, Thomas Voigtman and the director, Giovanni Galizia, she discusses and approves proposals made by Fellows, such as the co-funding of their research projects, equipment and resources, conferences and workshops, as well as the nomination of Senior Fellows. On October 2, the EC members gathered for their regular strategic meeting to discuss general questions on the development of the Zukunftskolleg. As the EC membership of Ulrich Sieberer and Thomas Voigtmann came to an end, the assembly of members has to elect two new EC members at the first Jour Fixe in the winter term 2013/14, on October 24. The first EC meeting in the winter term with the two new members will take place on October 31.
Funding Instruments

Mentorship Programme

6 Mentorship winners

In its meeting on May 6, the Executive Committee decided on the winners for the Mentorship programme (application deadline had been on April 30). We were able to congratulate Liliana Ruth Feierstein (Literature), who is mentored by Nora Streijlevich from the San Diego State University, Lorna Gregory (Mathematics and Statistics), who is mentored by Françoise Delon from the Centre National de la Recherche Scientifique in Paris, Aswin Mangerich (Biology), who is mentored by Peter C. Dedon from the Massachusetts Institute of Technology, Muna Pohl (Linguistics), who is mentored by René Willibrord Joseph Karger from the University of Utrecht, Nils B. Weidmann (Politics and Public Administration), who is mentored by Jason Lyall from Yale University and Martin Welz (Politics and Public Administration), who is mentored by Adekeye Adebajo from the Centre for Conflict Resolution in Cape Town. For more information on the Mentorship programme please see:

http://www.zukunftskolleg.uni-konstanz.de/funding-programmes/mentorship/

Manfred Ulmer Scholarship

Stefanie Neupert won the Manfred Ulmer Scholarship for 2013

On behalf of the “Stiftung Wissenschaft und Gesellschaft” at the University of Konstanz, the Zukunftskolleg annually awards the Manfred Ulmer Scholarship. Winner of this year’s Scholarship (application deadline had been on July 5, 2013) is Stefanie Neupert (Biology). The Manfred Ulmer Programme is open to doctoral students of all disciplines at the University of Konstanz and pays 1,000 euros per month over six months. It enables the scholars to bridge a financial gap between their studies and their doctoral phase. In her PhD project “Social Communication in Ants”, Stefanie Neupert aims to study the rules governing nestmate recognition in ants and she will investigate the neuronal mechanisms that allow the fast and reliable classification of friends and foes.

Last Call for 2- and 5-year ZIF-Fellowships

Fifteen plus one

In its recent call for applications (the closing date for applications had been March 15, 2013), the Zukunftskolleg had received more than 180 applications for the 2-year Postdoctoral and 5-year Research Fellowships, as part of the Marie Curie Zukunftskolleg Incoming Fellowship Programme (ZIF) supported by the European Union COFUND Programme. In its first meeting on April 15, the Recruitment Committee chose 33 finalists for the 2-year Postdoctoral Fellowships and 4 finalists for the 5-year Research Fellowships. On June 17, the Recruitment Committee held its second meeting to select the best 2-year Postdoctoral Fellows: Of the 33 finalists, 16 candidates – representing a wide variety of disciplines – were offered a 2-year position. On the same day, the “Workshop on Future Research Directions” for the candidates applying for a 5-year Research Fellowship was held. Of the 4 finalists, one candidate from Physics was offered a 5-year
position.

**ZIF Marie Curie 2-year Postdoctoral Fellows:**

- Karin Bruckmüller, Law
- Joanna Chojnicka, History and Sociology
- Martin Dege, Literature
- Laura Iapichino, Mathematics and Statistics
- Zhongbao Jian, Chemistry
- Claudius Kratochvil, Biology
- Ben Lambert, Mathematics and Statistics
- Julia Langkau, Philosophy
- Sven Lauer, Linguistics
- Bernard Lepetit, Biology
- Beatriz Puente Ballesteros, History and Sociology
- Antonio Rotolo, History and Sociology
- Paraskevi Salamaliki, Economics
- Minmin Shen, Computer and Information Sciences
- Edina Szöcsik, Politics and Public Administration
- Julián Torres Dowdall, Biology

**ZIF Marie Curie 5-year Research Fellows:**

- Denis Seletskiy, Physics

**Current Call for 2-year ZIF- and 5-year ZuKo- and ZIF-Fellowships**

In its current call for 2- and 5-year Fellowships (the closing date for applications was September 30, 2013), the Zukunftskolleg received 104 applications. In its first meeting on November 8, the Recruitment Committee will choose the finalists for the ZIF-funded 2-year Postdoctoral Fellowships and the 5-year Research Fellowships, funded by both the ZIF-programme and the German Excellence Initiative. The Recruitment Committee will hold its second selection meeting for seven 2-year Postdoctoral Fellows who will be offered positions on December 13. From January 23-24, 2014, the “Workshop on Future Research Directions” for the candidates applying for a 5-year Research Fellowship will be held.

*In the current call the Zukunftskolleg offers the following Fellowships:*

- **7 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 Programme (FP7) Marie Curie Actions – People (co-funded by regional, national and international programmes), the German Research Foundation (DFG) and the University of Konstanz. The rules and ethical principles for FP7 and the DFG guidelines apply. These Fellowships will begin on March 1, 2014, and will end on February 29, 2016.

- **4 Zukunftskolleg Research Fellowships and 6 ZIF Marie Curie 5-year Research Fellowships** (for any discipline represented at the University of Konstanz, with a Salary Scale of 14 TV-L) for researchers in the early stage of their career to develop and carry out individual research projects. This call for proposals is part of the Zukunftskolleg Incoming Fellowship Programme (ZIF) and is financed by the Seventh Framework Programme (FP7) Marie Curie Actions – People (co-funding for regional, national and international programmes), the
German Research Foundation (DFG) and the University of Konstanz. The rules and ethical principles for FP7 and the DFG guidelines apply. The Fellowships will begin on June 1, 2014, and end on May 31, 2019.

Co-funding

The Executive Committee and the Director of the Zukunftskolleg approved 39 applications for start-up funding, student assistants, travel allowances and consumables between May and September 2013 for a total amount of 217,861,35 euros.

Events

Jour Fixe

Robotic Art

Jour Fixe presentation by Senior Fellow and Artist in Residence Patrick Tresset on April 25, 2013

What can artists do when they get bored of painting? – Patrick Tresset’s solution: develop a robot with artistic skills. He sees several reasons for doing this: to understand the draughting activity, to achieve marketable skills for domestic robots or to reach a certain form of immortality. But the most fascinating reason is “to create autonomous systems capable of producing drawings that have an aesthetic and emotional effect equivalent to the effect produced by a man-made drawing.”

He defines drawings as an exceptional and unnatural visual experience and as a construction of reality. Contrary to a human painter, his robot called Paul is naïve and cannot be deluded, as he has no memory and no knowledge of what he is doing. Patrick Tresset – who has always been interested in representing human faces – programs Paul so that he can paint portraits automatically. To obtain various perspectives and stages of the drawing process, the Artist in Residence uses six Pauls for each portrait. A portrait session lasts about 20-30 minutes; since his creation, Paul has already drawn more than 2000 subjects.

Patrick Tresset comes from the Computing Department at Goldsmiths College, University of London, UK. He was nominated as Artist in Residence by Oliver Deussen from the Department of Computer and Information Science at the University of Konstanz, and by Giovanni Galizia, and will stay until the end of October. Patrick Tresset’s main internationally recognised achievements lie in the field of computational aesthetics, computational creativity and arts. As Artist in Residence, Patrick Tresset will continue his research on robot painting. His current project is called “Aikon-II” – an art-sciences research project mixing art, cognitive computing and robotics to investigate the sketching activity. During his stay in Konstanz, he will study the painting strategies by using the robot painting machine that was developed in Oliver Deussen’s group. Together they will present the results of their collaboration as well as individual works at an exhibition in the Bildungsturm in Konstanz (read more in chapter “Latest Collaborations”).

More information about Patrick Tresset: www.patricktresset.com, and about his current project “Aikon-II”: http://www.aikon-
gold.com/

How do crystals form in solution? — And the implications for chilling beer
Jour Fixe presentation by Denis Gebauer on May 2, 2013

What do mussels, lobsters, snails, algae, chalk and cement have in common? — This is one of the questions that physicochemist Denis Gebauer can answer in an easy but scientifically competent approach. The above mentioned animals and materials all use calcium carbonate, the most abundant biomineral. Minerals are solid, mostly inorganic crystalline compounds, built-up of a regular arrangement of atoms, ions or molecules in a 3-dimensional lattice. In biologically formed minerals, crystal morphologies, structures and orientations are controlled in very sophisticated ways. In general, the resulting biominerals — like bones, teeth, or shells — show outstanding performance in terms of their material properties, such as superior fracture resistance. Studies into biomineralization are thus motivated by finding inspiration in nature, which can potentially be utilized for the development of novel functional materials. And this is what makes it that interesting for Denis Gebauer. He analyzes the crystalline structures, in particular, how they are formed via intermediates and precursors including so-called prenucleation clusters.

