
Universität Hamburg – Kyoto University Symposium June 6th-8th 2017



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I. Greetings

Dieter Lenzen

President of Universität Hamburg



My dear colleagues from Kyoto and Hamburg,

I am delighted that we —researchers from Kyoto and Hamburg— have been able to meet in these three days in Hamburg in order to firmly establish future collaboration. To this end, we have agreed to jointly hold this symposium. We will explore our universities' research interests, which may be similar or even the same; exchange thoughts about our research goals, methods, and procedures; and agree upon concrete forms of cooperation. This should cover the entire spectrum of international cooperation: from joint externally funded research projects through the exchange of students and doctoral students to joint publications and conferences. In short, everything that can expand our universities' cooperation in both research and teaching. We would like to establish concrete timetables, identify projects, and look to the future together.

We also wish to use this occasion to sign a joint Memorandum of Understanding, marking a further formal step in our cooperation. In Hamburg, we are delighted by the openness and hospitality of our colleagues from Kyoto and we wish to respond in kind.

The *Kyodai* is the first university in Japan with which we seek such intensive cooperation. Thus, this partnership is an important component in our internationalization strategy, according to which we are pursuing a limited number of very strong strategic and sustainable partnerships with select, internationally outstanding institutions.

I wish you great success with your discussions, presentations, and agreements.



Univ.-Prof. Dr. Dieter Lenzen

Juichi Yamagiwa President of Kyoto University



Dear friends and colleagues,

It gives me great pleasure to welcome you to the Universität Hamburg-Kyoto University Symposium 2017.

Kyoto University is honored to co-host this symposium with our valued partner Universität Hamburg in the beautiful harbor city of Hamburg, with its rich history of international exchange and prosperity.

I would like to express my most sincere gratitude to all of the participating researchers for their invaluable contributions, and for making this symposium possible.

Over the last two years we have worked on deepening the mutual understanding and cooperation between our two institutions—efforts which entailed a number of visits back and forth between Germany and Japan. This symposium now represents a new stage in our collaboration.

The symposium focuses on six selected academic areas: manuscript culture, physics, law and economics, polymer chemistry, Japanese studies, and infection research. We anticipate that it will lead to significant new developments in research collaboration in these disciplines.

The symposium also serves as an opportunity for the conclusion of a Memorandum for Academic Cooperation and Exchange and a Student Exchange Agreement between our two institutions. The conclusion of those agreements will facilitate a further

deepening of our partnership. I hope that, together, we can make a significant and lasting contribution to academic cooperation between Germany and Japan, and contribute to the advancement of international academic society as a whole.

I would like to end this brief greeting by thanking once again the faculty and staff of our two institutions who have worked so hard towards this symposium's realization. It is my hope that all participants will have many excellent opportunities to share knowledge and ideas, and form new and lasting partnerships. I extend my sincere best wishes to everyone for an enjoyable and enlightening two days of discovery, learning, and friendship.



Dr. Juichi Yamagiwa

II. Participating Vice Presidents

Susanne Rupp

Vice President for Studies and Teaching of Universität Hamburg



Prof. Dr. Susanne Rupp took over as vice president for studies and teaching in August 2014, after serving as vice dean for academic affairs in the university's Faculty of Humanities, as professor of British literature and culture with an extensive track record in interdisciplinary research. She completed her doctoral studies at the Technische Universität Berlin, followed by research stations at the Freie Universität Berlin, the Universität Stuttgart as well as the University of Glasgow.

Prof. Rupp focuses on the relationship between literature and music as well as the crossroads of religion/theology and literature. Utilizing these foci plus her expertise in British literature from 1500-1800, she has served as a fellow in the university's research training group "Interkonnfessionalität in der Frühen Neuzeit" (Interdenominationalism in the Early Modern) funded by the German Research Foundation.

Jan Louis

Vice President for Research of Universität Hamburg



Prof. Dr. Jan Louis started his term as vice president for research in August 2016. He completed his doctoral studies at the University of Pennsylvania and his *Habilitation* at Ludwig-Maximilian-Universität Munich. Before coming to Hamburg as an expert researcher specializing in theoretical particle physics and string theory in 2003, he held a full professorship at Martin-Luther-Universität Halle.

For ten years, Prof. Louis was the speaker of the Collaborative Research Centre “Particles, Strings and the Early Universe” funded by the German Research Foundation. He also served as a founding member of the Academy of Sciences and Humanities in Hamburg, and is a member of a number of internationally renowned scientific committees. Moreover, his career has included stations as a fellow at CERN/Switzerland and a research associate at the Stanford Linear Accelerator Center/USA. His impressive publication list includes articles centering on supergravity and supersymmetry.

In addition, Prof. Louis introduced a successful outreach format *Wissen vom Fass – Knowledge on Tap*, allowing leading researchers at Universität Hamburg to present their latest discoveries to Hamburg’s public.

Kayo Inaba

Executive Vice President for Gender Equality, International Affairs, and Public Relations of Kyoto University



Dr. Kayo Inaba served as the dean of Kyoto University's Graduate School of Biostudies from April 2003 to March 2005, and director of its Center for Women Researchers in from October 2007 to March 2014. She received her doctorate in science from Kyoto University in 1978, and became the first female associate professor in the university's Faculty of Science.

Dr. Inaba is known for her research demonstrating the importance of dendritic cells, which act as the “sentinels” of the immune system. She has also shown that these cells can be treated outside the body, and then reinfused into the body to stimulate immune responses. In addition, she developed a method to generate dendritic cells from bone marrow precursor cells—a key advance that could lead to a new type of anticancer treatment or open a new path for cellular therapy.

Dr. Inaba received L'Oréal-UNESCO for Women in Science Award in 2014, the Takeda Medical Prize in 2015, and the Medal with Purple Ribbon (from the Government of Japan) in 2016.

III. Brief portraits

Universität Hamburg

Universität Hamburg was the first university in Germany to be founded by an act of parliament and it ceremoniously opened its doors on 10 May 1919.

One of the five largest higher education institutions in Germany, Universität Hamburg has:

- 170 degree programs reflecting the University's diversity;
- over 42,000 students, making Universität Hamburg the largest research and higher education institution in northern Germany;
- over 5,000 international students from more than 130 countries;
- around 700 professors and more than 4,500 academic staff who carry out research and teach at the University's eight faculties: Law; Business, Economics, and Social Sciences; Medicine; Education; the Humanities; Mathematics, Informatics and Natural Sciences; Psychology and Human Movement Science; and Business Administration.

Universität Hamburg is committed to the idea of sustainable science and scholarship, and pursues a broad range of approaches to sustainability research and teaching in all of its faculties. The Center for a Sustainable University (KNU) is an incubator for developing and evaluating new academic procedures and methods for a sustainable university.

Successful research depends upon cooperation with strong partners. To strengthen international research cooperation and increase the internationality and mobility of academic staff and students, Universität Hamburg maintains strategic partnerships with universities on every continent such as Fudan University in China, Macquarie University in Australia, the University of California, Berkeley in the United States, and Stellenbosch University in South Africa.

Besides the University's international partners, Universität Hamburg has established partnerships with non-university research institutions such as the Max Planck Institutes, the Leibniz and Helmholtz Associations, and organizations such as the Institute for Peace Research and Security Policy (IFSH), the Hans-Bredow-Institut, the Institute for the History of the German Jews (IGdJ), and the Research Center for Contemporary History in Hamburg (FZH), making Universität Hamburg one of the premiere research universities in northern Europe and northern Germany's largest and most diverse center of research.

All of these efforts serve to fulfill the University's guiding principle:

“To Research 研究, To Teach 修業, To Educate and Form 修養”

Kyoto University

Since its founding in 1897, Kyoto University has sought to tackle complex global issues and contribute to the welfare of the world's human and ecological community. Located in the historic and culturally rich city of Kyoto, the university maintains a distinctive institutional culture of academic freedom that emphasizes a spirit of self-reliance and independence among its students and researchers, and encourages frank interdisciplinary dialogue and the pursuit of innovative new fields of education and research.

Kyoto University is acknowledged as one of the most accomplished research-oriented universities in Asia. A reputation which is testified by the accolades conferred on its alumni and researchers, most notably nine Nobel Prize laureates who undertook vital research during their time at the university. The university is respected internationally for its high-level research in science and technology disciplines, as well as its excellence in humanities and social science disciplines.

At present, Kyoto University comprises:

- 10 faculties, 18 graduate schools, 13 research institutes, 23 centers and other facilities
- Approx. 22,800 students (13,500 undergraduate and 9,300 graduate students, including approx. 2,000 international students)
- Approx. 7,100 faculty and staff members (3,400 faculty members, 530 non-teaching researchers, 3,200 non-teaching staff members)

- The Kyoto University Institute for Advanced Study (KUIAS) was opened in April 2016 to integrate the university's research institutes and serve as an international research hub in collaboration with leading academic institutions around the world

The university has approximately sixty overseas facilities, including branch offices in Germany (Heidelberg) and Thailand, (Bangkok), and a US liaison office in San Diego. The branch offices serve as regional bases for the university's diverse activities and engagements overseas, including collaboration with overseas partner universities and companies.

The university frequently holds major international academic symposia as part of its efforts to contribute to international society by widely promoting international research collaboration and the sharing of knowledge.

IV. Session Overview

Session I: Manuscript Cultures

UHH	Kyoto U
Prof. Kai Vogelsang	Prof. Tomoyuki Nagata
Prof. Eva Wilden	Prof. Itaru Tomiya
	Prof. Yuko Yokochi
Topic	
- Manuscripts in Ancient China and India	

Session II: Particle Physics

UHH	Kyoto U
Prof. Gudrid Moortgat-Pick	Prof. Fumihiko Takayama
Prof. Marco Zagermann	Prof. Tadashi Takayanagi
Prof. Alexander Westphal	Prof. Shinji Mukohyama
Prof. Géraldine Servant	Prof. Yasuaki Hikida
Prof. Georg Weiglein	
Topics	
- String Theory and Phenomenology	

Session III: Law and Economics

UHH	Kyoto U
Prof. Wolf-Georg Ringe	Prof. Kanako Takayama
Prof. Frank Schiemann	Prof. Nobuyuki Isagawa
Prof. Harald Baum	Prof. Norio Sawabe
Prof. Alexander Baur	Dr. Masaki Ueda
	Takumi Sugimoto
	Yumi Yoshiuchi
Topic	
- Corporate Governance and Finance	

Session IV: Polymer Chemistry

UHH	Kyoto U
Prof. Patrick Théato	Prof. Makoto Ouchi
Prof. Volkmar Vill	Prof. Yoshihiro Sasaki
Prof. Martin Trebbin	Prof. Takuya Kubo
Topic	
- From Precision Soft Matter Synthesis To Microfluidics	

Session V: Japanese Studies

UHH	Kyoto U
Prof. Gabriele Vogt	Prof. Wako Asato
Prof. Birgit Pfau-Effinger	Prof. Emiko Ochiai
Dr. Alexander Weiß	Prof. Ken Victor Leonard Hijino
Denise Sablinski	
Anna-Lea Schröder	
Anna Wiemann	
Thurid Eggers	
Ralf Och	
Topics	
- Reforming Democracy and Social Inclusion: Subnational and Supranational Approaches in Japan and Beyond	

Session VI: Infection Research

UHH	Kyoto U
Prof. Thomas Dobner	Prof. Takashi Fujita
Dr. César Muñoz-Fontela	Prof. Takeshi Noda
Prof. Wolfram Brune	Prof. Junichiro Yasunaga
Topics	
- Perspectives for Cooperation in the Realm of Infection Research	

Session I: Manuscript Cultures

Topic: Manuscripts in Ancient China and India

Participants Kyoto U: Prof. Itaru Tomiya, Prof. Yuko Yokochi

Participants UHH: Prof. Kai Vogelsang, Prof. Eva Wilden



Itaru Tomiya

Professional position

Professor emeritus, Kyoto University

Research field

Legal history in East Asia

Education and degrees

1977 – 1979 Graduate School (doctoral), Oriental History,
Kyoto University

1997 D.Litt., Kyoto University

Academic appointments

2000 Professor, Institute for Research in Humanities, Kyoto
University

2012 Director, Center for Informatics in East Asian studies,
Institute for Research in Humanities, Kyoto University

Memberships in scholarly organizations

Member of the Swedish Royal Academy of Letters, History and
Antiquities

Order of Chivalry

Commander of the Order of the Polar Star (Kingdom of Sweden)

Abstract: Writing materials and laws in Imperial China

Laws or legal systems of traditional China, represented by the term “lü ling 律令” (statutes and ordinances) emerged in the Qin-Han period and reached a degree of perfection in the Tang Criminal Code. Ordinary textbooks and introductory books of history explain statutes as a penal code, and ordinances as a code of non-penal administrative law. Such explanation can apply to the statutes and ordinances of the Tang, but, honestly, is incorrect for the statutes and ordinances of the Qin and Han. The statutes and ordinances in the Han and the Tang are totally different from each other in the definitions of “lü 律” (statutes) and “ling 令” (ordinances), the form of law, contents, and so on.

