

Expert Discussion

Future of Work – New Technologies & Impact on People and Processes

Paths Toward German-American Collaborative Research & Exchange

On the Occasion of the Opening Celebration of Campus OWL New York

Thursday, February 27, 2020 – German House New York

871 United Nations Plaza, New York, NY 10017 (on 1st Ave, b/w 48 and 49 St)

11:45am – 5:45pm

Please bring a Photo ID for security check-in

Contact: Dr. Katja Simons, Executive Director, Campus OWL New York
Phone: 212.758.3321 Email: simons@campus-owl.org

Short description of topic and objectives:

The current industrial transition creates many new opportunities. At the center of this transition are workers and employees whose roles are undergoing great changes. Work processes are formed that require flexible employment. We will look at different examples from research reflecting those changes and its impact on people and processes. The objective of the expert discussion is to bring together researchers from different academic disciplines to strengthen the German American collaboration and to create a new scientific network in the field of Future of Work.

Campus OWL is a network of five universities in OstWestfalenLippe (OWL), Germany. The OWL region is one of the strongest commercial and technology centers in Germany where higher education and industry are powerful partners. The New York based liaison office promotes opportunities for study and research and facilitates collaboration with North American partner institutions.

Member institutions: Bielefeld University, Paderborn University, Bielefeld University of Applied Sciences, OWL University of Applied Sciences and Arts, and Detmold University of Music.

- 11:30am Guest Arrival and Registration/Security check-in
11:45 am **Networking Lunch, 2nd floor Auditorium**
- 12:30 pm **Welcome & Meeting Objectives**
Dr. Katja Simons, Executive Director, Campus OWL New York
- 12:45 pm **Introduction to Campus OWL**
Prof. Dr. Ingeborg Schramm-Wölk, President, Bielefeld University of Applied Sciences / Chair, Campus OWL
Prof. Dr. Torsten Meier, Vice-President for International Relations, Paderborn University
- 1:00 pm **Technology and the Future of Work**
Flashtalks and Discussion
Human-Centered Assistance Systems
Prof. Dr. Dr. Dr. Carsten Röcker, inIT – Institute Industrial IT, OWL University of Applied Sciences and Arts
Prof. Dr. Nadir Weibel, Human-Centered & Ubiquitous Computing Lab, University of California, San Diego
Human-Robot Interaction
Dr. Sebastian Wrede, Managing Director, Research Institute for Cognition and Robotics, Bielefeld University
Precision Farming and Digitization in Agriculture
Prof. Dr. Burkhard Wrenger, Program Coordinator “Precision Farming”, Environmental Monitoring, Autonomous Sensor Systems, UAV, Robots, OWL University of Applied Sciences and Arts
Prof. Dr. Leon Schumacher, College of Agriculture, Food & Natural Resources, University of Missouri
Moderator: Prof. Dr. Gerhard Sagerer, Rector, Bielefeld University

2:30 pm **Networking Coffee**

3:00 pm **Funding Opportunities for International Collaboration**

Dr. Rainer Grulich, Director, DFG North America (German Research Foundation)

Sonia Ortega, PhD, Program Director, Office of International Science and Engineering, National Science Foundation

Benedikt Brisch, Director, DAAD North America (German Academic Exchange Service), Director, German Center for Research and Innovation (DWIH New York)

4:00 pm **Digital Transformation of Work & Societal Impacts**

Flashtalks and Discussion

Digitization, New Work and Human Resource Management

Prof. Dr. Sascha Armutat, Faculty of Business and Health, Bielefeld University of Applied Sciences

Digital Transformation & Future of Work

Eric Lui, Managing Partner, HCG Global Partners, Professor at New York University

Beyond Technology: Transforming Workforce and Citizenship through Vocational Education

Prof. Dr. Tobias Jenert, Faculty of Business Administration and Economics, Paderborn University

Prof. Dr. Christoph Winkler, Endowed Professor and Founding Program, Director, Hynes Institute for Entrepreneurship & Innovation, Iona College

Moderator: Dr. Lena Weber, Department of Arts and Humanities Sociology, Paderborn University