In his presentation, he first explained the classical theory of nucleation, which deals with the formation of seed particles in solution, and then showed his research results on non-classical nucleation, which appears to be relevant for most biominerals. From the classical point of view, nucleation eventually happens when a chemical system becomes supersaturated, super cooled, or superheated. For example, when beer is chilled, it can stay in its liquid form, even below the freezing point. At times, it can suddenly solidify when supercooled and taken from the freezer. The bulk energy of seeds randomly forming in solution drives nucleation, whereas the energetic costs caused by the generation of internal surface inhibit the growth of seeds in small sizes. Hence, seeds will dissolve again when they are smaller than a certain critical size, and the beer in the freezer may remain liquid, even below its freezing point. To start the freezing process, the barrier that arises from the energetic costs due to the surface of the seeds needs to be overcome. This can be achieved by
cooling it down to even lower temperatures, or may happen spontaneously when the bottle of beer is touched, and a small amount of energy transferred by the movement helps to overcome the energetic barrier to initiate the process of solidification.

To explain the importance of his research, Denis Gebauer illustrated the relevance of pre-nucleation clusters and non-classical nucleation to the early stages of the precipitation of calcium carbonate. In case of this prominent biomineral, the classical point of view as outlined above obviously does not apply. So-called pre-nucleation clusters are stable, even at small sizes in solution before nucleation, and nucleation proceeds via cluster-cluster aggregation, initially yielding amorphous nanoparticles as intermediates. A better understanding of the mechanisms underlying the nucleation of minerals is not only important for the development of bio-inspired materials, but can also help to avoid unwanted mineralization, for instance, the scaling (incrustation) of private or industrial appliances caused by water hardness. Scientific fields that benefit from novel insights into crystallization and nucleation range from materials science and pharmacy through to medicine and engineering.

More information about Denis Gebauer:
http://www.zukunftskolleg.uni-konstanz.de/people/personen-details/gebauer-denis-1898/6338/2415/

May it be a light for you in dark places
Jour Fixe presentation by Dominik Wöll on May 16, 2013

Imagine: You're playing volleyball on the beach and lose a little LED-light in the sand. What is the best way to find this „glowing grain of sand“? The answer is: wait until it gets dark. Dominik Wöll used this comparison to illustrate the high sensitivity of fluorescence microscopy. His aim is to detect one (fluorescent) single molecule within an area of billions of billions of other molecules. In his research this “area” is typically a polymer, i.e. billions of polymer chains. He explained: “One emitting molecule in our thin polymer films is like an emitting grain of sand on a beach-volleyball field." To detect this molecule, he uses fluorescence measurements that are extremely sensitive due to the opportunity they offer for measuring against a totally dark background.

But why does he measure single molecules if he could measure the ensemble and save a lot of time and money? There are many reasons for this: to observe static and dynamic heterogeneities, to visualize single molecule motion and to analyze rare events which would be obscured by ensemble measurements.
In order to detect translational and rotational motion of single molecules on different time scales Dominik Wöll uses various techniques: Widefield Fluorescence Microscopy and Fluorescence Correlation Spectroscopy (FCS).

One of the chemical scientist’s research project deals with the observation of heterogeneities in thin polymer films by single molecule wide-field fluorescence microscopy. He wants to find out where these heterogeneities come from: Are they dependent on temperatures, on film thickness, on film preparation or on polymers? He analyzed significant differences between thin and thick polymer films. The result made it possible to verify a model where, with increasing temperature, the zone of mobile molecules shift more into the film, and at the surface he identified a higher dye concentration. So far, it has only been possible to obtain 2D-projection of the position of single molecules in thin films. Therefore Dominik Wöll’s future plan is to get 3D-resolution to analyze the z-profile of diffusion coefficients.


The emancipated spectator
Jour Fixe presentation by Julia Boll on May 23, 2013

A glimpse into contemporary theatre is what Julia Boll gave her audience in her presentation. She showed clips of the Brazilian-British theatre co-production “Hotel Medea” (2001-2012). The story is based on the Greek myth of Medea, the result is an overnight promenade performance (lasting five hours, from midnight to dawn) which actively involves the audience. According to the myth, Jason, nephew of king Pelias of Iolkos, and the Argonauts come to Colchis, where Medea lives, to steal the Golden Fleece that is protected by Medea’s father, king Aietes. Medea and Jason fall in love and she helps him to steal the Fleece. In order to escape, she kills members of her family. Medea and Jason live with their children in Corinth until Jason leaves Medea for the daughter of king Creon of Corinth. To take revenge Medea sends a poisoned dress to Jason’s bride and also kills her own children.

The production “Hotel Medea” is an example of how to bring the figure of the homo sacer onto the stage. Medea herself, the archetypal refugee, represents the homo sacer, whom philosopher Giorgio Agamben describes as the one whose life is sacred, defined purely by her exclusion from the polis and stripped of all civil and human rights, and of social and legal status. What is left is bare life, the
contact with which is taboo. In most cases, bare life has remained invisible – its taboo status calls to be shielded from the public eye. As the central political taboo on which, according to Agamben, Western society is founded, it has also remained the last taboo to be brought to the theatre. Drawing from philosopher Kelly Oliver’s theory of an ethic based witness, the theatre might be seen as the art form best suited to enable “witness beyond recognition”.

And “Hotel Medea” might be seen as a perfect example for doing so, as it actively involves the audience which gets into contact with Medea and Jason: in Chapter 1, for example, the stage is a dancefloor and Medea kills her family amongst the audience dancing. Julia Boll described how “Hotel Medea’s” unique inclusion and physical engagement of the audience allows for both the witnessing of and response to the homo sacer. For her it was an experience that goes far beyond spectatorship and successfully enables the audience to establish a relationship with the politically and socially excluded, which might overcome that exclusion: although Medea is a murderer, the spectator feels empathy with her. In the end, Julia Boll admitted that she had needed two packages of tissues when she left the play.


Tumor targeting with peptides
Jour Fixe presentation by Marilena Manea on June 6, 2013

Cancer is a major public health problem and the second greatest cause of death. This is one of the reasons why chemist Marilena Manea is interested in developing a cancer chemotherapeutic approach that targets the tumors with peptides. She explained how this works in her Jour Fixe presentation. The most common treatments of cancer are surgery, radiation therapy and chemotherapy. However, in the case of advanced or metastatic cancer, chemotherapy is still the primary therapeutic approach. Mainly due to their lack of selectivity, the administration of free chemotherapeutic agents (i.e., conventional chemotherapy) is followed by side effects like the decreased production of blood cells, immunosuppression, inflammation of the lining of the digestive tract, hair loss etc. Therefore, the development of an alternative targeted chemotherapeutic method, providing increased selectivity and decreased systemic toxicity, is of interest for Marilena Manea, and is one of her research topics.
What is the main difference compared to the conventional method? In the case of targeted chemotherapy, the anticancer drug is attached to a so-called targeting moiety, for instance, a peptide, which will specifically bind to its receptors expressed on the surface of cancer cells. Thus, the hybrid cytotoxic compound (i.e., anticancer drug-peptide bioconjugate) will enter the cancer cells via a receptor mediated way. It has been found that several regulatory peptides have membrane-bound receptors of various types of tumors. One of the peptides – the chemist uses in her work – is the Gonadotropin-releasing hormone (GnRH). GnRH receptors are highly expressed on cancer cells, with limited expression in healthy tissues; hence, they are important molecular targets for cancer therapy. GnRH derivatives are employed as targeting moieties for the attachment and subsequent delivery of anticancer drugs to tumors expressing GnRH receptors. In her work, Marilena Manea uses modified GnRH peptides to reach the best results in targeting the tumors and reducing the side effects of chemotherapeutic agents. But that's what makes her research also very difficult and surely will take her yet some more years to find a targeted chemotherapeutic agent that could be applied to humans.

Marilena Manea's presentation was also her farewell, as her 5-year Fellowship at the Zukunftskolleg ended. But she will stay at the University of Konstanz, working on a transitional position in the Department of Chemistry.