The writing material in the Han period was wood or bamboo cut into slips. Han lü 漢律 and Han ling 漢令 were written on wood and bamboo slips. The format of law, the authorization of law, and the editing of provisions in a law were closely related to the material to write them on, i.e., wooden slips. It can be true, therefore, that the format of law was determined by the writing material.



Yuko Yokochi graduated from the Univ. of Tokyo in 1995 and took MA (Litt.) there in 1998. In 2005 she took PhD (Indology) at the University of Groningen. After teaching at the Kochi Univ. of Technology from 1997, she has been teaching Sanskrit literature at the current position at the Kyoto Univ. since 2002 (professor from 2013). She has been a member of the Skandapurāṇa Project since

1995 and is now a co-organiser of the project. Her main interest is in the religious history in Ancient and Mediaeval South Asia, especially the goddess worship and Shaivism. She also loves the Sanskrit and Prakrit belles-lettres.

Abstract: ‘Composition-in-Transmission’: Some Remarks on the transmission of Sanskrit texts and manuscripts

Features and problems of the textual transmission through hand-written manuscripts depend on elements that stabilize a text, such as grammar, metre, logic and style. In case of the Sanskrit literature in South Asia, regional languages and scripts are also involved. Thus it is difficult to generalize them. In this presentation, I pick up some texts on which I have been working, in the genre of the anonymous mythic narrative (Purāṇa) and the belles-lettres (Kāvya). In the former there is considerable room for ‘composition-in-transmission,’ which I will bring into focus.



Kai Vogelsang, born in 1969, studied Sinology and Economics in Hamburg and Taipei. He received his PhD in Sinology in Hamburg in 1997 and his habilitation in Munich in 2004. He was assistant professor of Sinology in Munich 1999-2006, guest researcher in Kyoto 2006-2008 and 2012.

Since 2008 he has been professor of Sinology at Universität Hamburg. His research interests are Chinese (and) conceptual history as well as historiography.

Abstract: Manuscripts vs. Transmitted Literature: The Case of the Shangjun shu

In recent decades, excavated and acquired manuscripts have greatly changed our knowledge of ancient Chinese history and society. They provide a host of information that was theretofore inaccessible, since researchers had to rely on transmitted texts only. This paper aims to put the kind of information provided by both types of sources into contrast by examining the kind of information a classical text - the Shangjun shu - does NOT contain. The comparison may serve to re-assess the value of both types of sources.



Eva Wilden (b. 1965) studied Indology and Philosophy at Universität Hamburg, where she took a doctorate on Vedic ritual and afterwards specialised in Classical Tamil under the guidance of S.A. Srinivasan. Her habilitation *Literary Techniques in Old Tamil Caṅkam Poetry: The Kuṟuntokai* was published in 2006. Since 2003 she has been employed as a researcher at the École Française d'Extrême-Orient in Pondicherry and Paris, which for a number of years gave her the occasion to study daily with the late lamented T.V. Gopal Iyer. She is head of the *Caṅkam Project*, occupied with the digitisation and edition of Classical Tamil manuscripts and organiser of a yearly *Classical Tamil Summer Seminar* in Pondy. After completing a critical edition plus translation of the *Narriṇai* (2008) and the *Kuṟuntokai* (2010) she is currently working on the *Akanāṇūru*, of which the first part is about to be published. In the framework of the Hamburg Centre for the Study of Manuscript Cultures she has also traced the transmissional history of the Caṅkam corpus, a study published 2014 under the

title: “Manuscript, Print and Memory: Relics of the Caṅkam in Tamilnadu”. She has won an ERC Advanced Grant for her project NETamil: “Going from Hand to Hand – Networks of Intellectual Exchange in the Tamil Learned Traditions”(http://www.manuscript-cultures.uni-hamburg.de/netamil/index.html), hosted by Universität Hamburg and the Centre of the EFEO in Pondicherry since 2014. In 2015 she received the Indian presidential award “Kural Peetam” for her work on Classical Tamil. In June 2017, she took up a professorship for Tamilistics and Manuscript Studies at Universität Hamburg.

Abstract: New Models of Accessibility: Digitising and Cataloguing Classical Tamil Manuscripts

The present contribution will describe changes of concept and aquisition policy in treating manuscript material brought about in an age of large-scale digitisation. It will do so based on the example of the collection of photographs of Classical Tamil manuscripts started in the year 2003 with the Caṅkam project, hosted by the Pondicherry centre of the Ecole Française d’Extrême-Orient. Beginning with small-scale personal initiative and traditional photography or hand copying wherever the permission could be obtained, the scheme gradually enlarged via an MoU concluded in 2005 with one of the most important Tamil libraries in Chennai, the U.V. Swaminathayar Library, that allowed the digitisation of a considerable manuscript corpus. With the ERC Advanced Grant NETamil, obtained in 2014 and hosted jointly by the EFEO Pondy and by the Centre for the Study of Manuscript Cultures in Hamburg, the financial backup was given for the more ambitious goal of digitising all surviving

witnesses for a number of literary traditions. The latest step is an agreement with the Bibliothèque Nationale de France in Paris, holder of the most substantial collection of Classical Tamil manuscripts in Europe, with the aim of digitising and putting online in the BnF website Gallica high resolution images along with the catalogue produced by an international team of scholars from the CSMC, the EFEO and the CNRS.

Session II: Particle Physics Topic: String Theory and Phenomenology

Participants Kyoto U: Prof. Fumihiko Takayama, Prof. Tadashi Takanagi, Prof. Shinji Mukohyama, Prof. Yasuaki Hikida

Participants UHH: Prof. Gudrid Moortgat-Pick, Prof. Marco Zagermann, Prof. Alexander Westphal, Prof. Géraldine Servant, Prof. Georg Weiglein



Fumihiko Takayama is currently associate professor at Yukawa Institute for Theoretical Physics (YITP), Kyoto University. He is working on elementary particle theory, especially for the phenomenological aspects. He received his Ph.D. in 2002 at Tohoku University, Japan. After the completion of his Ph.D., he spent three years in University of California, Irvine and another three years in Cornell University as postdoctoral researcher. In fall 2008, he moved to DESY-Hamburg and stayed as postdoctoral fellow until March 2010. Since March 2010, he has been appointed the present position at Kyoto University.

After his arrival in Kyoto, he has organized several workshops on related topics to particle phenomenology. In 2013-2016, he was a member of the international advisory committee for “Summer Institute on phenomenology of elementary particles and cosmology” held in East Asian countries. Also, since 2016, he is a member of the international steering committee for series of international workshops on “dark side of the universe”.

Abstract: Neutrino and Dark Matter Portal to New Horizon beyond the Particle Standard Model

Progress of precise measurements in extreme scales from microscopic processes of elementary particles to large scale structures of our universe and the successful description by the particle- and the cosmological-standard model could be a great triumph of humanity. In 2012, discovery of a new particle nowadays called as Higgs boson was announced, which means not only the completion of particle standard model proposed in 1960's but also our departure toward new horizon of our knowledge.

Observed neutrino masses and mixings indicate that the particle standard model is just a low energy effective theory, and the way of the UV completion has not been uniquely fixed yet. In addition, several mysterious phenomena observed in space, which require to hypothesize dark sectors, may encourage us to pursue further fundamental understanding of elementary particles and the interactions beyond the standard model.

I briefly review the recent topics related to neutrinos and dark matter and discuss how they might guide us to new horizon.



Tadashi Takayanagi is currently professor at Yukawa Institute for Theoretical Physics, Kyoto University. He got his Ph.D. in 2002 at University of Tokyo. After that, he spent 3 years in Harvard University as a post-doctoral fellow and he was also in KITP at University of California, Santa Barbara for

his second post-doc job. In 2006, he became an assistant professor in Kyoto University. In 2008 he moved to Kavli IPMU at the University of Tokyo as an associate professor. In 2012, he took the present position.

He has been awarded the Yukawa-Kimura Prize in 2011, the Nishinomiya-Yukawa Memorial Prize in 2013, the New Horizons in Physics Prize in 2014 and the Nishina Memorial Prize in 2016. He is currently one of principal investigators of “It from Qubit Simons Collaboration on Quantum Fields, Gravity, and Information”.

Abstract: Emergent Spacetime from Quantum Entanglement

It has been passed 20 years since the AdS/CFT correspondence (Gauge/Gravity duality) was discovered. However we still do not know the basic mechanism of the AdS/CFT, though we have so many evidences and applications of AdS/CFT now. Recently, it has been appreciated that quantum entanglement can be an important clue to attack this major problem. In 2006, Ryu and I found that entanglement entropy, which measures the amount of quantum entanglement, can be computed as the minimal surface area in a gravity dual spacetime. This strongly suggests that spacetimes in gravitational theories can emerge from quantum entanglement. One interesting class of models which realizes this idea is so called tensor networks. This is a method to describe a quantum state in a many-body system as a geometry of network of quantum entanglement. We recently found an alternative way to describe tensor networks by using the path-integrals. This new method enables us to study a continuum limit of networks as important in quantum field theories

and we can analytically show how the AdS/CFT emerges from an optimization of path-integrals in quantum field theories. This strongly implies that our optimization procedure which chooses the most efficient algorithm of performing path-integrals in QFTs, is equivalent to solving Einstein equation, i.e. the dynamics of gravity. In my talk, I would like to explain these developments.



Shinji Mukohyama is a Professor at Yukawa Institute for Theoretical Physics, Kyoto University. After receiving a PhD from Kyoto University in 1999, he continued his research at University of Victoria and Harvard University as a postdoctoral research fellow. He was appointed as an assistant

professor in University of Tokyo in 2004 and then promoted to an associate professor in 2008. In 2014 he moved to Kyoto university as a full professor. It has been the aim of his research to deepen our understanding of various phenomena in the universe making free use of the universal laws of physics. This is the real pleasure of theoretical physics and astrophysics. He has thus been working on cosmology and gravitation, focusing mainly on braneworld cosmology, string cosmology, Hořava-Lifshitz cosmology, dark energy and dark matter, modification of gravity at long distance and time scales, black hole entropy, and so on.

Abstract: Massive gravity and cosmology

Einstein's theory of relativity has been successful in explaining and predicting many gravitational phenomena. Experimentally,

however, we do not know how gravity behaves at distances shorter than about 0.01mm. Gravity at very long distances, e.g. billions of light-years, may also be as weird as at short distances. In order to tackle the mysteries in modern cosmology such as dark energy, dark matter, inflation and big-bang singularity, I have been exploring various attempts to go beyond Einstein's theory of general relativity. In this presentation I will talk about massive gravity and its cosmological implications. The search for a consistent theory of finite-range gravity is a longstanding problem and well motivated by both theoretical and observational considerations. On the theoretical side, whether there exists such a consistent extension of general relativity by a mass term is a basic question of classical field theory. On the observational side, continuing experimental probes of gravity have revealed new unexpected phenomena at large scales. One of the most profound discovery is the cosmic acceleration, which was found in 1998. The extremely tiny energy-scale associated with the cosmic acceleration hints that gravity might need to be modified at long distances. The massive gravity is one of the most interesting attempts in this direction. In this talk, after reviewing the history and recent developments of massive gravity, I will describe cosmological solutions and their stability as well.