5:30 pm **Summary and Outlook:** Prof. Dr. Gerhard Sagerer, Rector, Bielefeld University

5:45 pm End of Roundtable in Auditorium

6:30 pm Start of [Opening Celebration](#) in Auditorium

Short Bios of Speakers

Anja-Kristin Abendroth is a Junior Professor for Technical and Social Change at the Faculty of Sociology at Bielefeld University, Germany. She is one of the Executive Board members of the interdisciplinary collaborative research program “Design of Flexible Working Environments – Human Centered Use of Cyber-Physical Systems in Industry 4.0” and part of the program “Digital Future” funded by the Ministry of Culture and Science of the German State of North Rhine-Westphalia and run by the Universities of Bielefeld and Paderborn. As one of the project leaders of the German Research Foundation project “Organizational Inequalities and Interdependencies between Capabilities in Work and Personal Life” she is further studying how workplace policies, structures, and cultures shape employees’ work-life interface and social inequalities in the labor market. In 2013 she defended her dissertation, “Working Women in Europe: How the Country, Workplace, and Family Context Matter,” at the Faculty of Sociology/ICS at Utrecht University, the Netherlands. Her research interests include the digital future of work, the interplay of work and family life, social inequalities and organizational and cross-national comparative research.

Sascha Armutat is professor of Human Resources Management and Organization at Bielefeld University of Applied Sciences, Germany. He lectures on Human Resource Management, Organization and Leadership. The topics he deals with through his research focus on issues in Strategic Human Resources Management, Employer Branding and Performance Management. Professor Armutat studied Educational Sciences at the Helmut-Schmidt-University in Hamburg and earned his PhD at the Faculty of Economics and Social Sciences at the University of Potsdam while working in the industry. From 2007-2011, he was an assistant professor of Human Resources and Organization at the University of Potsdam. He gained professional experience in various managerial positions at the *Deutsche Gesellschaft für Personalführung e.V.*, the German Association for Human Resources Management, from 2003 to 2016. As head of research, strategy and politics he was responsible for the organization's thematic and strategic focus. Prior to that, he held various leadership and teaching positions at training institutions in the German Air Force and served as a military officer.

Benedikt Brisch holds an M.A. in History with a focus on Eastern European Studies. He studied Eastern European History, Slavic Languages and Political Science at the University of Cologne. In 1998 he started working at DAAD in Bonn, where he coordinated a scholarship program for Russian graduates, which was funded by German industry. During his time as Deputy Director of the DAAD Regional Office in Moscow from 2000 to 2004, a

main topic of his work was the development of co-funded scholarship programs. From 2005 until 2014 he was responsible for programs of academic exchange between Germany, Eastern Europe and Central Asia, where DAAD is fostering a growing number of projects in the field of trans-national education. From 2015 until his departure for New York City he was the head of the Division for Scholarships in Europe and North America at DAAD's Headquarters in Bonn. He took over the position of Director of the DAAD Regional Office New York, as well as Director of the DWIH (German Center for Research and Innovation) New York in January 2019.

Rainer Grulich is the Director of the North America Office of the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation), the self-governing funding organization for science and research in Germany. Located in Washington, DC and New York City, the DFG North America Office works to strengthen collaboration between German and North American scientists and researchers, supports early-career researchers and DFG research fellows in the region, and organizes outreach activities to showcase the German research landscape across North America. Engaged in political and social discourse, the DFG closely cooperates with its North American partners to advocate the cause of science and of basic research, in particular. Dr. Grulich has been engaged in the promotion of international research cooperation and transatlantic academic exchange for twenty years. Prior to being appointed Director of the DFG's North America Office in September 2017, he headed the section on North America within the Division International Affairs at the DFG's headquarters in Bonn, Germany, and held the position of Program Director for Strategic Planning and External Relations at the Alexander von Humboldt Foundation before joining the DFG in 2012. Dr. Grulich earned his doctorate in Modern History from the University of Tübingen, holds a master's degree in Medieval History from the University of Oxford, and spent an extended period of time as a graduate student at the Fletcher School of Law and Diplomacy and at Tufts University (Medford, MA).