The world behind a PDF document
Jour Fixe presentation by Tamir Hassan on June 20, 2013

Many of us regularly encounter PDF files in our everyday-work, and the great thing about them is that they always look the same, regardless of whether they are being printed, viewed on a screen or on a smartphone or tablet. But this versatility also has its drawbacks: it is very difficult to edit a PDF, once it has been created. In fact, many non-computer scientists even see this as an advantage, although it must be pointed out that minor edits, such as fiddling a few figures on an invoice, are actually relatively easy to perform.

As a computer scientist, Tamir Hassan
has often been asked why it is so difficult to edit PDF documents. One of his research topics is logical structure analysis, which he sees as the first step towards making PDF and other print-oriented documents editable. In his Jour Fixe speech on “Rediscovering the structure of PDF documents”, Tamir Hassan first explained the general characteristics of print-oriented documents such as PDF: they consist of a physical and a logical structure. The physical structure represents the document's visual appearance, i.e. the layout and typographic conventions that have been used in its presentation. The logical structure refers to elements such as headings, paragraphs, captions, headers and footers, and the reading order of the physical blocks. Unlike a Word document, a PDF file does not usually contain adequate machine-readable information about its logical structure. There are many applications such as search and text mining, repurposing for small-screen devices, archiving, accessibility and information extraction, methods that are dependent on this structure.

To rediscover this structure, Tamir Hassan applies an evaluation model which, in its simplest form, is composed of nested rules for each type of object, such as words, lines and paragraphs: each rule contains a search method to, for example, “find the N most likely combinations of paragraphs on this page” and an evaluation method to evaluate each result, e.g. “how likely is this combination of objects a paragraph?” In order to retain computational feasibility, these evaluation results are then re-used in the higher levels, and the number of hypotheses at each level is restricted. By structuring the rules and separating hereditary knowledge from acquired knowledge about document structure, he aims to make it easy to make improvements and customizations, e.g. by adding publication-specific rules, and adjust the tradeoff between accuracy and computation time. In general, Tamir Hassan wants to find out how knowledge about the conventions governing a document's appearance can be efficiently represented and reasoned on, and how this rediscovered structure can be represented in a standardized format, enabling its reuse.

At the end of his speech, the computer scientist mentioned his visions for the future: Besides PDF, the methods being developed can also be applied to image and HTML documents. Furthermore, he sees his work broadening into the areas of stylesheet reconstruction and automatic document layout, thus completing the repurposing cycle. He also introduced a further interdisciplinary research project currently being planned in collaboration with theatre scholars from Vienna, in which he plans to work on methods to support the digitization of historic theatre playbills, many of which are in poor condition and have been printed in the
Fraktur (German Gothic) script, and extract the information in a structured form, enabling machine-aided analysis of the entire collection of >500,000 playbills.

More information about Tamir Hassan: https://www.zukunftskolleg.uni-konstanz.de/people/personen-details/hassan-tamir-1952/6338/2415/

Science from the armchair?
Jour Fixe presentation by Andrea Lailach-Hennrich on June 27, 2013

Some philosophers think there is some kind of knowledge that can be known or justified regardless of experience, i.e. a priori knowledge. Andrea Lailach-Hennrich is one of them. She argues that we should accept the possibility of a priori knowledge, and what’s more, we should also accept the possibility of synthetic a priori knowledge. What the term “a priori” means and why philosophers are concerned with a priori knowledge or a priori justification at all, is what she explained in her Jour Fixe speech. One reason why philosophers are interested in a priority might be that philosophy itself could be considered as an a priori inquiry, because philosophers “think, reflect and argue from the armchair. For this kind of reasoning they do not have to rely on experience, i.e. they do not have to discover their environment or carry out experiments. Instead they argue for the truth of their beliefs by relying on (pure) reason or thought alone.” Hence philosophical knowledge seems to be the outcome of a priori reasoning. Based on Kant’s definition of a priori knowledge as “knowledge that is independent of experience and even of all impressions of the senses (…)” Andrea Lailach-Hennrich elucidated on the one hand, how one could understand the expression “independent of experience”, and, on the other, she briefly discussed two main conceptions of a priority, namely metaphysical and epistemological conceptions.

Besides such required conceptual clarification, Andrea Lailach-Hennrich’s research project focuses on the question of whether the possibility of synthetic a priori judgments is defendable. Usually,
 synthetic *a priori* judgments are determined as true judgments about some non-mental facts (i.e. facts of the external world) that are justified, regardless of experience. Hence science from the armchair seems to be a possibility if synthetic *a priori* judgments are possible.

From a Kantian point of view though, synthetic *a priori* judgments tell us something about the necessary features of empirical objects by identifying the general conditions of experience and knowledge. It is precisely this understanding of synthetic *a priori* judgment as presenting the necessary conditions for the knowledge that Andrea Lailach-Hennrich wants to investigate in her research project. To do so, she has to answer several objections raised against the possibility of synthetic *a priori* knowledge. Among them, Kant’s claim that we can only understand the possibility of synthetic *a priori* judgments if we buy into his doctrine of transcendental idealism. Andrea Lailach-Hennrich’s project aims to present an account of synthetic *a priori* judgments that, whilst strongly relying on Kant’s transcendental analyses, are not committed to the controversial doctrine of transcendental idealism or any other strong metaphysical assumption.


Lake understanding

Jour Fixe presentation by Karsten Rinke on July 4, 2013

For a limnologist like Karsten Rinke, living and working in Konstanz seems like paradise, as not only is the lake so close, but so is the Limnological Institute of the University of Konstanz as well, situated directly on the lake side. Nevertheless Karsten Rinke decided to move to Magdeburg three years ago to work as Head of the Department of Lake Research at the Helmholtz-Centre for Environmental Research. But he is still a Fellow of the Zukunftskolleg and still works on the DFG-funded project “Climate effects on the ecosystem dynamics of Lake Constance”. To analyze these effects (e.g. changing air temperatures and its consequences for biomass), he collaborates with climatologists and meteorologists. He applies coupled hydrodynamic-ecological models that contain a hydrodynamic compartment that is directly forced by meteorological data and include an ecological model accounting for the complexity of the relevant ecological processes.

Ecological model:
Since Magdeburg has no lake, Karsten Rinke and his colleagues conduct their research on artificial lakes, such as reservoirs. His team is highly interdisciplinary and consists of biologists, chemists, physicists and geologists. They are interested in restoring lakes and mining lakes, reservoir management, water quality monitoring and modeling lakes and reservoirs. One of these reservoirs they are working on is the Rappbode Reservoir Observatory, which is located in the Harz Hills in Germany. It consists of one main reservoir and three pre-dams. With a surface area of 395 hectares, it supplies more than one million people with drinking water. Karsten Rinke’s team continuously monitor the water quality and ecosystem dynamics, such as phytoplankton dynamics, as well as nutrient and carbon fluxes.

Karsten Rinke concluded his speech by comparing his current position at the Department of Lake Research with a Fellow from the Zukunftskolleg: In Konstanz he enjoyed the extremely high independence in his own research work, but on the other hand, he believes that teaching should be given higher valued and considered an important component in career development. In Magdeburg, the administrative load increased considerably, but being the boss of well-established scientists in other fields of expertise is a high honour indeed.


Finding the “truth” in Brazil
Jour Fixe presentation by Nina Schneider on July 11, 2013

When Nina Schneider first visited Brazil as a 16-year-old exchange student, she wondered why none of her teachers ever spoke about the authoritarian regime that ruled the Latin American country until the
mid-1980s. Coming from Germany, she was accustomed to the contrary: at school you were taught about the Nazi past many times. This experience of surprise was one of the reasons why she decided to dedicate her scientific career to Brazilian history. In her Jour Fixe speech, Nina Schneider talked about her new research project with the preliminary title: “Resisting Restitution? Historicizing the struggle over historical justice in post-authoritarian Brazil from a global human rights perspective”.

Between 1964 and 1985, the civilian-military regime tortured some 50,000 Brazilians and forced 10,000 into exile. One key moment for civil-society came about in 1985, when the “Brazil Nunca Mais” report was published, which provided the first evidence on the regime’s systematic human rights crimes. Although the democratic state had initiated a two step-reparation programme in 1995/2002 and launched official memory projects from 2006 onwards, it took nearly three decades until a Truth Commission was finally established in 2012 mandated to systematically investigating the State’s widespread use of violence against political opponents.

But not only did the Truth Commission seek the “truth”, but so did Nina Schneider, too: In 2012/13, she paid several research trips to Brazil and the US to research the archives and to conduct interviews with both victims and key people involved in the reckoning process, such as members of the Truth Commission. On the basis of these sources, she tries to find answers for her research questions: How are international and Brazilian human rights protagonists and ideas connected? What role should she as a researcher assume in Brazil’s process of reckoning with its violent past, and how should she write about human rights? Her work currently focuses on identifying and retrieving the most important and best available sources, and on contacting key protagonists. Moreover, she is pondering about how to narrow down the project (as she realized that it might be too broad), and continuously monitors the work of the Truth Commission.