Yasuaki Hikida is currently an associate professor at Yukawa Institute of Theoretical Physics in Kyoto University. After he received his Doctor of Science in 2003 from the University of Tokyo, he spent four years aboard as a research fellow at Seoul National University, Korea and at Deutsches Elektronen-Synchrotron (DESY), Germany. He was also a research fellow at High Energy Accelerator Research Organization (KEK) for totally two and a half years just before and after he was in Germany. In 2009 he became as an assistant professor at Keio University, and in 2013 he moved to Rikkyo University. After he spent a half year at Ritsumeikan University as an assistant professor, he then became an associate professor at the current institute last October.

He received Overseas Research Fellowship and Research Fellowship for Young Scientists from Japan Society for the Promotion of Science while he was at DESY and KEK.

Abstract: Higher spin gauge theory, holography, and superstring theory

At very high energy region, such as, at the beginning of universe or inside black holes, it is necessary to use description in terms of superstring theory beyond general relativity. A specific feature of superstring theory is the existence of higher spin excitations, and they are expected to be described by a higher spin gauge theory at high energy regime. Recently, there has been much progress on higher spin gauge theory in the context of holographic duality, which relates a gravity theory (e.g., string

theory) on a curved space-time and a non-gravity particle theory. For instance, we have proposed a duality between a higher spin supergravity in three dimensions and so-called Kazama-Suzuki model in two dimensions. In this talk, I will first review recent developments on holographic dualities using higher spin gauge theory including our proposals. Then I would like to discuss the relation between higher spin gauge theory and superstring theory by making use of the holographic dualities.



Marco Zagermann studied Physics at Universität Hamburg and received his Ph.D. from the Pennsylvania State University in 2000. After postdoctoral stays at the University of Halle, CERN and Stanford he was head of an Emmy Noether Research Group at the Max Planck Institute for Physics in Munich from 2005-2009. From 2009-2017 he held a Junior and Adjunct Professorship at the Leibniz University Hannover, and since April 2017 he is a visiting professor at Universität Hamburg. His research is centered on phenomenological and cosmological applications as well as the mathematical aspects of string theory, supergravity and supersymmetric field theories.

Abstract: Universal Tachyons in Nearly No-Scale de Sitter Vacua

We investigate de Sitter solutions of $N=1$ supergravity with an F-term scalar potential near a no-scale Minkowski point, as they may in particular arise from flux compactifications in string theory. We show that a large class of such solutions has a universal tachyon with $\eta \leq -43$ at positive vacuum energies, thus

forbidding meta-stable de Sitter vacua and slow-roll inflation. The tachyon aligns with the sgoldstino in the Minkowski limit, whereas the sgoldstino itself is generically stable in the de Sitter vacuum due to mass mixing effects. We specify necessary conditions for the superpotential and the Kähler potential to avoid the instability. Our result may also help to explain why the program of classical de Sitter hunting has remained unsuccessful, while constructions involving instantons or non-geometric fluxes have led to various examples of meta-stable de Sitter vacua.



Alexander Westphal was born in 1977 in the small town Rinteln in the German state of Lower Saxony, where he grew up surrounded by classical music, and graduated from high school with the German “Abitur”. After studying physics in Heidelberg graduating there in 2002 with an Otto Haxel Award “For an Outstanding Diploma Thesis” in Theoretical Physics, and acquiring his PhD in theoretical particle physics in Hamburg in 2005 at DESY, he went on as a post-doctoral researcher from 2005 - 2007 in Trieste, Italy, and from 2007 - 2010 in Stanford, USA, to work on a description of cosmological inflation in string theory in collaboration with Eva Silverstein and Andrei Linde, both at Stanford. Returning to DESY in 2010 as a Helmholtz Fellow, Alexander Westphal started his own research group on the connection between inflation and string theory as a Helmholtz Young Investigator. In 2014 he became permanent as a senior staff member in the DESY theory group, and was awarded an ERC Horizon 2020 Consolidator Grant STRINGFLATION in 2015 for the duration of five years.

Since 2015 he is a holder of a J. Hans D. Jensen-Prize for research in string theory.

Abstract: Back-reacted (rel)Axion Monodromy for Inflation & Relaxation in String Theory

Cosmological inflation explains how our old, large, and spatially flat Universe emerged expanding from an initial hot ‘big bang’ phase, by generating it from an earlier phase of exponentially fast expansion driven by the vacuum energy of slowly rolling scalar field. During inflation the quantum vacuum fluctuations of its scalar field would stretch and form the origin of all cosmic structure such as the galaxies at later times. Inflation has increasingly strong support from various cosmological observations, most strongly those of the cosmic microwave background radiation (CMB). However, inflation is sensitive to quantum mechanical corrections from the interactions of its scalar field. Thus, we need a description of inflation within a fundamental quantum theory of all interactions including gravity such as string theory. The sensitivity of inflation to quantum corrections increases with the energy scale of inflation because the scalar field will traverse an increasingly ‘large field’ range during inflation. This correlates with an increasingly strong signal of primordial gravitational waves generated during inflation. Hence, the inflation models with the most detectable gravitational wave signal also have the strongest need for a description in string theory. We will describe the mechanism of axion monodromy as a mechanism in string theory to provide the large field ranges needed for high-scale inflation for the axions of string theory. These axions enjoy a so-called shift symmetry with controlled breaking which provides them with partial pro-

tection against large quantum corrections. We will describe moreover, how realizing axion monodromy in string theory inevitably leads to calculable feed-back effects from the many other heavy scalar fields in string theory. These back reaction effects have observable consequences for axion monodromy inflation models, and can even prevent the use of axion monodromy for recent models of explaining the electro-weak hierarchy by cosmological relaxation.



Geraldine Servant got her PhD in 2001 from University Paris XI for theoretical research conducted at CEA Saclay and McGill University in Montreal. After postdoc years at the University of Chicago she returned to CEA Saclay on a permanent position, and eventually moved to CERN's Theory group in 2006, first as a Fellow and then on a 5-year contract with an ERC Starting Grant. In 2013 she moved to Barcelona where she was appointed Research Professor at ICREA (Catalan Institution for Research and Advanced Studies). In 2015 she became DESY scientist and professor at Universität Hamburg.

Her major direction of research is on the particle-cosmology interplay, in particular on the dark matter and the origin of the matter-antimatter asymmetry of the universe, with special emphasis for cosmological consequences of the electroweak phase transition in the early universe.

Abstract: Higgs-flavour cosmological interplay

It will be reported how Yukawa couplings of Standard Model fermions may vary at the same time as the Higgs field is acquiring its vacuum expectation value. In this context, the electroweak phase transition can be first-order and the Cabibbo-Kobayashi-Maskawa matrix can be the source of CP-violation for electroweak baryogenesis.

These ideas apply if the mechanism explaining the flavour structure of the Standard Model is connected to Electroweak symmetry breaking, as motivated for instance in Randall-Sundrum or Composite Higgs models. It will be shown how this can be compatible with experimental constraints and naturally leads to the correct amount of the baryon asymmetry of the universe.



Georg Weiglein is leading scientist at DESY and visiting Professor of Durham University (U.K.). His main area of research is elementary particle physics, in particular Higgs physics, supersymmetric extensions of the Standard Model of particle physics, electroweak precision physics, renormalisation of spontaneously broken gauge theories, as well as the interplay of physics at the Large Hadron Collider (LHC) and possible future colliders. After the spectacular discovery of a signal in the Higgs-boson searches at the LHC it is now the prime goal to identify the underlying physics of the new state and to determine the mechanism of electroweak symmetry breaking, which is responsible

for providing fundamental particles with the property of mass. The research in this area, which is characterised by a close interaction between theory and experiment, may provide access to the underlying physics behind the Standard Model of particle physics.

Abstract: Higgs physics: Where are we and what next?

The status and future prospects of Higgs physics will be discussed in the light of the current experiment situation concerning the discovered Higgs signal at about 125 GeV as well as the ongoing searches. The role of the mass of the detected particle as a precision observable constraining the parameter space of possible realizations of electroweak symmetry breaking will be emphasized. Some interesting features of the phenomenology of extended sectors will be highlighted.

Session III: Law and Economics

Topic: Corporate Governance and Finance

*Participants Kyoto U: Prof. Kanako Takayama, Prof. Noboyuki Isagawa,
Prof. Norio Sawabe*

*Participants UHH: Prof. Georg Ringe, Prof. Frank Schiemann, Prof. Harald
Baum, Prof. Alexander Baur*



Kanako Takayama was born on July 29, 1968, in Tokyo. She graduated from the University of Tokyo, Faculty of Law, in 1991 (B.A.). Master of Law at the same university in 1993 (M.A.). Academic assistant at the same university and lecturer at Seijo University in Tokyo. From 1998 to 2000, she was a visiting scholar at the University of Cologne.

During the time, she had the scholarship of the Alexander von Humboldt Foundation. She moved to Kyoto University in 2002 to be associate professor. Since 2005, she has been ordinary professor for criminal law at the Law Schools of the university. In 2006, she obtained Order of Merit of the Federal Republic of Germany (Cross, *Bundesverdienstkreuz am Bande*). She is an executive member of the Criminal Law Society of Japan as well as of the International Association of Penal Law and a corresponding member of the German Society of Comparative Law. Many articles written in Western languages are listed at: <http://www.kt.rim.or.jp/~k-taka/dindex.html>

Abstract: Corporate compliance and criminal law

In Japan, control on corporate activities through administrative sanctions is limited and criminal law covers a wide range instead. Traditionally, Japanese criminal law was influenced by German law, whereas recently more and more American elements are introduced. Certainly, it would be a good idea to combine various sanction systems in an effective way. However, a mere mixture of different legal traditions may cause confusion, too. Since the Japanese share economic way of thinking much better than legal ideas, transparency and predictability must be particularly guaranteed. Criminal sanctions with the Japanese discretionary prosecution system tend to disturb this, for example, in the field of competition law. Further, in 2016, Criminal Procedure Code was amended to introduce a new system of “agreement” (*Absprache*) among parties in criminal procedure mainly in complicated economic cases after the model of new German law. It has not entered in effect yet but its future impact on the risk management of companies is to observe carefully.



Nobuyuki Isagawa is currently professor of finance and business, Graduate school of Management, Kyoto University. He received his BA and Ph.D from Kobe University. After obtained Ph.D, he spent about 20 years as associate professor and professor of business finance at Graduate School of Business, Kobe University. He has been working for Kyoto University since 2016. His research, mainly on theoretical corporate finance and empirical financial economics, has been

published in some academic journals, including *Journal of Corporate Finance*, *Financial Management*, *Journal of Financial Research*, *Pacific-Basin Financial Journal*, etc. His article, A theory of unwinding of cross-shareholding under managerial entrenchment, received outstanding article awards of *Journal of Financial Research* in 2008. He published or edited about 10 books on corporate finance and valuation in Japan. He is an independent director of Funai Soken Holdings.

Abstract: Profitability, cost structure and equity returns: Evidence from Japanese stock markets

Using comprehensive Japanese data in a period from 1994 to 2016, we examine relationships between stock returns and some financial factors such as profitability and cost structure. Since Fama-French (2015) five-factor model, profitability and cost measures have been focused on in asset pricing model literatures. We find that gross profitability and operating cost (divided by assets or equity) have significant effect on cross sectional stock returns in Japanese stock market. Our result shows that financial ratios are good proxy for future stock returns similar to valuation ratios such as B/M and market capitalization.