Tobias Jenert is a professor for human resource education with a focus on higher education. In 2008 he started his post-graduate research at the University of St. Gallen. As a fellow of the Pro*Doc program "Rethinking Education in the Knowledge Society" he received a grant from the Swiss National Foundation. From 2012 Jenert worked as a postdoc researcher and project manager at the Institute for Business Education and Educational Management at the University of St. Gallen. He carried out numerous projects on topics such as educational management, personnel development and corporate learning. Project activities covered research as well as organizational development and counselling in corporate and public contexts. In 2017 Jenert was appointed assistant professor, in 2018 he received a full professorship at Paderborn university. His current research covers the transformation of vocational education, focusing on the role of teacher education and entrepreneurship.

Jürgen Krahl studied Chemistry at the Technical University Braunschweig, and worked as a scientist at the German Federal Research Centre for Agriculture in Braunschweig. After

four years of employment as a scientist, he became a research leader for biofuels and the head of analytical chemistry. In 1993, he received his Ph.D. and in 2001, the Venia Legendi from TU Braunschweig. Each time focusing on research in biofuels. In 1997, he became a full professor at Coburg University of Applied Sciences, and in parallel, he remained as a research leader for biofuels in Braunschweig. Between 2005 and 2013, Prof. Dr. Krahl was the German representative for the International Energy Agency Bioenergy, Task 39, and from 2008 to 2016, he was the head of the Technology Transfer Center Automotive at Coburg University. He went on to serve as Vice President of Coburg University from 2009 to 2014, before becoming a teaching staff member of Bayreuth University in 2014. Prof. Dr. Jürgen Krahl is a founding member of the Fuels Joint Research Group, and the Chairman of UFOP expert commission Biofuels and Renewable Materials. Since 2016, he has been the President of Technische Hochschule Ostwestfalen-Lippe - OWL University of Applied Sciences and Arts.

Eric Lui is a senior executive/board advisor, emergent technology innovator/entrepreneur, angel investor and transformational thinker with over 20 years of experience in the financial services, technology, academia, and public sectors. Eric has served over two dozens clients globally within the Financial Services, Healthcare, Supply Chain, Technology areas, internationally recognized and is involved in numerous social impact initiatives with organizations like the United Nations' via the Global Summit, Sustainability Development Goals (SDG2030) Forum; Science Technology and Innovation (STIC) Forum, Brookings Institute, and US Chamber of Commerce. He has also contributed thought leadership and articles around Finance, Technology & Innovation, Risk Management and has spoken, keynoted, paneled, and published in CIO, Leadership Council, Waters Technology, RiskUSA, Professionals Risk Management Association, Asian American Business Development Council, Sino-Asian Pharma Association, US-China Foreign Relations and many more prominent events/institutions. Eric Lui graduated with Bachelors of Business Administration from Pace University and Masters of Business Administration from Northeastern University. He currently is a professor at New York University and City University of New York's Baruch College where he teaches Business Strategy, Innovation, Management of Multi-national Corporations, Program Management, and Organizational Ethics. He has been recognized as the Global Outstanding 50 Asian Americans for his accolades and contributions to business, academia and social communities.

Torsten Meier studied physics at Philipps-Universität Marburg and received his Diploma in 1992. From 1992-1994 he continued as a PhD student in Marburg and received his doctoral degree Dr. rer. nat. with distinction. From 1995-1997 he stayed as a Post-Doc at the Department of Chemistry, University of Rochester, New York, USA. Afterwards, he returned to Marburg where he received his habilitation in 2000. From 2002-2007 he was funded as a Heisenberg fellow by the German Research Foundation (DFG). In April 2007 he started as a full professor for theoretical physics in the Department of Physics at Paderborn University, where he is the head of the "Computational

Optoelectronics and Photonics" group. From October 2011 until March 2018 he was Dean of the Faculty of Science. Since April 2018 Torsten Meier is Vice-President for International Relations at Paderborn University.