Structure as the basis to understand function
Jour Fixe presentation by Senior Fellow Adelheid Godt on July 18, 2013

Senior Fellow Adelheid Godt from the department of Chemistry closed the summer term 2013 with her Jour Fixe speech on “Molecular rulers for spectroscopic rulers”. To explain her field of interest, she started by quoting Francis Crick, molecular biologist and biophysicist, who once said: “If you want to understand function, study the structure." She adds: “If we want to understand function, we have to consider not only the structure but also the dynamics of molecules" and emphasizes that when designing functional nanoscopic molecules, dynamics have to be taken into account. And that’s exactly what she and her co-workers are contributing to it: as organic chemists, they synthesize tailored molecules for the evaluation and further development of tools that help us to gain knowledge about the structure and dynamics of molecules. These tools function like spectroscopic rulers.

Senior Fellow Gunnar Jeschke developed the spectroscopic ruler called DEER (Double Electron Electron Resonance), a special EPR (Electronic Paramagnetic Resonance) technique. Adelheid Godt contributed to this development by designing and providing molecular rulers with which the technique was evaluated. These rulers consist of a rodlike spacer and two spin labels - paramagnetic moieties - which are attached to the ends of this spacer. Based on the results of a DEER experiment you cannot only determine the distance between the two labels, but also the distance between the two sides to which the labels are attached, as well as the flexibility of the spacer. Malte Drescher, who nominated Adelheid Godt as Senior Fellow, benefits enormously from this method. He describes it as a “very well established technique for biological applications with which to understand biological processes”. Together they work on creating an application for studies of peptides in living cells. This calls for new, chemically very stable spin labels and new ways of attaching them to the peptide.

After her presentation, the Senior Fellow mentioned some further current research aims: She wants to develop spin labels that provide higher sensitivity and therefore reduce the measurement time and amount of material needed. With the new spin labels, the range of accessible distances may be increased and the development of EPR techniques which are fundamentally different from DEER can be
supported. In all of these cases, appropriate molecular rulers will be essential tools.

More information about Adelheid Godt: https://www.zukunftskolleg.uni-konstanz.de/people/personen-details/godt-adelheid-2196/6338/13775/

**Zukunftskolleg Lecture**

*Between Body and Mind*

**Zukunftskolleg Lecture with Senior Fellow Jeffrey Alan Barrett on June 10, 2013**

At first sight, physics and philosophy seem to be two disciplines with totally different focuses. Senior Fellow Jeffrey Alan Barrett, Professor of Logic and Philosophy of Science at the University of California at Irvine, shows that this is not necessarily the case. He was awarded the Zukunftskolleg Lecture held in the summer term 2013. In his presentation of June 10 on “Quantum Mechanics and Wigner’s Mind-Body Dualism”, he analyzed the difficult relationship between mental and physical states in quantum mechanics. “The quantum measurement problem is perhaps the most difficult conceptual problem in the foundation of physics”, he explained at the beginning. “Attempts to solve it have led physicists and philosophers to speculate concerning the proper relationship between the mental states of observers and the physical states of the systems they observe.”

In 1961, summarizing a view that he took to be held by most of his colleagues, the physicist Eugene Wigner argued that “until not many years ago, the ‘existence’ of mind or soul would have been passionately denied by most physical scientists. As soon as physical theorists began to focus on microscopic phenomena, through the creation of quantum mechanics, the concept of consciousness came to the fore again.” And he concluded with the remarkable claim that “it is not possible to formulate the laws of quantum mechanics in a consistent way without reference to consciousness.” More specifically, Wigner believed that a consistent formulation of quantum mechanics requires one to endorse a strong variety of mind-body dualism.

The measurement problem arises from the fact that the standard theory's two dynamical laws are incompatible: one is linear and deterministic, and the other non-linear and random. Since they constitute contradictory descriptions of the time-evolution of physical states, they threaten to render the standard theory logically inconsistent if one is unable to specify strictly disjointed conditions for when each applies. The theory tells us that the linear dynamics are to be used in all situations except when a measurement is made in which case the non-linear collapse dynamics is to be used; but since it does not tell us what constitutes a measurement, we do not know when to apply the linear dynamics and when to apply the collapse dynamics.
Wigner’s solution to the measurement problem was to have the theory stipulate that a collapse occurs whenever a conscious mind apprehends the state of the measured system. He said that this move was "required" for the consistency of the standard theory, and he considered it to be the “simplest way out” of the quantum measurement problem.

Jeff Barrett wondered if Wigner was right in thinking that a solution to the quantum measurement problem requires you to endorse a strong variety of mind-body dualism. His answer: It depends on the explanatory demands that are placed on quantum mechanics and on underlying background assumptions that are considered to be plausible. “We have seen why Wigner thought he needed to endorse a strong version of mind-body dualism: it provides a principled criterion for when collapses occur on the standard theory.”

Barrett argued further that “even if one opts for a no-collapse formulation of quantum mechanics, a strong variety of mind-body dualism may still be required on plausible-sounding background assumptions.” However, in the end the Senior Fellow summed up: “My own sense is that if a set of plausible-sounding assumptions commits one to a strong mind-body dualism, then one should sacrifice some of the plausible-sounding assumptions. The puzzle is what to sacrifice.”

Jeffrey Alan Barrett has been Professor of Logic and Philosophy of Science at the University of California at Irvine since 2004. He received his PhD with Distinction in Philosophy from Columbia University in 1992 and taught at the University of California at Irvine from 1992 to 2004. His interests are in philosophy of science and epistemology and logic generally, but most of his recent research has been in the Philosophy of Physics, in particular the measurement problem in quantum mechanics. Jeff is author of, among others, “The Quantum Mechanics of Minds and Worlds” (Oxford University Press 1999) as well as of 35 articles, including articles in the two leading journals on Philosophy of Science, “Philosophy of Science” and “The British Journal for Philosophy of Science”. From 2000 to
2013, he was Head of Department, and since 2009 he has been Editor-in-Chief of the journal “Philosophy of Science”.

More information on Jeffrey Alan Barrett: http://www.lps.uci.edu/lps_bios/jabarret

Speeches, Workshops and Symposia

Julia Boll:
• “Between Homeland and Exile: Witnessing the homo sacer at the Heart of Hotel Medea”, Conference “Theatre and Politics: Theatre as Cultural Intervention”, Charles University, Prague, May 30-June 2, 2013

• “Beyond Spectatorship: Witnessing the homo sacer at the Heart of Hotel Medea”, Annual Conference at the International Federation of Theatre Research, Theatre and Film Institute Barcelona, July 22-26, 2013

• “Violence on Stage and Staged Violence”, Conference “Representation, Politics and Violence”, Centre for Applied Philosophy, Politics and Ethics (CAPPE), University of Brighton, September 11-14, 2013

• Attendance at the Annual Anglistentag, University of Konstanz, September 18-21, 2013

María Cruz Berrocal:
• “Colonial Experiences in Local and Global Perspectives. An Archaeological Example from Hoping Island, Taiwan”, International Seminar on Archaeologies of Early Modern Spanish Colonialism, Barcelona, June 6-7, 2013, organized by S. Montón-Subiás, M. Cruz Berrocal, A. Ruiz

• “An archaeological perspective on Spanish early colonialism in the Pacific”, guest lecture in the module “Taiwan History” taught at the 2013 Summer Exchange Program, Summer Course “Introduction to Taiwan Culture”, organized by the Office of International Affairs at NTNU, July 3-27, 2013

Sarang Dalal:
• Poster presentation at the Organization for Human Brain Mapping meeting, Seattle, June 16-20, 2013

• Poster presentation at the International Conference on Basic and Clinical Multimodal Imaging, Geneva, September 5-8, 2013

• Lecture and tutorial at the “Move the Brain” Magnetoencephalography Autumn School, Tübingen, September 30-October 2, 2013

Panteleimon Eleftheriou:
Invited Lectures:
• “Pregeometries and definable groups”, Model theory seminar, Department of Mathematics and Statistics, University of Konstanz, June 3, 2013

• “Semi-bounded groups”, Panhellenic Logic Symposium, National Technical University of Athens, July 16, 2013

Workshop Participation:
• ASL Annual Meeting, University of Waterloo, May 8–11, 2013

• Model Theory, Ravello, Italy, June 10-15, 2013
• Applications of O-Minimality to Analysis and Number Theory, Passau, September 9-12, 2013