Norio Sawabe specialises in accounting research, covering both management and financial accounting, and has a particular interest in developing institutional evolutionary perspectives in order to understand the evolution of accounting practices grounded on systematically accumulated

empirical knowledge. Sawabe currently has a particular interest in conducting action research in collaboration with professionals in the field of management accounting for SMEs.

Sawabe has published in leading international journals, including *Accounting, Organizations and Society*, *Accounting, Auditing and Accountability Journal*, *Critical Perspectives on Accounting*, *Journal of Evolutionary Economics*, and *Evolutionary and Institutional Economics Review*. His co-authored work with Stephen Jollands and C. Akroyd “Core Values as a Management Control in the Construction of ‘Sustainable Development,’ published in *Qualitative Research in Accounting & Management*, 12(2), 2015, was awarded 2015 Emerald Literati Network Award for QRAM (Outstanding Paper Award).

Sawabe is the chief editor of *Melco Journal of Management Accounting Research*, and a member of the editorial board of *Kyoto Economic Review*, *Critical Perspectives on Accounting Journal*, *Accounting, Auditing and Accountability Journal*, and *Journal of Management Accounting Research*, and an ad hoc reviewer for a number of accounting and economic journals.

Sawabe is currently a vice president of Japan Management Accounting Association, board member of Japan Cost Accounting Association, and Japan Evolutionary Economics Association.

Abstract: Clinical Accounting Research/Practices in Japanese SMEs

Management accounting in small and medium-sized enterprises (SMEs) has been an issue of growing interest. Management accounting systems are found to improve overall business performance

when they provide information relevant for decision-making (Lopez & Hiebl, 2015). Most of the existing empirical research on the association between management accounting practices and performances are based on subjective measures of performance. In collaboration with accounting professionals who act as clinicians for SMEs, the analysis of this presentation is based on two sets of data: objective financial performances of SMEs, and expert's perceptions on their client SMEs' management accounting ability and related contingent factors such as a top management's characteristics and employees' attitudes. Following a series of qualitative research that we conducted to investigate the use and effects of management accounting practices of SMEs in Japan, this presentation focused on budget-based management cycles in which PDCA (Plan, Do, Check, Action) activities are systematically taken place. Based on the data of 364 SMEs in Japan, multiple regression results supports positive correlation between the level of budgeting practices and financial performances when other variables are controlled.



Wolf-Georg Ringe is Professor of Law at Universität Hamburg and Director of the Institute of Law & Economics. He also teaches at the University of Oxford as a visiting professor.

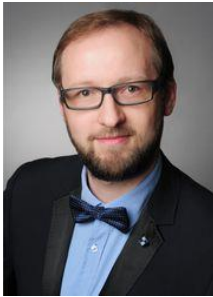
Professor Ringe's work relates to European and global issues of corporate law and financial regulation, as well as capital markets. He has been advising both the European Commission and the European Parliament on issues of European Corporate Law.

He is the general editor of the *Journal of Financial Regulation*.

Abstract: Changing Law and Ownership Patterns in Germany: Corporate Governance and the Erosion of Deutschland AG

German corporate governance and corporate law are currently undergoing a major change. The old “Deutschland AG”, a nationwide network of firms, banks, and directors, is eroding, ownership is diffusing and the shareholder body is becoming more international than ever. This paper presents new data to support this development and explores the consequences in governance and in law that have been taken or that need to be drawn from this finding. Consistent with market-based theoretical accounts on corporate law, it finds that the changes currently underway are mainly a response to global market pressure: German banks divested their equity stakes mainly as a consequence of increased international competition.

The paper extends the model of market-led change by two important observations: first, market pressure is not the only driver of legal change, but the law itself in this case contributed to facilitating competition. Notably, a taxation law reform enabled and accelerated the competition process already underway. Legal rules and market competition may thus be understood as not operating in isolation, but as forces that can be working in dialog. Secondly, the paper highlights the importance of ownership structure as an important intermediate condition in the logical order between market competition and legal change.



Frank Schiemann is currently a junior professor in the Faculty of Business Administration focusing on corporate accounting at Universität Hamburg. After the graduation with a degree in economical engineering from the University of Dresden in 2004, he worked as a research associate in the areas of accounting and controlling at Technische Universität Dresden, where he obtained his Ph.D. in 2009.

His research focuses on non-financial disclosure (corporate social responsibility reporting, intellectual capital disclosure, risk reporting), earnings quality, measuring organizational performance. Currently, he is conducting research in the areas of disaggregation and earnings quality; association between carbon disclosure quality and earnings quality; measurement of organizational performance; consequences of corporate climate risk management and carbon performance. His work has been published in journals including *Business & Society*, *International Journal of Accounting*, *Journal of Accounting and Public Policy*, *Journal of Applied Accounting Research*, *Journal of Management Control*, *Organization & Environment*, and *Organizational Research Methods*.

Abstract: Carbon Disclosure, Contextual Factors and Information Asymmetry: The Case of Physical Risk Reporting”

Climate change can have a substantial impact on business activities, which makes it important for investors to collect information about the physical risks for a firm arising from climate

change. While studies on carbon disclosure usually focus on information about firms' impact on climate change, we investigate whether reporting about physical risks is associated with information asymmetry. Drawing on data from the Carbon Disclosure Project (CDP) questionnaire for 717 European companies over three years (2011–13), we find information asymmetry to be lower for firms reporting on physical risks compared to non-reporters. Moreover, we show that for firms regulated by climate policy, the reported exposure to physical risk is related to lower information asymmetry, whereas for firms not regulated by such a climate policy the relation shows the opposite direction. These findings are important as they indicate that the physical risks of climate change represent proprietary information and are of relevance for investors. Furthermore, our study contributes to the literature by showing that the relation between disclosure and information asymmetry is not necessarily negative. We demonstrate that disclosing the same information may have different ramifications, depending on the context of the disclosing firm.



Harald Baum is Senior Research Fellow and Head of the Japan Law Department at the *Max Planck Institute for Comparative and International Private Law*, Hamburg; Professor at Universität Hamburg; Research Associate at the *European Corporate Governance Institute*, Brussels; and Vice-president of the *German-Japanese Association of Jurists*. Graduation from Freiburg University in 1977; doctorate and habilitation at Universität Hamburg in 1984 and 2004 respectively; ad-

mission to the Hamburg Bar in 1981. He joined the Institute in 1985; in 1989 research stay at the *University of California at Berkeley*; 1990-91 guest researcher at the Kyoto University (AvH / JSPS postdoctoral fellowship); in 2005 visiting professor at the University of Tokyo and in 2015 at the Université Jean Moulin Lyon III. Baum has organized various international and interdisciplinary conferences and has authored and edited numerous books and articles on business law, corporate governance, and capital markets in Germany, the EU, Japan, and the U.S. He is the executive founding editor of the *Journal of Japanese Law*; member of the *Académie Internationale de Droit Comparé*, the *German Society of International Law* et al.; and fellow of the *European Law Institute*. His conferral of the 2010 Award of the *Stiftung zur Förderung japanischdeutscher Wissenschafts- und Kulturbeziehungen (JaDe)* was followed by the publication of the *Festschrift: 'Business Law in Japan: Cases and Comments. Writings in Honour of Harald Baum'*, Alphen aan den Rijn 2012.

Abstract: International “Legal Fashions” and National Corporate Governance

The lecture deals with role international “legal fashions“ play in shaping national corporate laws. Till some 40 years ago corporate problems were mainly addressed by corporate law. The term and concept of “corporate governance” as such was virtually unknown until the mid-1970s. Since then we saw a transition from corporate law to corporate Governance. In the early 2000s the literature on corporate governance exploded. The modern narrative is that good corporate governance has to be embodied in corporate governance codes. These have become an international legal fashion and “must have” regulatory tools

since the 1990s. Today, the European Corporate Governance Institute in Brussels lists more than hundred corporate governance codes of countries and international organizations on its website starting in Albania and ending in Yemen. Most of these deal with independent directors in one way or another. These are internationally regarded as a state of the art corporate governance device any sophisticated jurisdiction must provide for to be considered credible. The Anglo- American independent director has become a universal transplanted legal fashion. This is somewhat surprising giving the fact that there is only shaky empirical support for staffing boards with independent directors. Looking at Germany and Japan, we see a legal transplant that does not actually fit in the specific path dependent institutional setting of these receiving legal orders.



Alexander Baur (Prof. Dr. jur., Mag. phil., B.Sc.) studied law, psychology and communication science in Tuebingen (Germany), Buenos Aires (Argentina) and Konstanz (Germany). After completing his doctoral dissertation in Tuebingen (2014) he worked as a lawyer at *Gleiss Lutz*, Stuttgart, consulting (international) corporations in compliance issues and corporate liability law. Since April 2017 Alexander Baur is a lecturer (“Juniorprofessor”) for criminal law at the University of Hamburg.

Abstract: Corporate Compliance and Criminal Law – Developments, Frictions and Interdependencies.

In recent years Corporate Compliance has become a broadly discussed topic in Germany. Following the standards of compliance is more and more relevant for day-to-day business; legal compliance advisory has developed into a quite profitable business field. All big German Companies have equipped themselves with substantial Compliance Departments and even small entities feel the pressure to establish institutionalized compliance organizations. Elaborate Compliance standards list supposedly necessary basic compliance measures. Specialized compliance systems addressing every potential compliance risk are implemented extensively. Beyond this very dynamic surface there lie quite a lot of unsolved problems. Even the legal origin of compliance is disputed. In Germany, compliance obligations are derived from criminal law (criminal liability for certain organizational omissions – § 13 StGB) as well as from public law (explicit compliance obligations for special economic sectors, e.g. banking and finance – § 25a KWG; or general obligations to control and supervise – § 130 OwiG). Another prominent motivation for compliance is the civil responsibility of management board members for lawful behavior of a corporation (§ 76 AktG) and the risk of their own personal civil liability (§ 93 AktG). This third pillar of compliance is of utmost importance, not least due to the fact that with civil liabilities international compliance standards are transmitted into German legal practice: If he omits to establish a fully functioning compliance organization, a management board member can be made personally liable for damages caused by this omission. As the sanctions for breaches of foreign law – especially US-regulations – can be much sharper than under current German national legislation the liability risks of management board members multiply. (See only the

recent violation of the US Clean Air Act that caused Volkswagen to make provisions in the amount of EUR 18,2 billions up to this day.) Effectively, compliance rules in Germany stem from civil, public and criminal law and are increasingly influenced by international standards. These dynamic and varied, partly conflicting influences are not yet integrated into a unified theory of compliance. Hence, Compliance practice and advisory is faced with frictions and complex interdependencies. The last part of the contribution shall illustrate this interplay by giving some paradigmatic examples.

Session IV: Polymer Chemistry

Topic: From Precision Soft Matter Synthesis To Microfluidics

Participants Kyoto U: Prof. Makoto Ouchi, Prof. Yoshihiro Sasaki, Prof. Takuya Kubo

Participants UHH: Prof. Patrick Théato, Prof. Volkmar Vill, Prof. Martin Trebbin

Panel Abstract:

Inspired by nature, the synthesis of precision polymers has become an achievable goal recently. Being able to molecularly control the sequence of polymer chains along with its overall lengths will propel scientists into the position to mimic nature in an unprecedented way. On the way to achieve this goal and open the route for mass-production not only synthetic challenges have to be mastered, but also the analytical tools and continuous production via microfluidics have to be addressed.



Makoto Ouchi is an associate professor at Department of Polymer Chemistry, Graduate School of Engineering, Kyoto University. He received his Ph.D. degree at Kyoto University in 2001 under supervision of Professor Mitsuo Sawamoto. He then joined Toyota Central R&D Labs to develop poly (lactic acid)-based automobile resin. In 2004, he moved to Kyoto University to start his academic career as an Associate Professor. He spent one year and 5 months as a visiting researcher in Prof. David A Tirrell's group at California Institute of Technology

to study protein engineering with non-canonical amino acids (2007-2009). After he returned to Japan, he was promoted to an associate professor in 2010. Since 2013, he also joined Japan Science and Technology Agency (JST) as a researcher for the PRESTO project of “Molecular Technology”. His current interests include development of precision polymerizations, particularly sequence-controlled polymerization and ring-expansion polymerization as well as development of very active polymerization catalysts. He received Young Scientist Prize of the Annual Kobe Polymer Research Symposium (2011) and Polymer Journal Zeon Award (2012) from the Society of Polymer Science, Japan (SPSJ).