Sonia Ortega currently serves as Program Director for West Europe, Mexico and Brazil in the Office of International Science and Engineering (OISE) at the National Science Foundation. From 2015 until April 2018, she was NSF's Head of Europe Office in Brussels, Belgium. As Head of the Europe and Eurasia Office, she represented NSF at high level meetings, built an extensive network of representatives from European organizations and facilitated the interaction between US and European scientists. She joined NSF in 1989. Before coming to the NSF, Dr. Ortega was a Research Associate at the Duke University Marine Laboratory in Beaufort, North Carolina. From 2001 to 2004 she worked as Director of Education and International Programs at the Long Term Ecological Research (LTER) Network Office at the University of New Mexico in Albuquerque, New Mexico. Dr. Ortega holds a BS degree in Biology from the University of Costa Rica, an MA in Zoology from Duke University, and a Ph.D. in Biology from the University of South Carolina. Dr. Ortega represented NSF at Palmer Station Antarctica. She represented NSF and the US as an Embassy Science Fellow at the US Embassy in Kuala Lumpur, Malaysia. She is a founding member of the Nicaraguan Academy of Sciences.

Carsten Röcker is professor for Human-Technology Interaction at TH OWL University of Applied Sciences and Arts, deputy director of the Institute Industrial IT (inIT), and head of the research group on Intelligent Assistance System at the Fraunhofer Institute of Optronics, System Technologies and Image Exploitation (IOSB). Prior to these appointments, he held positions at RWTH Aachen, Germany (2008 - 2014), University of California (2007 - 2008), San Diego, USA as well as Fraunhofer IPSI, Darmstadt, Germany (2000 - 2006) and was guest researcher at the Toyota Technological Institute, Nagoya, Japan (2017), Nara Institute of Science and Technology, Ikoma, Japan (2013), the Medical University Graz, Austria (WS 2013/14), and the University of Tokyo, Japan (2010). Carsten Röcker is author/editor of 8 books and over 140 journal and conference papers in the fields of intelligent systems, human-computer interaction and technology acceptance. He has an interdisciplinary background with academic degrees in the fields of Computer Science (PhD), Psychology (PhD), Sociology (PhD), Management (Master), Electrical Engineering (Master), Communication Science (Habilitation).

Gerhard Sagerer has been Professor of Applied Informatics at Bielefeld University's Faculty of Technology since 1990. Before that, he studied Informatics at the University of Erlangen-Nürnberg, where he took his doctorate in 1985 and his postdoctoral habilitation in 1990. Gerhard Sagerer's research interests include cognitive and social robotics, human-robot interaction, speech and dialogue systems, and the architecture of intelligent systems. He has served as coordinator and member of the executive board for numerous EU projects (VAMPIRE, COGNIRON) and Collaborative Research Centres (360: Situated Artificial

Communicators, 673: Alignment in Communication). He has been actively engaged in the academic self-administration of Bielefeld University since 1993. From 1993 to 1995 and from 1997 to 2001, he served as Dean of the Faculty of Technology. From 2001 to 2007, he was Vice-President for Studies and Teaching. Since 2009 Gerhard Sagerer has been rector of the university. From October 2015 until September 2018 he was president of the Rectors' Conference of North Rhine-Westphalia (LRK). Since October 2018 he is the LRK's vice-president.

Ingeborg Schramm-Wölk became president of Bielefeld University of Applied Sciences in September 2015 and is the chairwoman of Campus OWL e.V., a network of the five public higher education institutions in East Westphalia-Lippe. Furthermore, she is serving on several other boards, such as the German Academic Exchange Service (DAAD). Prior to joining Bielefeld University of Applied Sciences, she was Professor of Informatics and Biology at the Rhine-Waal University of Applied Sciences. In her capacity as Founding Dean and Dean she was responsible for the development and organisation of the Faculty of Communication and Environment with an international orientation and the planning of mainly English-language study programmes. After her PhD at the Medical Faculty of the Charité, Humboldt-University Berlin as Dr. rer. medic., she became Professor of Programming at the Beuth University and later Professor of Informatics and Multimedia at the Anhalt University of Applied Sciences. Professor Schramm-Wölk earned a Diplom in Biology (equivalent to Master of Science) from the University of Tübingen and the Freie Universität Berlin (FU Berlin) as well as a Diplom in Medical Informatics from the Technical University of Applied Sciences Berlin, now Beuth University of Applied Sciences Berlin. For several years, she worked as research associate at the Charité Universitätsmedizin Berlin and as IT-developer and project manager in different corporations.