Denis Gebauer:
• “The Early Stages of Crystallization - Polyamorphism, Prenucleation Clusters, and Polymorph Selection”, invited keynote lecture at the BACG (British Association of Crystal Growth) Annual Conference, Manchester, June 16-18, 2013
• “The Role of Pre-nucleation Clusters during (Bio)mineral Nucleation”, invited speech at the 17th International Conference on Crystal Growth and Epitaxy (ICCGE-17), Warsaw, August 11-16, 2013

Helen Gunter:
• “Biological Variability: How it should be acknowledged and built into experimental designs”, presentation at the workshop on “Philosophers meet Biologists: Experimental Studies of Population Phenomena”, Konstanz, May 7, 13
• “The transgenerational scars of violence”, presentation at the “XIII Congress of the European Society for Traumatic Stress Studies”, Bologna, June 7, 2013
• “No strain no gain: Genetic investigation of adaptive phenotypic plasticity in teleost jaws”, presentation at the conference for the European Society for Evolutionary Biology, Lisbon, August 21, 2013
• “Revisiting Gavin de Beer’s classic example of heterochrony: the developmental basis of jaw growth in halfbeaks and needlefish”, presentation at the conference for the European Society for Evolutionary Biology, Lisbon, August 23, 2013

Helen Gunter, Julia Jones and Senior Fellow Giora Hon:
• “Philosophers meet Biologists: Experimental Studies of Population Phenomena”, interdisciplinary workshop, University of Konstanz, May 6-7, 2013

Laura Iapichino:
• “Optimization with PDEs, algorithms for large scale optimization problems and related applications”, contributed talk at the III European Conference on Computational Optimization (EUCCO), Chemnitz UT, July 17-19, 2013
• “Reduced basis methods and optimal control problems: a combined perspective”, visit and invited talk in the group “Numerische Mathematik (Partielle Differentialgleichungen)” of Prof. Dr. Roland, Chemnitz UT, July 22-24, 2013
• Poster session at the Aachen Conference on Computational Engineering Science (AC.CES 2013), Aachen Institute for Advanced Study in Computational Engineering Science, RWTH Aachen, September 9-11, 2013
• “Optimization strategy for the parameter sampling in the reduced basis method”, invited talk at the first IFAC workshop on Control of Systems Modeled by Partial Differential Equations (CPDE), Henri Poincare Institute, Paris, September 25-27, 2013; and co-chair the session “Reduced-Order Modelling in PDE Constrained Optimization” with S. Volkwein
Karsten Lambers:
- “Texture Segmentation as a First Step Towards Archaeological Object Detection in High-Resolution Satellite Images”, poster presentation at the 10th International Conference on Archaeological Prospection (AP), Vienna, May 29 - June 2, 2013
- “Satellite-assisted archaeological survey in the Silvretta Alps”, speech given at the annual meeting of the European Association of Archaeologists (EAA), Pilsen, September 4-8, 2013

Philip Leifeld:
- “POLNET+: Advanced Network Analysis”, Summer School in Konstanz and Meersburg for international PhD students and researchers, June 28-29, 2013

Bernard Lepetit:

Marilena Manea:

Daniel Plaumann:
- „Hyperbolic polynomials and sums of squares“, International Conference on Continuous Optimization (ICCOPT), Lisbon, July 29, 2013
- „Positive polynomials on non-compact semialgebraic sets“, SIAM Conference on Applied Algebraic Geometry, Fort Collins, Colorado, August 1, 2013

Gianluca Rastelli:
- Conference Participation:

Tanja Rinker:
- “Assessment of early lexical development in Turkish-German children: Evidence from L1 and L2”, poster presented at the COST Action IS0804 Final Conference Child Language Impairment in Multilingual Contexts, Krakow, Poland, May 2013 (with Budde, N., & Sachse, S.)
- “Turkish language and migration in Germany”, Workshop within the Hegau Bodensee-Seminar, University Day in the Humanities, University of Konstanz, May 17, 2013 (read more in “Latest Collaborations”)
- “Language skills in Turkish-German school children and adults”, speech
presented at the International Symposium on Bilingualism (ISB 09), Singapore, June 2013 (with Kaya, M., Winter, V., Budde, N., & Eulitz, C.)

- “Turkish-German language development from childhood to adulthood”, Colloquium, International Symposium on Bilingualism (ISB 09), Singapore, June 2013 (with Sachse, S.)

Nina Schneider:
- “Brasiliens Umgang mit der Militärdiktatur 1964-1985”, lecture on the occasion of the Latino-Festival at the University of Konstanz, May 6-8, 2013
- Invited Speaker at the Early Researcher Roundtable, Beyond the One-Size-Fits-All Model of “Transitional Justice” - a conference concluding the “Bosnian Bones Spanish Ghosts: Transitional Justice and the Legal Shaping of Memory after Two Modern Conflicts”, project funded by the European Research Council, University of Deusto, Bilbao, August 28-30, 2013

Ilja Serzants:
- “Semantics and Structure of Linguistic Units”, invited speaker at the University of Klaipeda, Lithuania, June 14, 2013
- Association for Linguistic Typology - 10th Biennial Conference, Leipzig, August 15-18, 2013 (no presentation)
- 46th Annual Meeting of the Societas Linguistica Europaea, Split University, Croatia, September 18-21, 2013

Minmin Shen:
- “Automatic framework for tracking honeybee’s antennae and mouthparts from low frame rate video”, poster presentation at the IEEE International Conference on Image Processing (ICIP), Melbourne, September 15-18, 2013

Ulrich Sieberer:
- „Und sie ändern sich doch… Die Konzeptionalisierung und Messung von Institutionenwandel am Beispiel parlamentarischer Regeln”, Paper presented at the Annual Convention of the DVPW Section Methods, Konstanz, May 3-4, 2013 (with Peter Meißner, Julia Keh, and Wolfgang C. Müller)
- “Hat Karlsruhe wirklich das letzte Wort? Die These von der Justizialisierung der Politik und ihre Grenzen”, Speech at the University of Konstanz, June 12, 2013


Margarita Stolarova:
- “Inclusion in school and pre-school: strategies for implementation and the consequences for institutional management”, invited speech at the University for Applied Sciences, Potsdam, June 2013


Attila Tanyi:
- “Immortal Curiosity”, Annual conference of the Society for Applied Philosophy, University of Zurich, June 2013

- “Can Reasons Be Propositions?”, Swedish Congress of Philosophy, Stockholm University, June 2013

Margaret Thomas:
Invited Speeches:
- “Algebraic points and Weierstrass zeta functions”, Model Theory Special Session, Logic Colloquium 2013, Universidade de Évora, Portugal, July 2013

- “Algebraic points, Pfaffian sets and Weierstrass zeta functions”, Workshop “Applications of O-Minimality to Analysis and Number Theory”, University of Passau, September 2013

Workshop participation:
- Satellite workshop “Model Theory and Applications to Geometry”, CMAF, Universidade de Lisboa, Portugal, July 2013

Andreas Thum:
- Nutritional Homeostasis Workshop, LIMES Institute, University of Bonn, May 1-4, 2013

Nils B. Weidmann:
Conference and Workshop Participation:

- Concentration on Conflict, Institute of Economic Analysis, Barcelona, June 18-19, 2013

- First PSS/ISA Conference, Budapest, June 27-29, 2013

- EnCoRe Workshop, University of Essex, September 18-20, 2013

Invited Speeches:
- “Intragroup Inequality and Conflict”, Peace Research Institute Oslo (PRIO), May 7, 2013

- “On the Accuracy of Conflict Event Data”, German Institute of Global and Area Studies (GIGA), Hamburg, May 22, 2013
• “Within-group Inequality and Conflict”, Institute of Political Science, University of Heidelberg, June 12, 2013

• “Within-group Inequality and Conflict”, Department of Economics, University of Frankfurt, July 9, 2013

Contributing to an International University Debate resp. Media Presence

On the radio: Zukunftskolleg as best practice for promoting young researchers

„Forschen und Bangen“ („Research and tremble“) is the title of a radio report on SWR2 Wissen that analyzes the situation of young researchers in Germany. To show good examples for supporting up-and-coming researchers, journalist Beate Krol has visited the University of Konstanz and the Zukunftskolleg and interviewed Anda Lohan and Agata Nörenberg. The whole report can be downloaded from here:
http://www.swr.de/swr2/programm/sendungen/wissen/archiv/-/id=660334/w9hse1/index.html

Elena Rosseeva met Nobel Laureates

Elena Rosseeva took part in the 63rd Lindau Nobel Laureate Meeting dedicated to the topic of chemistry. 625 outstanding young researchers from 78 countries have been selected for the unique opportunity of participating in the meeting. From June 30 to July 5, they met 35 Nobel Laureates in Lindau to exchange knowledge and ideas, to share their enthusiasm for science and to establish new contacts. For Elena Rosseeva, it was an important experience: “It was a great honor for me to participate in the meeting and to present results of my research work. This meeting provided a great opportunity for exchanging knowledge and ideas between Nobel Laureates, senior and young researchers from all over the world. I really enjoyed the incredible atmosphere and the spirit of this event. I wouldn’t like to miss the chance to participate in this meeting!”