Abstract: Precision Polymer Syntheses: Control of Side-Chain Sequence and Main-Chain Topology

Biopolymers such as DNA and proteins are expressing their functions based on sequence, i.e., order of repeating unit (nucleic acid and amino acid), and position of functional groups in the pendant groups as well as shape (topology) of the main chain. For synthetic polymers, control of the chain length and terminal groups is now possible by using living polymerization techniques, but that of topology and sequence is still challenging. Our efforts have been directed to control of side-chain sequence and main-chain topology for vinyl polymers (polyolefins). Crucial to approach the difficulty is design of molecules (i.e., initiators and monomers) in polymerizations using special covalent bonds that are easily formed, cleaved, regenerated, and reversibly activated. The resultant new type of “well-defined polymers” are expected to express unique chain behaviors and self-

assembly leading to advanced functions. Applications with the controlled polymers will be also discussed.



Yoshihiro Sasaki is currently associate professor of Polymer Chemistry at Kyoto University. He was born in Nagoya, Japan, in 1972. He graduated from the Faculty of Engineering, Kyoto University in 1995, and obtained his PhD in 1999 from the same university on polymer chemistry under the guidance of Prof. J. Sunamoto. After his Ph.D., he worked as an assistant professor at Nara Institute of Science and Technology on artificial cell membrane for application to nano-bioscience. In 2003, he performed a short stay as a visiting scholar at University of Notre Dame, U.S.A. and joined in Prof Akiyoshi's group in Tokyo Medical and Dental University in 2008. In 2013, he was appointed associate professor at Kyoto University. His research covers a broad range of topics in bio-inspired chemistry and nanobioscience centered around supramolecular chemistry, focusing on artificial cell (liposome), organic-inorganic nanohybrid, self-assembled nanogel, synthetic receptor, and molecular device as well as the study of their biomedical applications including gene delivery and cancer chemotherapy.

Abstract: Magnetically navigated protein transduction by hybrid nanogels

With properties such as multifunctional specificity and potency, proteins have great promise as therapeutic agents. Despite their great promise, protein pharmaceuticals face many development

challenges relating to instability and delivery issues, especially for intracellular applications. Therefore, systems for “protein transduction”, that is, intracellular delivery of functional proteins, are needed. Our technology is a hybrid combination of iron nanoparticles with a nanogel protein carrier inspired by the “catch and release” mechanisms of molecular chaperones. We showed that embedding the iron nanoparticles within the nanogel not only shielded the cytotoxic properties of these particles, but also enabled the hybrid nanogel to be magnetically directed to the target cells. In our study, we demonstrated several promising properties of this magnetic nanogel chaperone (MC) hybrid when complexed to a variety of model proteins. We further showed that the enzyme, when delivered to HeLa cells, could convert a nontoxic prodrug to a toxic agent, proving that, once delivered to the cytosol of target cells. Our study has demonstrated a facile magnetically guided protein transduction system. We believe that such systems can greatly enhance the potential therapeutic value of protein pharmaceuticals by enabling their efficient intracellular delivery.



Takuya Kubo is currently an associate professor of Department of Material Chemistry, Graduate School of Engineering, Kyoto University. He received his PhD from Kyoto Institute of Technology in 2004. He joined the Graduate School of Environmental Studies, Tohoku University as an assistant professor (2004–2012) and worked at Department of Chemistry, Portland State University as a visiting professor (2010). He joined the Graduate School of Engineering, Kyoto University as an associate professor (2012–). His research

interests include the development of novel separation media having molecular recognition ability by molecular imprinting, the functional porous materials, monolithic materials contributing to microfluidics, carbon materials for specific separations, effective separations of biomolecules, and the development of Dispersion Interaction Chromatography. According to these activities, he received the Tohoku Area Encouragement Award in 2006 from Tohoku affiliate of the Japan Society for Analytical Chemistry, the Encouragement Award in 2007 from the Society for Chromatographic Science, and the Encouragement Award in 2011 from the Japan Society for Analytical Chemistry.

Abstract: Unique separations by polymer-based devices applicable for microfluidic analyses

We focus on two topics including 1) nano-carbon materials for the specific separations in nano- and micro- liquid chromatography, and 2) selective separations of biomolecules using molecularly imprinted hydrogels for application to detection in micro devices. In first topic, we found that the C60- or C70-fullerene modified silica monoliths provided the selective retention ability toward a hemispherical molecule, corannulene. Results of the computer simulation of the molecules suggested that the specific interaction might be caused by the deflection of the π -electrons-density in fullerenes. Furthermore, the absorption spectra of fullerene with/without corannulene were dramatically changed by the specific interaction. Also, several unique separations were achieved in micro liquid chromatography under normal phase mode. In second topic, the selective adsorption of carbohydrates, proteins, and glycoproteins were effectively achieved by molecularly imprinted hydrogels (MIHs) with poly(ethylene glycol) (PEG)-based crosslinker. Additionally, the specific functional mono-

mers, which showed sensitive alteration of fluorescent intensity or visible absorption by interaction with the target molecules, were successfully synthesized. Then, MIHs prepared with these monomers provided the effective detection of the target molecules.



Patrick Théato studied chemistry at the University of Mainz and the University of Massachusetts, Amherst, and obtained his doctoral degree from the University of Mainz in 2001. After postdoctoral studies at Seoul National University supported by a Feodor Lynen Postdoctoral Research Fellowship and at Stanford University, he completed his habilitation at the University of Mainz in 2007. From 2009 to 2012 he held a joint appointment at Seoul National University within the WCU program. In 2011, he accepted a prize senior lectureship at the University of Sheffield. Shortly after he moved to the Universität Hamburg, where he is currently a professor for polymer chemistry. He has edited 3 books, authored or coauthored more than 220 publications and has an h-index of 48. His research interests are post-polymerization modifications, precision polymers, hydrogels, stimuli-responsive polymers, surface modifications, energy storage, functional nanoobjects, and nanofibers.

Abstract: Simplifying the synthesis of complex polymer materials

Incredible progress has been made in synthetic polymer chemistry to control the polymer chain length, structure and architecture via controlled/living polymerization reactions as well as their functionalization via efficient post-modification chemis-

tries. The development in this field is still very intense and dynamic, leading to an ever-increasing molecular complexity.

However, this increasing complexity on the molecular level demands for highly advanced specialists possessing the skillset to synthesize such chemical structures. This clearly limits or slows down the advancement to new scientific areas. Hence, we have addressed this challenge over the years by developing simple synthetic routes, while maintaining a molecular complexity, thereby providing the synthetic tools for many scientists to prepare highly functional polymer materials with unprecedented molecular precision.

Synthetic routes, possibilities, remaining challenges and opportunities for next generation polymers will be discussed with the aim to development and study of structure-property relationships of polymeric materials. As such, novel syntheses of polymer materials for smart materials and battery related materials will be presented as examples.



Volkmar Vill, Professor at the Institute for Organic Chemistry, received his Diploma in Chemistry and Physics in 1988, and a doctorate in Chemistry in 1990. Following his PhD he habilitated on Organic Chemistry. Professor Vill looks back on experiences as a visiting professor at Kyushu University, and a substitute professorship at Kiel University, before he became Professor at Universität Hamburg in 2003. He is also successfully

maintaining a software engineering cooperation with Fujitsu since 1995 and is head of the IT Service at the Chemistry Department of Universität Hamburg. Professor Vill's work group at the Institute for Organic Chemistry of Universität Hamburg focuses on organic materials and liquid crystals, knowledge systems and data bases of the history of science.

Abstract: Liquid crystalline materials from carbohydrates

This presentation will address two bio-inspired aspects of liquid crystal research:

1. Chiral liquid crystals from Carbohydrates: Examples of cholesteric phases as reflectors and color pigments, sensors incl. helical inversions, ferroelectric phases, and blue phases will be discussed. 2. Glycolipids: Lyotropic cholesteric liquid crystals and functional surfactants as anti-inflammatory or antimicrobial materials will be investigated.

Last but not least, recent developments in "Materials Information Systems" will be presented: (i) SciDex (object-oriented database management system), (ii) LiqCryst (liquid crystals, including phase transition prediction), (iii) CLAKS (hazard materials management system), (iv) development of computational methods for (a) hazard evaluation, (b) "legal high" drug control, and (c) industrial safety requirements.



Martin W. Trebbin is Assistant Professor for “Ultrafast Structure Determination in Liquids” at the excellence cluster “Centre for Ultrafast Imaging” (CUI) at Universität Hamburg with an affiliation to the Departments of Physics and Chemistry. After completing his PhD in physical chemistry (summa cum laude) under Prof. Dr. Stephan Förster, he was immediately awarded the current professor position. The interdisciplinary research of his group focuses on microfluidics and time-resolved X-ray scattering at X-ray free electron lasers (XFELs) and synchrotrons to investigate ultrafast protein structural dynamics, soft matter self-assembly and the nucleation & growth of nanoparticles.

Integrated in the science campus at DESY (the German Electron Synchrotron facility) and in close contact with the European XFEL, his work to date includes the build-up of a complete microfluidics pipeline ranging from conceptual design of microfluidic systems, including finite element simulations of the fluid dynamics within these small channels, setting up the microfabrication infrastructure to the production of advanced microfluidic devices. Such devices have been used in multiple experiments at synchrotrons and XFELs for determining the structure and orientation of liquid colloidal complex fluids and bio macromolecules using X-ray diffraction. Furthermore, his lab synthesizes functional block copolymers and nanoparticles, as well as characterizing them with X-rays during their

growth *in situ* with the aim of creating new advanced materials.

Abstract: Rapid Mixing Microfluidics for Time-Resolved X-ray Scattering

Microfluidics in combination with microbeam X-ray scattering is currently being developed into a powerful experimental methodology suitable for the time-resolved investigation of nanostructures, particle alignment and serial protein crystallography at synchrotrons and X-ray Free Electron Lasers (XFELs). This experimental approach enables the *in situ* study of kinetics with nano- or atomistic resolution by using X-ray compatible microflow chips and rapid mixing microfluidic liquid jet devices [1-6].

As an example, our microfluidic SAXS experiments at the micro-focus beamline P03 (PETRA III, DESY) revealed the striking effect, that after passing a narrow section, polymer wormlike micelle and elongated particles are rotated perpendicular to the flow direction, keeping this orientation over the remaining length of the channel (see Fig.1A) [1,2]. The flow-alignment of cylindrical, wormlike or fibrous structures is central to many processing steps such as in the production of nanocomposite materials, (micro-)fibers, during injection molding or the flow of cells and proteins through thin capillaries.

We also present lithography-based microfluidic devices (see Fig.1B) that produce liquid jets with μm -diameters (0.9 to 5 μm) at very low flow rates (150 to 1000 $\mu\text{l h}^{-1}$) under atmospheric or vacuum conditions [5]. This microfluidic liquid jet system with highly reproducible geometries is based on the gas dynamic virtual nozzle (GDVN) design suitable for structural biology at

serial femtosecond X-ray nanocrystallography [6] and time-resolved rapid mixing experiments [3,5].

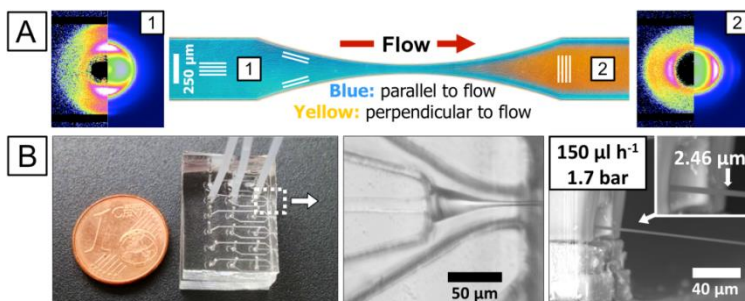


Figure 1 (A) Two SAXS patterns show the wormlike micelle orientation before and after the tapering (1 = parallel, 2 = perpendicular) [1] (B) Microfluidic liquid jet device in operation [5].

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Session VI: Japanese Studies

Topic: Reforming Democracy and Social Inclusion: Subnational and Supranational Approaches in Japan and Beyond

Participants Kyoto U: Prof. Wako Asato, Prof. Emiko Ochiai, Prof. Ken Hijino

Participants UHH: Prof. Gabriele Vogt, Prof. Birgit Pfau-Effinger, Dr. Alexander Weiß, Denise Sablinski, Anna-Lea Schröder, Anna Wiemann, Thuri Eggert, Dipl.-Soz Ralf Och

Panel Abstract:

While the regulatory limitations of the nation state have been a topic of research in political science for some decades, the ongoing globalization on the one hand, and a global rise of populism and nationalism as somewhat of a ‘counter-movement’ on the other hand, have added a new timeliness to this topic. Democracies in Europe, Japan and beyond currently face the common challenge of redefining their scope of functionality. This panel proposes to address the subnational and supranational perspectives of democracy put in action, in order to gain insights into how political actors address this challenge. On the subnational level, issues such as decentralization, and social movements will be addressed; on a supranational level, the focus shall lie with trends of regionalization in the light of increasing border-crossing movements of people.



Associate professor **Wako Asato** in Graduate School of Letters / Asian Studies Unit of Kyoto University conducts extensive research on demographic change and care including domestic workers, care workers, and nurses intertwining welfare regime. He also conducts exchange programs of care skills among Asian countries. He is an awardee of the Presidential Award of the Philippines in 2014.

Abstract: Formalizing Care Work: Intersection between Welfare and Migration Regime

Even though Asian Familism has various aspects, one of the main points is whether the welfare regime is convergent or divergent in the process of demographic change. This is seen in the following country cases: Hong Kong and Singapore took a liberal familism stance due to its laissez-faire market economy recruiting more than 200,000 foreign domestic workers respectively; while Japan and Germany have been moving ways from socialization (Long Term Care Insurance) in the end of the previous century to refamilialization care due mainly to budget ceiling, and strengthening family care. Japan took the way of professionalization and nationalization of elderly care at the same time. Thailand instead started LTC (long term care) services and disease prevention and health promotion through community fund. Korea also started LTC, however, the service provision is minimum and it is pointed out that the family care allowance made family care being appreciated. Taiwan once was about to start LTC. But due to budget ceiling, it was failed though already exist 220,000 foreign domestic worker take the role of family

care as a round the clock care provider. The divergence also constructs certain social contexts how to recruit foreign workers and types of visa given to care providers and how to socially integrate them.



Emiko Ochiai is Professor of Sociology and the Director of the Asian Research Center for the Intimate and Public Spheres at Graduate School of Letters, Kyoto University. She is a family sociologist and family historian who is also active in the field of gender studies.

She has contributed to comparative studies of Asian societies and reconstruction of social theories from an Asian perspective. Her recent research projects combine family sociology, welfare state theories and migration studies, and compare Asian and European cases to develop a framework to understand on-going transformations in private lives and public institutions all over the world. The outcomes of the projects are being published as a series *The Intimate and the Public in Asian and Global Perspectives* from Brill, of which she is the series editor. Her English publications include *Transformation of the Intimate and the Public in Asian Modernity* (co-editorship, Brill, 2014), *Asian Women and Intimate Work* (co-editorship, Brill, 2013, selected in Choice Outstanding Academic Titles 2014), *Asia's New Mothers* (co-editorship, Global Oriental, 2008) and *The Stem Family in Eurasian Perspective: Revisiting House Societies, 17th-20th Centuries* (co-editorship, Peter Lang, 2009).

Abstract: Changing Care Diamonds in Europe and Asia: Paths of Longevity Revolution

This paper is an outcome of a project on changing childcare and elderly care provision and finance in relation to the changing roles of family, state, market and community in European and Asian countries. Due to rapid changes on both sides, a new landscape is emerging. We are discussing welfare retrenchment and refamilialization in Europe and the development of welfare states in Asia. We are inclined to ask if Europe is becoming like Asia and if Asia is becoming like Europe. “Asianization” and “Europeanization” are defined firstly as the decrease and the increase in public social expenditure and, secondly, as the changing shape of the care diamond that consists of four sectors: state, market, family and association or community. To conclude, the state sector has even expanded and mixed with other three sectors in Europe, playing the roles of regulator and financier, while its role is still limited in Asia.



Ken Victor Leonard Hijino is Associate Professor at the Faculty of Law, Kyoto University. He has written about local elections, decentralization, and central-local relations in Japan primarily. His first book, *Rokaru demokurashi* (Ashi shobo 2015) published in Japanese, analyzes changes in local-level democracy following decentralization reforms in Japan in the early 2000s. His second book, “Local Politics and National Policy: Multilevel Conflicts in Japan and Beyond”, analyzes the impact of local politics on national policy and has just come out from Routledge in May 2017. He has also published articles, among others, about party

organizations and chief executives - "Intra-party conflicts over gubernatorial campaigns in Japan: Delegation or franchise?" Party Politics (2014); about new regional parties - "Delinking National and Local Party Systems: New Parties in Japanese Local Elections." Journal of East Asian Studies (2013); and about the political discourse surrounding regional inequality and decentralization in Japan - "Regional Inequality in 2014: Urgent Issue, Tepid Election" in Japan Decides 2014, Palgrave (2015). He is half-Swedish and half-Japanese, raised in Japan with a B.A. from Wesleyan University and a PhD from Cambridge University, Faculty of Asian and Middle Eastern Studies.

Abstract: Changing dynamics of multilevel democracy in Japan

The presentation will provide an overview of changes in local democracy and representation, and its impact on national political processes in Japan since the 1990s. The overall argument is that roles of local legislatures and executives have been transformed by political reforms at the national level, decentralization, reduced clientelism, and broader socio-economic challenges faced by local governments areas such as depopulation. The first section will focus on overall trends in the "quality" of local democracy in terms of some indicators of responsiveness, accountability and participation in local representation at municipal and prefectural level. The second section will discuss, from my recent book on multilevel conflicts, how changes in local representation and local party organizations have affected national processes, particularly important national policies such as those on energy and security. I end with some thoughts on how aggravated regional inequality (in particular between rural and urban areas) will affect

decentralization and the quality of local and national democracy in the near future.



Gabriele Vogt (Dr. phil., 2002) is Professor of Japanese Politics and Society at Universität Hamburg. In recent years, she held visiting professorships at Waseda University and Chūō University in Tokyo and at Kyūshū University in Fukuoka. She is a member of the scientific advisory boards of the Berlin Institute for Population and Development (BI) and the German Association for Asian Studies (DGA), and serves as a liaison officer to the German Academic Merit Foundation. In addition, she is an editorial board member at the Social Science Japan Journal (SSJJ) and the German Journal on Contemporary Asia. From 2005 to 2009, she was a senior research fellow and deputy director at the German Institute for Japanese Studies (DIJ) in Tokyo. Previous appointments include postdoctoral positions at Cornell University in Ithaca, NY and at the University of the Ryūkyūs in Okinawa. Her research interest lies with demographic change and international labor migration to Japan, the local protest movements in Okinawa, and Japan-US security relations. Her research is based in concepts of multi-level governance, policy analysis and social movement studies. Recent book publications include: *Population Aging and International Health-Caregiver Migration to Japan* (forthcoming 2017, Springer), *Japan in der Ära Abe – eine politikwissenschaftliche Analyse* (co-ed. w/ Steffen Heinrich, 2017, Iudicium), *Destination*

Japan: Population Aging and International Labor Migration (ed., special issue of *Contemporary Japan*, 2014, vol. 26, 2).

Abstract I: Policies Designed to Fail: Health-Caregiver Migration to Japan and Germany

Japan and Germany are in the midst of substantial demographic changes with a combination of low birth rates and high life expectancies triggering population aging and population decline. The decline of the working age population results in labor shortages in some industries. One of the business sectors most severely hit by Japan's and Germany's demographic developments is health-caregiving, where the mismatch of demand and supply is particularly pronounced: While an increasing number of elderly are in need of health-caregiving, the number of those who chose to enter the professions is on the decline. Recently and reluctantly both countries have jumped onto the bandwagon of international health-caregiver recruitment. They both do so via bilateral treaties signed with a number of nations in Southeast Asia respectively in Eastern Europe and North Africa; with the Philippines being the one sending country Japan and Germany alike are aiming to recruit from. Both migration schemes, however, have proven to be unattractive to potential employers and employees alike. By studying the underlying policy-making processes, this paper explores the factors that lead to the design of what can be called faulty programs. Differences and similarities in the policy-making process will be studied – and a special focus will be given to the supranational level – in order to highlight the diverging paths that lead to equally insufficient programs. Ultimately this paper aims at suggesting ways to avoid pitfalls of international labor migration schemes.

Abstract II: Political Protest from the Periphery: Social Movements and Global Citizenship in Okinawa

All the recurring waves of post-war political protest in Okinawa have a common issue. They are all about the withdrawal of U.S. military forces from Okinawan soil, and they all have failed to achieve that goal. This paper introduces the strategies social movement activists of the so-called reversion movement of the late 1960s and early 1970s, and the peace movement of the 1990s applied. Both movement waves have shown much innovative power with regard to their action repertoires, and – surely interconnected to that – they were grounded on a broad actor coalition, involving local activists and politicians next to state and non-state actors from mainland Japan, the U.S. and, to a lesser degree, from other states as well. It will be argued that in both social movement waves, despite the lack of new information and communication technology, global citizenship, which serves as gateway to transboundary activism, was the dominant notion of citizenship among Okinawan social movement actors. The Okinawan movements have domesticated international norms and applied global framings to their actions. To some degree they have also managed to re-impact the global frames in a bottom-up manner from peripheral Okinawa. The Okinawan social movements in these past decades have challenged the Japanese nation-state time and again. They have, during the reversion period, contributed to a peaceful process of post-war nation-building, and, in the 1990s, demanded for a restructuring of the political system towards a more decentralized state form. In both cases, their demands resonated with the *zeitgeist* of global political activism. The emerging new wave sees a resurgence of the idea of an inde-

pendent Okinawa – this, too, resonates with a global trend of localization in the face of globalization.



Birgit Pfau-Effinger is Professor of Sociology and Research Director at the Centre of Globalisation and Governance (CGG) at Universität Hamburg, Germany, since 2003, after she was professor at the University of Jena, Germany. She was visiting professor at the University of Tampere in Finland, the University of Aalborg in Denmark and the Universitat Autònoma de Barcelona in Spain. She was appointed “Honorary Professor for Comparative Welfare State Research” from the University of Southern Denmark for the period of 2011-2016, and was Research Professor at the University of Southern Denmark from 2014-2016.

Her main research interests include the relationship between cultural change and welfare state change; the role of culture and institutions for the explanation of cross-national differences in gender, care and the work-family relationship; the explanation of the historical development ‘male breadwinner family’; the diversity of development paths of the work-family relationship, and the changing relationship between formal and informal work. She has published numerous articles in academic journals, among others in the *British Journal of Sociology*, *British Journal of Industrial Relations*, *Community, Work & Family*, *Comparative Social Research*, *Environment & Planning A*, *European Journal of Aging*, *Journal of Social Policy*, *European Societies*, *Journal of Aging Studies*, *International Journal of Sociology*

and Social Policy, Journal of Social Policy, Social Policy & Administration, and Work, Employment & Society, as well as several books with leading English-language publishers. She has received grants from the German Research Council (DFG), the European Science Foundation (ESF) and the European Union (EU), and she had a leading role in several international collaborative research programs, like the COST A13 Action and the EU Network of Excellence RECWOWE. She was elected co-editor of “*Work, Employment and Society*”, and she is member of the Board of ESPAnet since 1/2016.