“Talking a lot helps” – Interview with Tanja Rinker

Tanja Rinker was interviewed by the local newspaper Südkurier. She spoke about her research project on “Turkish-German children with and without Specific Language Impairment”, and explained the opportunities and challenges for children who grow up with two languages. You can read the whole interview and download it here:
http://www.suedkurier.de/region/kreis-konstanz/konstanz/Tanja-Rinker-8222-Viel-sprechen-ist-hilfreich-8220;art372448,6164400

Radio interview with Margarita Stolarova

On September 12, Margarita Stolarova gave a 30 minute live-interview for the Bulgarian National Radiostation (www.bnr.bg) as an expert on the practices of inclusive education and early child care. She was invited to comment on a recent law initiative adopted by the Bulgarian parliament and to report on the platform www.moedete.bg, an information resource resulting from a research project at the Zukunftskolleg.
Latest Collaborations

Hegau-Bodensee-Seminar

Georgia’s and Turkey’s Roles in Europe

University Day in the Humanities for pupils dealt with Europe’s linguistic and cultural diversity

On May 17, some 30 scholars from the Hegau-Bodensee-Seminar visited the University of Konstanz to find out more about research in the Humanities. The occasion was this year’s University Day in the Humanities for pupils, jointly organized by the Hegau-Bodensee-Seminar, the Zukunftskolleg and the Center of Excellence “Cultural Foundations of Social Integration”. It was called “Europe’s linguistic and cultural diversity”.

At the beginning, Thomas Hinz, Dean of the Faculty of Humanities, and Norina Procopan, Head of the Hegau-Bodensee-Seminar, welcomed the scholars in Y 311. Then Zukunftskolleg Fellow Margarita Stolarova gave an interactive plenary speech on the meaning of multi-lingualism. She involved the audience in defining what multilingualism means by asking the pupils to build different clusters according to their family backgrounds and mother tongues.

Tanja Rinker and Marifet Kaya focused on the bilingual development of Turkish children born in Germany, as well as on the history and the reasons for Turkish migration to Germany. Mariami Parsadanishvili wanted her participants to analyze the pros and cons of Georgia’s potential membership in the European Union. In both workshops the pupils learned a lot about the cultures and languages of both countries, but also

After a coffee break, the scholars were given the opportunity to participate in one of two workshops: one by Zukunftskolleg Fellow and linguist Tanja Rinker and her colleague Marifet Kaya on “Turkish language and migration in Germany”, and the other by Mariami Parsadanishvili, PhD student in Eastern European History and member of the Center of Excellence, on “Georgia’s diversity”.

[Images of scholars participating in workshops]
about their history, geography and their political and economic importance for Europe. The scholars worked on various topics in subgroups and presented the results in a plenary meeting at the end of the day. Finally, Norina Procopan looked ahead to the next University Day in 2014.


„Zufallszwänge. Roboterbilder zwischen Wissenschaft und Kunst“ Exhibition with Senior Fellow Patrick Tresset and Alumnus Albert Kümmel-Schnur

On September 27 at 6:00 p.m., the vernissage of the exhibition „Zufallszwänge. Roboterbilder zwischen Wissenschaft und Kunst“ in the Wolkensteinsaal, Kulturzentrum am Münster, Konstanz was held. The exhibition, which could be visited in the Bildungsturm Konstanz until October 20, showed two painting robots/robot painters created by Oliver Deussen (Computer Graphics and Media Design, University of Konstanz) and Patrick Tresset (Senior Fellow/Artist in Residence of the Zukunftskolleg). The exhibition was funded by the Zukunftskolleg and implemented in cooperation with the Degree Programme “Literature-Art-Media” and Information Engineering at the University. Zukunftskolleg Alumnus Albrecht Kümmel-Schnur curated the exhibition. More information: www.zufallszwaenge.de

People

Fellows

Fellowships ending at the end of May 2013:
• Julia Jones

Fellowships ending at the end of June 2013:
• Martin Bruder

Fellowships ending at the end of July 2013:
• Alexander Titz

Fellowships ending at the end of August 2013:
• Simon Hanslmayr

Fellowships ending at the end of September 2013:
• Karsten Lambers
• Karsten Rinke

New Fellows at the Zukunftskolleg:

In June, we welcomed Aline Steinbrecher (History) and Magdalena Balcerak Jackson (Philosophy) at the Zukunftskolleg. Aline Steinbrecher is one of a total of 16 2-year Postdoctoral Fellows and Magdalena Balcerak-Jackson one of a total of eight 5-year Research Fellows selected in the 2012/2013 call for applications.
In July, we welcomed Zhongbao Jian (Chemistry) at the Zukunftskolleg, who started his 2-year Postdoctoral Fellowship. He works at the chair of Chemical Materials Science headed by Stefan Mecking on his project “Stereoselective acrylate insertion polymerization”. Zhongbao Jian is the first of a total of 15 new 2-year Postdoctoral Fellows who were selected in the latest call for applications.

In August, we welcomed Julián Torres-Dowdall (Biology) at the Zukunftskolleg, who started his 2-year Postdoctoral Fellowship. He works in the Laboratory for Zoology and Evolutionary Biology headed by Axel Meyer on his project “Does side matter? Evolution of genital asymmetry in live-bearing fishes”. Julián Torres-Dowdall is one of a total of 15 new 2-year Postdoctoral Fellows who were selected in the latest call for applications.

In August, we also welcomed 2-year Postdoctoral Fellow Panteleimon Eleftheriou (Mathematics and Statistics) at the Zukunftskolleg. He is working on his project on “Groups definable in tame expansions of o-minimal structures”. Before coming to Konstanz, Panteleimon Eleftheriou had been a Postdoctoral Fellow at the department of Mathematics at the University of Waterloo, Canada.

In September, we welcomed 14 new Fellows:

- Julien Bernard, Philosophy, Postdoctoral Fellow
- Joanna Chojnicka, History and Sociology, Postdoctoral Fellow
- María Cruz Berrocal, History and Sociology, Research Fellow
- Laura Iapichino, Mathematics and Statistics, Postdoctoral Fellow
- Claudius Kratochwil, Biology, Postdoctoral Fellow
- Ben Lambert, Mathematics and Statistics, Postdoctoral Fellow
- Julia Langkau, Philosophy, Postdoctoral Fellow
- Bernard Lepeit, Biology, Postdoctoral Fellow
- Daniel Plaumann, Mathematics and Statistics, Research Fellow
- Beatriz Puente Ballesteros, History and Sociology, Postdoctoral Fellow
- Paraskevi Salamaliki, Economics, Postdoctoral Fellow
- Denis Seletskiy, Physics, Research Fellow
- Minmin Shen, Computer and Information Sciences, Postdoctoral Fellow
- Edina Szöcsik, Politics and Public Administration, Postdoctoral Fellow

Senior Fellows and Mentors

In May, the Zukunftskolleg welcomed Senior Fellow Viktor V. Kabanov from the Department of Complex Matter at the Jozef Stefan Institute in Ljubljana, Slovenia. He had been nominated by Jure Demsar. After his last stay in Konstanz in autumn 2012, the Senior Fellow was our guest this time until June 11, 2013. The theoretical physicist is an expert in superconductivity and ultrafast phenomena in complex solids. During his stay, he joined forces with experimental colleagues at the University of Konstanz to work on the projects “Electron relaxation in noble metals” and „Superconducting gap dynamics in electron doped cuprate high temperature superconductors“. In May, another Senior Fellow arrived at the Zukunftskolleg: Sandeep Verma from
the Department of Chemistry at the Indian Institute of Technology in Kanpur. He was nominated by Daniel Summerer and was our guest until July 15, 2013. A main part of Sandeep Verma’s research deals with the use of nucleobases, nucleotides, as well as oligonucleotides, which provide a direct link to Daniel Summerer’s research programme. For Sandeep Verma it was his second stay at the Zukunftskolleg; last time he had been nominated by Alumnus Jörg Hartig and stayed there from May until July 2011.