The German Research Council (DFG) has included her into the “Online Portal of Outstanding Women Academics and Scientists” AcademiaNet’ since 2010. One of her articles in *Work, Employment and Society* was distinguished in 2012 as “Favorite WES article of the last 25 years” by the British Sociological Association. Her article ‘Culture and Welfare States. Reflections on a complex interrelation’ is among the top ten most cited articles in in the *Journal of Social Policy*.

Abstract: Women’s Labor Market Integration in Institutional and Cultural Context – Theoretical Approach and Comparative Analysis

The aim of this paper is to analyse how far contemporary family policies impact on the labour market integration of mothers of children below age three in European welfare states. Social-policy researchers have argued at times that family policies influence the degree to which women are included into the labour market when they have small children. However, women’s labour market behaviour is not always coherent with the

labour market behaviour that is supported by family policies. Therefore a more complex explanation is needed. The main question of this paper is how family policies and other factors like cultural factors and socio-economic factors interact in explaining cross-national differences in the labour market integration of mothers of children below age three.

The chapter applies the author's theoretical approach of the "gender arrangement" to provide an explanatory framework for cross-national differences in the labour market integration of women with children below age three. This approach emphasises the mutual, and in part contradictory, interrelations and dynamics between culture, institutions and socioeconomic structures which form the societal context for women's labour market integration and its relation with childcare. According to this approach, family policies, culture and socio-economic factors together contribute to the explanation of cross-national differences in the labour market integration of women with children below three of age, and if these factors interact in a coherent or contradictory manner.

The paper is based on an empirical study that comprises ten European countries of the main European regions: Austria, Czech Republic, Denmark, Finland, France, Germany, Italy, Poland, Spain, UK. It uses comparative analysis of family policies on the basis of documents, economic statistics and employment statistics from OECD and EU; and attitude data from the European Value Survey. The findings show that considering cultural family models and family policies together, as well as socio-economic factors, and if their interaction is coherent or contradictory, leads to a more satisfactory explanation of cross-

national differences in the share of women who are employed when they have small children.

The paper contributes to the discussion about the impact of family policy on women's labour market integration in that it shows that family policies and other factors, mainly cultural, but also socio-economic factors, interact in their impact on women's labour market integration, and that also the way in which these factors interact is relevant for the explanation.



Alexander Weiß, Dr. disc. pol., studied Political Science, Philosophy, and German Literature in Hamburg, Paris, and West Lafayette, Indiana. He earned his doctoral degree with a dissertation on 'Parliamentary Publicity. Elements of discourse history and deliberative model' at University of Göttingen in 2007. Between 2009 and 2016 he was lecturer in Political Theory at Universität Hamburg, and in 2016 he changed to Helmut Schmidt University in Hamburg. He is currently finishing his habilitation on 'Comparative Democratic Theory'. His research fields are Comparative Political Theory (with focus on East Asia), Democratic Theory, Digitalization and Democracy.

Abstract: The Relevance of Japanese democratic concepts in Comparative Political Theory

Japanese Democracy has been object of reflection in democratic theory from Masao Maruyama up to Tetsuki Tamura's and Yasuko H. Kobayashi's diagnosis of a crisis in Japanese society.

Particularly this latter description has similarities with diagnoses of democratic crises in the West. My question will be, whether from the perspective of Comparative Political Theory this can claim relevance beyond the domestic context of origin. Is there a mutual learning from patterns and descriptions of a crisis of democracy? What are the conceptual assumptions about democracy we have to make in order to enhance such mutual learning? I will address these questions and contextualize them with findings from a recent project on concepts of democracy beyond the West in comparative perspective.



Denise Sablinski is currently enrolled in the International MA Program in Japanese Studies at the Institute for Asian and African Studies, Universität Hamburg. Her main research interests include party politics (especially new parties), voting behavior, nuclear energy policy and contemporary populism in Japan. In 2014, she completed her Bachelor thesis that dealt with the Japanese lower house election 2012 and the question of how the LDP could win despite its pro-nuclear stance just one year after the Fukushima nuclear disaster. Drawing on voting behavior theories like the Michigan model and the rational choice theory, the thesis tried to solve the puzzle by closely analyzing the part nuclear energy and economic policy played in the decision making process of the Japanese voters. During a semester abroad at the Momoyama Gakuin University in Osaka Prefecture in 2013, Ms Sablinski developed a strong interest for the political situation in the Kansai region. She came back to Kansai in 2015, studying at

the Faculty of Intercultural Studies at Kobe University. During her stay, she conducted interviews with local politicians throughout Osaka Prefecture and worked on her case study about the Osaka Restoration Party as part of her research project on populist strategy in Japanese politics. She is currently in the process of completing her MA thesis with the title „The Construction of Japanese Populism“.

Abstract: Local-Level Populism in Japanese Politics - The Case of the Restoration Party in Osaka

Populism as a global phenomenon is on the rise. One of its most notable characteristics is that it is able to adapt its rhetoric to the local political landscape and tends to form symbiotic relationships with other ideologies. In Europe, populism is used by parties with a nationalistic ideology and alongside provocative slogans targeting issues like migration, globalization and the EU in general. Meanwhile in Japan, contemporary populism is characterized by its connection to neoliberalism. Politicians who frame themselves as revolutionary reformers on the side of the people promote economic and structural reform through a dramatized political rhetoric. Former Prime Minister Koizumi Jun'ichirō is often considered the most notable representative of contemporary Japanese populism.

Koizumi's strategy has been adopted by local parties with increasing success. This presentation outlines the dynamics between the external factors that create an ideal breeding ground for parties with a populist strategy and the way their internal organization and external communication strategy meets the demands of the electorate. The case of the Restoration Party

(Ishin no Kai) in Osaka is utilized as an example for a successful attempt of a new party to replace the LDP (Liberal Democratic Party) as the strongest party in a local government. Since its foundation in 2010, the party continues to dominate the local political scene with its goal to reclaim economic resources and political power from the centralized government in Tōkyō to restore and strengthen Osaka's position on the national and international level. The analysis takes a closer look at party leadership, communication strategies and the party's relationship with the media, while also considering region-specific policies like the Osaka Metropolis plan. This way, the case study aims to contribute to put Japanese populism into a wider global context.



Anna-Lea Schröder is currently enrolled at Universität Hamburg in the interdisciplinary masters program „East Asian Studies“ with a focus on Japan. Her main research interests include social policy, especially with regard to elderly care, the interplay between social change and welfare state change with respect to family models, the gendered dual labor market and changes in the formal and informal provision of elderly care.

Her bachelors thesis „The Socialization of Elderly Care in the Japanese Welfare State“ focused upon the implementation of the Long-Term Care Insurance as a universalist approach to social welfare in the backdrop of demographic crisis, and subsequent paradigm change regarding social norms related to elderly care. Furthermore, the applicability of Esping-Andersens

„Three Worlds of Welfare Capitalism“ was put to the test on the case study of Japan.

Ms Schröder has recently spend one semester abroad at the University of Fukui to do field work for her masters thesis on lifelong learning as means to prolong the healthy life span of senior citizens and thus reducing the financial burden on social welfare programs. This was followed by a three months stay at Waseda University participating at the DAAD research project „Diversification of the Japanese Labor Market“.

Abstract: Lifelong Learning in Japan: Neoliberal Care-Prevention vs. Activating Welfare State?

The ageing society is one of Japan’s major contemporary socio-political issues. As Japan’s hyperaged society is one of the most advanced worldwide with elderly people making up 26,7% of the population, Japan’s policy reforms with regard to elderly care might provide best practice examples which can serve as models for other nations facing similar challenges.

In my presentation, I would like to address Active Ageing policies with a focus on Lifelong Learning as means to prolong the „third age“ in which senior citizens are living an active, healthy and independent life, thereby help to reduce the need for elderly care and increase the sustainability of social welfare programmes for the elderly in Japan.

With the implementation of the Long-Term Care Insurance in the year 2000, Japan is taking a universalist approach toward elderly care in terms of risk-management , while at the same time taking a neo-liberal approach toward care prevention

through Active Ageing policies which advocate self-responsibility.

The primary target group consists of elderly citizens who have just left the labor market and are looking for a new focus in everyday life, trying to preserve their physical and mental fitness, increasing their social network and striving to remain independent for as long as possible. Illustrating this framework, I am going to present fieldwork conducted in summer 2016 at Kōnen Daigaku (高年大学), a Lifelong Learning facility for the elderly located in Sabae City, Fukui.

Anna Wiemann is a PhD candidate at Universität Hamburg and has just recently handed in her dissertation with the title “Networks and Mobilization Processes: The Case of the Japanese Anti-Nuclear Movement after Fukushima”. She holds a master’s degree in Peace and Conflict Studies (Philipps-University Marburg) and a bachelor’s degree in Japanese Linguistics and French Philology (Ruhr-University Bochum).

Abstract: Network-Building in Movement Waves: The Case of Post-Fukushima Japan

Social movements and their ways to interact with state actors are often considered an indicator for the democratic condition of a nation-state. Relational patterns of social movement organizations among themselves as well as to the state and the society play an important role in shaping the goals and action repertoires of social movements in move-



ment mobilization phases. This presentation introduces a newly developed theory-based analytical model to trace such processes and gives insight into two case studies of movement networks in Japan which engage in the fields of nuclear phase-out and promotion of renewable energy as well as victims' rights in the repercussion of the nuclear crisis at the Fukushima Daiichi nuclear power plant since March 2011.



Thurid Eggers studied Sociology at Universität Hamburg, where she is currently PhD student at the WiSo-Graduate School and member of the Center for Globalization and Governance. Since 2014 she has worked as a research assistant in the project “FAMICAP” (Institutional Framework of Senior Care by Family Members between Market Logic and Family Solidarity) that is led by Prof. Birgit Pfau-Effinger and funded by the German Research Foundation (DFG). In her research she focusses on the analysis and explanation of cross-national differences in the historical development of welfare state policies. She is especially interested in the role of policy ideas and actors in explaining welfare state change in the policy field of long-term care. She has presented work at several international conferences.

Abstract: Explaining Cross-National Differences in Care Policy Marketization – The Role of Cultural Ideas, Institutions and Actors

Thurid Eggers; Christopher Grages; Birgit Pfau-Effinger, Universität Hamburg

Since the 1990s, many welfare states have extended the social rights for senior citizens in Long-term Care (LTC) policies. Simultaneously they have strengthened market principles in LTC policies. There are substantial differences concerning the forms and strength of marketization between welfare states, even between welfare states with similar characteristics. So far, empirical studies are rare that explain cross-national differences in LTC marketization.

This paper aims to explain differences in LTC policy marketization between two conservative welfare states, Germany and Austria. Both have experienced a paradigmatic change in LTC policies in the 1990s, which combined the extension of publicly paid social services and new social rights with a strengthening of market principles. However, the LTC policy marketization was clearly more far-reaching in the Austrian welfare state.

We use the „welfare arrangement” approach (Pfau-Effinger 2005) as explanatory framework. It emphasizes the role of cultural change and the development of power relations and actors constellations in the context of historical development paths for the explanation of cross-national differences regarding welfare state reforms. The empirical study analyzes the different development paths, in which the policy reforms were embedded, and the causal relations and processes on which they were based.

The findings show that the differences can mainly be explained with the role of the respective market elements in the previous care policies and the main cultural ideas that were relevant in the policy process. The paper provides an innovative contribu-

tion to the international comparative theory and research about historical change in welfare state policies.



Ralf Och studied Social Sciences at the Humboldt University of Berlin. Currently he is PhD student at the Centre of Globalisation and Governance at Universität Hamburg. In his research he focusses on welfare state comparisons in social services and social security on the national and local level.

The research field, he is particularly interested in is institutional change, social care, unemployment security and political participation of civil society. He participated in several research projects funded by the German Research Council, the European Union and the Thyssen Foundation. He has published his work in the *Journal of Social Policy*, *European Societies*, and other national and international Journals and edited books.

Abstract: Civil societies' in municipal social policy – the direction of engagement matters

The article asks how we can explain differences in the participation of civil society in municipal policy processes on the example of senior citizen representatives. Those provide an interesting case as they are regarded as an innovative participation instrument. Political participation is often explained with reference to the overall strength of civil society or the effect of public institutions. The article argues that a high degree of political participation is not necessarily caused by the strength of civil society. Although public institutions are important for the explanation

of differences between municipalities the main difference makes the main orientation of the senior citizens representatives between the civil or the public realm.

Session VI: Infection research

Topic: Perspectives for Cooperation in the Realm of Infection Research

Participants Kyoto U: Prof. Takashi Fujita, Prof. Takeshi Noda, Prof. Junichiro Yasunaga

Participants UHH: Prof. Thomas Dobner, Dr. César Muñoz-Fontela, Prof. Wolfram Brune



Takashi Fujita

Date of Birth/December 20, 1954

B.A. in Biology, 1977 Waseda University
Tokyo, Japan Ph.D. in Biology,

1982 Waseda University Tokyo, Ja-
pan/Studied the mechanism of IFN

priming

1982-84/Cancer Institute (Tokyo)/Postdoc/

1984-90/Osaka University/Res. Associate/Studied gene expres-
sion of interferon- α and interleukin-2 in Dr. T. Taniguchi's labor-
atory.

1990-91/Whitehead Institute/Postdoc/Studied gene expression
by NF- κ B transcription factor family in Dr. David Baltimore's
laboratory.

1991-93/Rockefeller University/Postdoc/Studied gene expression by NF- κ B transcription factor family in Dr. David Baltimore's laboratory.

1993-2005/Tokyo Met. Inst. Med. Sci. /Studied the mechanism of IRF-3 activation and identified CARD helicase as sensing molecule for replicating viruses.

Sept. 2005- Institute for Virus Research,
Kyoto University/Professor

Oct. 2016- Institute for Frontier Life and Medical Sciences,
Kyoto University/Professor

Abstract: Analysis of innate immune responses to SFTSV infection.

Severe fever with thrombocytopenia syndrome (SFTS) is caused by SFTS virus (SFTSV), a novel Phlebovirus in the **Bunyaviridae** family. SFTSV is an ambisense RNA virus containing three segmented genomes. SFTS is characterized by high fever, thrombocytopenia, multiorgan dysfunction and a high fatality rate between 12 and 30%. However, the viral pathogenesis and virus-host interaction are largely unknown.

The aim of our study is to reveal the host responses against SFTSV. To assess the involvement of innate immune-related molecules in host defense to SFTSV infection, IPS-1, MyD88 and IFNAR1 KO mice were intravenously infected with SFTSV and their body weight and survival rate were monitored. To further reveal the spread of SFTSV infection, histopathological analysis was performed utilizing anti-SFTSV NP antibody. Among tested

mice, only IFNAR1 KO mice showed high susceptibility to SFTSV infection. IFNAR1 KO mice lost the body weight and died within 3-4 days post infection. Histopathological analysis showed increased SFTSV antigen in spleen of IFNAR1 KO mice. Although IFNAR1 KO mice showed the high susceptibility, other examined mice did not. This result suggests that IFN signaling is critical but RIG-I-like receptor (RLR)-dependent signaling is not the major source of IFN in SFTSV infection, and implicates a possible involvement of toll-like receptor (TLR)-pathway. Further analysis of TLR and RLR activation in SFTSV infection will be required for understanding antiviral responses against SFTSV.



Takeshi Noda is a virologist whose research focuses on intracellular replication mechanisms of influenza virus and Ebola virus such as genome transcription and replication, assembly and budding, and virus particle formation. He is also interested in antibody therapy by developing neutralizing monoclonal antibodies against highly pathogenic viruses. He received his D.V.M. in 2001 from Hokkaido University and his Ph.D. in 2005 from Graduate school of Veterinary Medicine, Hokkaido University, Japan. He had worked at Institute of Medical Science, University of Tokyo, Japan as Assistant Professor (2005-2011) and Associate Professor (2011-2015). In 2015 he was appointed Professor at Institute for Frontier Life and Medical Sciences, Kyoto University, Japan. During his academic career, he had earned a scholarship from Japan Society for the Promotion of Science (2004-2005), and had served concurrently as a researcher of Precursory Research for Embryonic Science

and Technology, Japan Science and Technology Agency (2013-2016).

Abstract: Genome packaging mechanism of influenza A virus

Influenza A virus causes seasonal epidemic of influenza and occasional pandemic. Its single-stranded negative sense RNA genome is segmented into eight segments, and each viral RNA (vRNA) segment encodes different viral proteins which are essential for virus replication. The vRNA segment is always associated with multiple copies of viral nucleoproteins and a viral RNA-dependent RNA polymerase, existing as a rod-like ribonucleoprotein complexes called RNP.

Later in infection, newly synthesized RNPs in nucleus of virus-infected cell are transported to plasma membrane, where the RNPs are packaged into progeny virions budding from the plasma membrane. During this step, eight distinct vRNA segments (i.e. eight different RNPs) must be packaged into each progeny virion for the virions to be infectious. However, it had remained unclear for a long time whether there are specific mechanisms for the packaging of RNPs into progeny virions. Here we discuss our previous and recent works showing that influenza A virus likely packages eight distinct vRNA segments in a selective way, although the selective mechanism remains to be elucidated.



Junichirou Yasunaga is a senior lecturer at Institute for Frontier Life and Medical Sciences, Kyoto University. In 1995 he received an M.D. degree from Kumamoto University School of Medicine. After graduation, he worked for four years in hospital as a hematologist. Kumamoto is an endemic area of human T-cell leukemia virus type 1 (HTLV-1), and he took care of many patients with HTLV-1-associated adult T-cell leukemia/lymphoma (ATL) during his career as a clinician. In 1999 he entered into Graduate School of Medical Sciences, Kumamoto University, in which he started researches on HTLV-1. In 2003 he received Ph.D. and moved to Institute for Virus Research, Kyoto University as an assistant professor. Between 2007 and 2010, he worked in the National Institutes of Health (NIH) in the United States of America, as a visiting fellow. In 2010 he came back to Kyoto University as a lecturer, and is currently continuing HTLV-1 research. He is a member of American Society of Hematology, Japanese Society of Hematology (JSH), Japanese Cancer Association, Japanese Society for Virology, and Japanese Society of HTLV-1 and Associated Diseases (JSHAD). He is also a councilor of JSH and JSHAD.

Abstract: Molecular mechanisms of oncogenesis by human T-cell leukemia virus type 1

HTLV-1 is an etiological agent of adult T-cell leukemia/lymphoma (ATL). HTLV-1 encodes two oncogenic factors, Tax and HTLV-1 bZIP factor (HBZ), which have opposite func-

tions in many signaling pathways. It has been known that HBZ is constantly expressed in infected cells, and critical for proliferation of ATL cells. Tax is a potent transactivator of viral transcription; however the significance of Tax in leukemogenesis is obscure since its expression is generally low in infected cells. We found that Tax is transiently expressed in only a small fraction (~1%) of cells in several ATL cell lines. Surprisingly, knockdown of Tax induced apoptosis in the majority of cells, indicating that Tax in a small subset is required for survival of whole population. Single-cell analysis revealed that Tax expression was positively correlated with cellular anti-apoptotic factors, and importantly, these effects of Tax appeared to carry over into Tax-negative cells. Mathematical simulation supports our hypothesis that transient Tax expression confers anti-apoptotic property on each expressing cell, and this effect lasts after Tax expression is diminished, which are critical events to maintain whole population of ATL. This study proposes novel roles of Tax in persistence of ATL cells.



Thomas Dobner studied Biology at the Ludwig Maximilians University in Munich, Germany, and received solid research training as a doctoral student and postdoctoral fellow in the prestigious laboratories of Profs Ernst-Ludwig Winacker and Tom Shenk, at the Institute of Biochemistry in Munich and the Department of Molecular Biology at Princeton University, NJ USA, respectively. His doctoral thesis focused

on the identification of tumor specific transcripts in Burkitt's Lymphoma. During his postdoctoral work in Princeton he became interested in the biology of human adenoviruses, focusing particular attention on molecular mechanisms of adenovirus-mediated oncogenesis. After postdoctoral training he returned to Germany where he accepted an offer for a position as an independent junior group leader at the University of Regensburg. In 2006 he was recruited by the Heinrich Pette Institute, Leibniz Institute for Experimental Virology (HPI) and the University of Hamburg as a full Professor for *Molecular Virology* and head of the HPI Research Unit *Viral Transformation*. Since 2009 he is the Scientific Director of the HPI, becoming full member of the Academy of Sciences and Humanities in Hamburg two years ago.

His group at HPI currently consists of four postdoctoral fellows, nine graduate students and technical staff. The general research concept of the group stems from previous findings that adenovirus regulatory proteins provide an excellent experimental tool to analyze fundamental mechanisms of normal and malignant cell growth. In particular, the ability of adenovirus proteins E1 and E4 to oncogenically transform primary mammalian cells in culture, which are then capable of initiating tumor growth in a susceptible host animal, has been used in his group for many years to uncover novel principles of viral oncogenesis and has given important insights into pathways which are relevant for the development of cancer in general.

Abstract: Viral Transformation

Work in the Research Unit *Viral Transformation* aims at elucidating molecular mechanisms underlying virus-mediated trans-

formation processes. Towards this goal we use human adenovirus (HAdV) and, more recently other human tumor viruses (EBV, HPV, HBV, MCPyV, and HTLV-1) as models to study the molecular interactions involved in viral carcinogenesis. Our studies employ an integrated experimental approach that combines different cell transformation models, including primary mammalian cells, humanized mice and adult human stem cells with genetics and cell biology as well as genome-scale analytical methods and *omics* technologies. Our basic studies not only provide valuable information into the control of viral oncogenesis but will also provide new target structures (viral and cellular) that may be subsequently used for the development of novel antiviral and anticancer therapies.



Following his studies in Biology, **César Muñoz-Fontela** received his PhD in Virology and Immunology at the Department of Microbiology II at Complutense University in Madrid in 2005. Muñoz-Fontela looks back on research trainings as a research scholar and postdoctoral fellow at the Imperial College in London and at the Mount Sinai School of Medicine in New York. Since 2011 he is a Junior Group Leader at the Heinrich Pette Institute (HPI) at the Leibniz Institute for Experimental Virology, and since 2012 Muñoz-Fontela is an associated scientist at the Bernhard Nocht Institute for Tropical Medicine (BNITM) and the WHO Collaborating Center on Arboviruses and Hemorrhagic Fever Reference and Research, both located in Hamburg, Germany.

Abstract: Antigen presenting cells and T cells during Ebola virus infection

Ebola virus disease outbreaks occur at random intervals in populations with no pre-existing antibody immunity against the virus. In this scenario, we hypothesized that the interface between antigen-presenting cells -which process viral antigens- and T-cells that initiate adaptive immune responses is a key component of the immune response and has strong influence on patient outcome. To test our hypothesis we have conducted experiments to assess the dynamics of APCs and T cells in newly generated animal models, and we have performed clinical immunology studies during the West African Ebola outbreak of 2013-2016. Our results are consistent across the human-animal model interface and show two important findings: First, inflammatory dendritic cells derived from blood monocytes are primary Ebola virus target cells and may play a role disseminating infectious virus from the initial sites of virus replication. Second, T cells are major barriers for virus dissemination and control, and proper and controlled T cell responses are correlated with survival. These findings warrant the testing of T cell-based therapies as putative post-exposure treatments against Ebola virus disease.



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Major Research Interests

- Cytomegalovirus subversion of host antiviral defenses
- Molecular basis of cytomegalovirus host species specificity
- Kaposi's sarcoma-associated herpesvirus lytic replication



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