In June, the Zukunftskolleg welcomed Anne Imberty from the CNRS (Centre National de la Recherche Scientifique) in Grenoble, France. She had been nominated by Alexander Titz within the scope of the Zukunftskolleg Mentorship Programme and stayed in Konstanz from June 9 to 12, 2013. Anne Imberty is a chemist by training and received her PhD in chemistry from the University of Grenoble. After a postdoctoral stay in Toronto, she moved to Nantes (INRA and CNRS) and then to Grenoble, where she is currently Directeur de Recherche II and leader of the Molecular Glycobiology Unit at CERMAV, a research institute of the CNRS. On June 10, Anne Imberty gave a lecture on “Structural glycobiology of host recognition by lectins from opportunistic bacteria” at the University of Konstanz. More information about Anne Imberty’s research group can be found at http://www.cermav.cnrs.fr/en/glycobiologie_gb.htm

Another Mentor also visited the Zukunftskolleg: Nora Strejilevich from the Department of Literature at the San Diego State University, California. In the last call for the Mentorship Programme she had been nominated by Liliana Ruth Feierstein, Postdoc in the research group headed by Zukunftskolleg Alumna Kirsten Mahlke, who is working on the project “Narratives of Terror and Disappearance. Fantastic Dimensions of Argentina’s Collective Memory since the Military Dictatorship”. Nora Strejilevich is professor, writer and survivor of a concentration camp in Argentina whose research, teaching and writing is devoted to the long-term consequences of genocidal practices. Together with Liliana Ruth Feierstein, she will work on the identification and interpretation of religious traces and cultural patterns in the narratives which deal with the last dictatorships in Argentina, Uruguay and Chile. Nora Strejilevich was our guest from June 11 until June 25, 2013.

In June, Senior Fellow Adelheid Godt from the Department of Chemistry at the University of Bielefeld enriched the Zukunftskolleg. She was nominated by Malte Drescher, Daniel Summerer, Dominik Wöll and Filip Wojciechowski and was our guest for two months. Prof. Godt is an organic chemist working in the field of synthesis of molecular rulers for spectroscopy. Her work contributes directly to research projects of all four nominating Fellows.

On September 1, Senior Fellow Giora Hon from the Department of Philosophy at the University of Haifa, Israel, arrived at the Zukunftskolleg. He was nominated by Helen Gunter and Julia Jones and will stay at the Zukunftskolleg until February 2014. It is already his second stay here, on the first time he had been nominated by Alumnus Samuel Schindler. Giora Hon’s work is located at the interface between the history of physics and the philosophy of science.
**Associated Fellows**

In July, the Zukunftskolleg welcomed *Brendan Balcerak Jackson* (Philosophy) as new Associated Fellow. He is Co-Director of the Emmy Noether Research Group “Understanding and the A Priori”. His wife, *Magdalena Balcerak Jackson*, has been a Research Fellow at the Zukunftskolleg since June this year.

We also welcomed *Stefanie Neupert* (Biology), winner of this year’s Manfred Ulmer Scholarship, as an Associated Fellow at the Zukunftskolleg (you can find the news about the Manfred Ulmer programme under the heading of “Funding Instruments”).

**Publications**

**Fight for Love**

Associated Fellow *Roland Weierstall* was involved in a study that analyzed the attractiveness of veterans. For this, he and his colleagues had interviewed more than 1,000 women, on what type of husband - out of four different types with and without posttraumatic stress disorder and aggression - they would prefer for a long-term or short-term relationship.

The study was published in the journal “Evolutionary Psychology”. Read more about it in the press release (in German): [http://www.aktuelles.uni-konstanz.de/presseinformationen/2013/41/](http://www.aktuelles.uni-konstanz.de/presseinformationen/2013/41/)

**Substantial progress in developing new chemotherapeutics**

Associated Fellow *Aswin Mangerich* from the department of Biology, who recently won a Mentorship at the Zukunftskolleg, developed – in cooperation with colleagues from the University of Konstanz and the Massachusetts Institute of Technology (MIT) in Boston, USA – a new method that makes it possible to quantify poly(ADP-ribose) in cells. This can help to develop new chemotherapeutics. Poly(ADP-ribose)ylation is an essential post-translational modification with the biopolymer poly(ADP-ribose) (PAR). The reaction is catalyzed by poly(ADP-ribose) polymerases (PARPs) and plays key roles in cellular physiology and stress response. PARP inhibitors are currently being tested in clinical cancer treatment, in combination therapy, or as monotherapeutic agents by inducing synthetic lethality. “We have developed an accurate and sensitive bioanalytical platform based on isotope dilution mass spectrometry in order to quantify steady-state and stress-induced PAR levels in cells and tissues and to characterize pharmacological properties of PARP inhibitors.” The study demonstrates that mass spectrometric quantification of cellular poly(ADP-ribose)ylation has a wide range of applications in basic research as well as in drug development.

Aswin Mangerich’s mentor, *Peter C. Dedon* from the Massachusetts Institute of Technology, was also involved in the study. The results are published in the magazine „Chemical Biology“ by the American Chemical Society (ACS). Here is the online-version: [http://pubs.acs.org/doi/abs/10.1021/cb400170b](http://pubs.acs.org/doi/abs/10.1021/cb400170b)

Further information can be found in the following press release (in German): [http://www.aktuelles.uni-konstanz.de/presseinformationen/2013/60/](http://www.aktuelles.uni-konstanz.de/presseinformationen/2013/60/)
Decision-making support for Bundestag elections

Postdoctoral Fellow Martin Elff from the department of Politics and Public Administration developed – in cooperation with colleagues from the University of Konstanz and the Centre for Democracy in Aarau, Switzerland – a decision-making tool called “ParteieNavi” for the Bundestag elections on September 22, 2013. It serves in addition to the Wahl-o-Mat of the “Bundeszentrale für politische Bildung” and aims to help the electorate to put its political position in relation to the parties’ positions.

More information can be found at www.parteienavi.de and in the following press release (in German): http://www.aktuelles.uni-konstanz.de/presseinformationen/2013/102/

Julia Boll:
- “The New War Plays. From Kane to Harris”; Basingstoke: Palgrave Macmillan, 2013 (forthcoming)

María Cruz Berrocal:
- “The archaeology of rock art in Fiji: evidence, methods and hypotheses” (with Millerstrom, S.); in: “Archaeology in Oceania”, to be published in September

Sarang Dalal:
- “Prestimulus oscillatory phase at 7 Hz gates cortical information flow and visual perception” (with Simon Hanslmayr, Gregor Volberg, Maria Wimber, Mark W. Greenlee); in: “Current Biology” (in press)
- “Improved EEG source localization employing 3D sensing by ‘Flying Triangulation’” (with Svenja Ettl, Stefan Rampp, Sarah Fouladi-Movahed, Florian Willomitzer, Oliver Arolld, Hermann Stefan, Gerd Häusler); in: Proc. SPIE 8791, Videometrics, Range Imaging, and Applications XII; 87910V (2013)

Panteleimon Eleftheriou:

Denis Gebauer:

Dimitri Ginev:

Helen Gunter:
- “Shaping development through mechanical strain: the transcriptional basis of diet-induced phenotypic plasticity in a cichlid fish”; paper published in: “Molecular Ecology”

Karsten Lambers:
- “Silvretta Historica: satellite-assisted archaeological survey in an

• “Texture segmentation as the first step towards archaeological object detection in high-resolution satellite images of the Silvretta Alps” (with Igor Zingman); in: “Archaeological Prospection: Proceedings of the 10th International Conference” (Vienna, May 29-June 2, 2013), edited by Wolfgang Neubauer, Immo Trinks, Roderick B. Salisbury and Christina Einwögerer, p. 327-329, Vienna: Austrian Academy of Sciences

• „Alpine Archäologie in der Silvretta“ (with Thomas Reitmaier, Christoph Walser, Igor Zingman, Jean Nicolas Haas, Benjamin Dietre, Daniel Reidl, Irka Hajdas, Kurt Nicolussi, Yvonne Kathrein, Leandra Naef and Thomas Kaiser); in: „Archäologie Schweiz“ 36/1: 4-15


Philip Leifeld:

• “Coping with Creeping Catastrophes: National Political Systems and the Challenge of Slow-Moving Policy Problems” (with Volker Schneider and Thomas Malang); in: “Long-Term Governance of Social-Ecological Change”, edited by Bernd Siebenhüner, Marlen Arnold, Klaus Eisenack and Klaus Jacob, p. 221-238, Abingdon: Routledge

• “Where does Political Polarization Come From? Locating Polarization within the U.S. Climate Change Debate” (with Dana R. Fisher and Joseph Waggle); in: “American Behavioral Scientist” 57(1): p. 70-92


• “Mapping the Ideological Networks of American Climate Politics” (with Dana R. Fisher and Yoko lwaki); in: “Climatic Change” 116(3): p. 523-545

• “texreg: Conversion of Statistical Model Output in R to LaTeX and HTML Tables”; in: “Journal of Statistical Software”, (forthcoming)

Marilena Manea:


• “Gonadotropin-releasing hormone receptors as molecular therapeutic targets in prostate cancer: current options and emerging strategies” (with Limonta, P.); in: “Cancer Treat”, Rev. 39(6): p. 647-663
Daniel Plaumann:

Beatriz Puente-Ballesteros:
• “Isidoro Lucci S.J. (1661-1719) and João Baptista Lima (1659-1733) at the Qing Court: The Physician, the Barber-Surgeon, and the Padroado’s Interests in China”; in: “Archivum historicum societatis Iesu”, vol. 82, fasc. 163 (2013:1), pp. 165-216

Gianluca Rastelli:

Nina Schneider:


Denis Seletskiy:

Minmin Shen:
• “Automatic framework for tracking honeybee’s antennae and mothparts from low frame rate video” (with Paul Szyszka, C. Giovanni Galizia, Dorit Merhof), paper on IEEE International Conference on Image Processing (ICIP), Melbourne, September 15-18, 2013

Ulrich Sieberer:

Edina Szöcsik:
• „Building inter-ethnic bridges or promoting ethno-territorial demarcation lines? Hungarian minority parties in competition” (with Daniel Bochsler); in: “Nationalities Papers” 41(5): p. 761-779 (2013)

Attila Tanyi:
• “Consequentialism and Its Demands: A Representative Study” (with Martin Bruder); forthcoming as invited contribution in: “The Journal of Value Inquiry”, a special issue edited by Sabine Roeser and Joel Rickard
• “Immortal Curiosity” (with Karl Karlander); in: “The Philosophical Forum”, Fall 2013

• “Silencing Desires?”; in: “Philosophia: Philosophical Quarterly of Israel”, 2013 43 (1)

Andreas Thum:
• “Mushroom body miscellanea: transgenic Drosophila strains expressing anatomical and physiological sensor proteins in Kenyon cells” (with Ulrike Pech, Shubham Dipt, Jonas Barth, Priyanka Singh, Mandy Jauch, André Fiala and Thomas Riemensperger) (accepted); in: “Frontiers in Neural Circuits”

Alexander Titz:

Grants, Approvals and Prizes

María Cruz Berrocal:
In June, the Chiang Ching-kuo Foundation for International Scholarly Exchange, Taiwan, approved a grant for the project “Taiwan in the 17th Century: Archaeology of Early Colonialism and the Beginnings of Globalization” for an amount of 85,000 euros from 2014-2016.

Sarang Dalal:
2-year grant as PI from the Jacques and Gloria Gossweiler Foundation, together with co-PIs Prof. Dietmar Saupe (Computer Science) and Prof. Alfons Schnitzler (University of Düsseldorf), for the project “Differentiation of oscillatory brain networks subserving bicycling and walking movements in Parkinson’s disease”

Helen Gunter:
Young Scholar’s Fund for “Examining the role of phenotypic plasticity in rapidly evolving lineages of Lake Victorian cichlid fishes” for an amount of 40,000 euros was approved in September.

Philip Leifeld:
Dissertation Award for the best social science PhD thesis in 2011/2012, sponsored by the “Foundation Science and Society at the University of Konstanz”. The award is endowed with 3,000 euros. The award ceremony takes place at the Dies Academicus on October 18, 2013 in Konstanz.

Daniel Plaumann:
DFG Research Grant for “Convexity in Real Algebraic Geometry” for an amount of 116,500 euros was approved in June.

Careers

After having finished his PhD, former Associated Fellow Junaid Jameel Ahmad from the Department of Computer and Information Sciences, has moved to Switzerland and started his Postdoctoral Fellowship at the Swiss Federal Institute of Technology, commonly known as École
Polytechnique Fédérale de Lausanne (EPFL). During his PhD studies, he was supervised by former Fellow Shujun Li, and received two Fellowships from the Zukunftskolleg: A one-year Fellowship in 2009/2010 to work as a student research assistant headed by Shujun Li, and a six-months Doctoral Fellowship in 2012 to fund the final phase of his doctoral thesis. Moreover, two of his publications were accepted out of the doctoral research work and he acknowledged the Zukunftskolleg for its support. More information about Junaid Jameel Ahmad can be found on his webpage at: http://www.inf.uni-konstanz.de/~ahmadj/

Gunhild Berg has been offered an Assistant Professorship (Hochschulassistenten role) at the Institute for German Studies at the University of Innsbruck, starting on October 1, 2013. There she will also work on her habilitation thesis “About the concept of ‘experiment’ as polemical term in the natural sciences and the ‘belles lettres’ during the 19th and 20th centuries”.

María Cruz Berrocal was given a Fellowship (Visiting Scholarship) at the National Taiwan Normal University & Academia Sinica, Taipei, from the Ministry of Foreign Affairs in Taiwan from January to December 2013.

Zukunftskolleg Alumnus Wolfgang Freitag has been offered a Professorship in “Epistemology and Theory of Science” at the University College Freiburg. Wolfgang Freitag was a Fellow from December 2006 until January 2012.

Helen Gunter was appointed as Temporary Lecturer in the Department of Biology at the University of Konstanz. In the summer term 2013 and winter term 2013/14, she will stand in for Prof. Ph.D Axel Meyer from the chair of Zoology and Evolutionary Biology in teaching.

Simon Hanslmayr has accepted a position as Senior Lecturer at the University of Birmingham. On September 1, 2013, he started working at the School of Psychology. For more information see http://www.birmingham.ac.uk/schools/psychology/index.aspx. Simon Hanslmayr has been a Fellow of the Zukunftskolleg since July 2010.

Julia Jones has been working as a Postdoctoral Research Fellow in Social Insect Biology (Evolution, Behaviour and Environment) at the University of Sussex, Brighton, since June 2013. She was a Fellow of the Zukunftskolleg from June 2008 to May 2013.

Jeff Kochan has been offered a Visiting Assistant Professorship for Epistemology and Theory of Science in the Liberal Arts and Sciences Programme at the University College Freiburg from September 2013 until March 2014. The University College Freiburg is an undergraduate college within the University of Freiburg.

Marilena Manea has been holding a Transitional Position in the Department of Chemistry at the University of Konstanz since June 2013. She is a Fellow of the Zukunftskolleg since June 2008.

On June 12, Ulrich Sieberer passed his habilitation and received the venia legendi in Political Science at the University of Konstanz. His title for the habilitation thesis: “MPs, Parties and Institutions. Rational Choice Institutionalist Studies of Parliamentary Behavior in European Democracies”.

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Margarita Stolarova has accepted a Temporary Professorship for Early Childhood Development and Education at the Rhine-Waal University of Applied Sciences in winter term 2013/14 and summer term 2014.

Daniel Summerer has accepted a Temporary Professorship in the Department of Chemistry at the University of Konstanz. Since October 1, 2013, he has been standing in for Prof. Dr. Ulrich Groth in Organic Chemistry with Focus on Chemistry of Natural Materials, Aromatic and Heterocyclic Compounds.

Attila Tanyi has accepted a Lecturer Position with a focus on ethics and applied ethics in the Department of Philosophy at the University of Liverpool, starting on November 1, 2013.

Margaret Thomas has been offered a Postdoctoral Fellowship at the Mathematical Sciences Research Institute (MSRI) in Berkeley, California, USA, from January to May 2014. She is invited to the research semester on “Model Theory, Arithmetic Geometry and Number Theory”. The mathematician is one of only seven MSRI Postdoctoral Fellows from a worldwide selection for the program. “This semester will bring together many senior mathematicians in my field, as well as junior researchers, to the collaborative research center; therefore, it probably goes without saying that participating fully in this programme as a fellow of the MSRI will provide fantastic opportunities for advancing my research”, states Margaret Thomas.

Alexander Titz has accepted a position as Group Leader of the Helmholtz Young Investigator Group “Chemical Biology of Carbohydrates”. On August 1, 2013, he started working at the Helmholtz Institute for Pharmaceutical Research in Saarbrücken which is part of the Helmholtz Centre for Infection Research. For more information see: http://www.helmholtz-hzi.de/en/organisation/locations/hips_saarbruecken/about hips/

Dominik Wöll has been holding a Transitional Position in the Department of Chemistry at the University of Konstanz since September 2013. He is a Fellow of the Zukunftskolleg since September 2008.

Imprint
Zukunftskolleg
University of Konstanz
Box 216
D-78457 Konstanz
Tel: +49 (0)7531 / 88 -4897
Fax: +49 (0)7531 / 88 -4829
Email: zukunftskolleg@uni-konstanz.de
http://www.uni-konstanz.de/zukunftskolleg
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