Leon Schumacher is Professor and Chair, Agricultural Systems Management Program, Division of Food Science and Biological Engineering, University of Missouri-Columbia. His research at the University of Missouri has focused on energy conservation and the use of alternative fuels for diesel engines. He has demonstrated to Missouri farmers that standard maintenance procedures to the engine and proper ballasting of farm tractors can increase their efficiency, saving them both time and money (and energy). Since 1992 he has researched the use of a biodegradable, non-toxic, cleaner burning fuel for diesel engines-biodiesel. Biodiesel is made from mono alkyl esters of long chain fatty acids. The fuel is derived from renewable lipid sources. Operationally, it performs similar to low-sulfur diesel (LSD) in terms of power, torque, and fuel economy. Biodiesel has good lubricity when compared to LSD. He anticipates that economically, the production and use of biodiesel will enhance both rural and urban economies. Ph.D. Iowa State University, 1987, Agricultural Education and Agricultural Mechanization; M.S. North Dakota State University, 1984, Agricultural Education and Vocational Education; B.S. North Dakota State University, 1977, Agricultural Education and Physical Sciences

Katja Simons is the Executive Director of the New York liaison office of Campus OWL, a network of five higher education institutions in Eastern Westphalia (Germany). In this role she promotes study and research opportunities and supports collaborations with North American partners. Previously she was Executive Director at the German University Alliance and Program Director at the German Academic Exchange Service (DAAD) in New York as well as Summit Manager for Generation Study Abroad at IIE. Katja studied sociology, political science, and history at the Universities of Freiburg and Berlin (FU Berlin), and received her doctorate at the Ruhr-University Bochum in 2002.

Lena Weber (Dr. phil., University of Paderborn) is research assistant in Sociology at the Department of Arts and Humanities, University of Paderborn (Paderborn). She studied Social Sciences and Sociology at the Justus-Liebig University (Gießen, Germany), University of Bielefeld (Germany) and University of Paris VII Denis-Diderot (France). In 2016 she was awarded a PhD in Sociology from the Department of Arts and Humanities at the University of Paderborn (Germany). She was for research visits in England and Sweden (2012). Her research areas are Sociology of Work and Organization (digitalization, digital organizations, Care work, elderly care), Gender Research, Methods and Methodology of qualitative research, Social Sciences of Higher Education and Science. Lena is recently engaged in a project on the relationship of digital technologies, care work and new gender attribution processes of gender in the context of care work, especially elderly home care. The starting point of my research intention is the Dutch community care organization "Buurtzorg". This mobile nursing service provider implemented digital work organization as an alternative to former hierarchical organizations. Through an own intranet (Buurtzorgweb) the nurses are small self-managed teams.

Nadir Weibel is a Research Scientist and Lecturer in the Department of Computer Science and Engineering at the University of California San Diego (UCSD), where he is teaching human-computer interaction and ubiquitous computing, and a Research Health Science Specialist at the VA San Diego Health Systems (VASDHS). His research is situated at the intersection of computer science, cognitive science, communication, health and social sciences. He investigates tools, techniques and infrastructure supporting the deployment of innovative interactive multimodal and tangible devices in context, and studies the cognitive consequences of the introduction of this technology in the everyday life. Current work focuses on interactive physical-digital systems that exploit pen-based and touch-based devices, depth-cameras, wearable and mobile devices, in the setting of critical populations and in particular applied to healthcare. Dr Weibel holds a master in Computer Science and Engineering and a PhD from ETH Zurich. He joined the University of California San Diego in October 2009, as a Postdoctoral Researcher in the Distributed Cognition and Human Computer Interaction Lab and moved to the faculty of the Department of Computer Science and Engineering at UCSD and the VASDHS in Summer 2013. He is a member of the Ubiquitous Computing and Social Dynamics Research Group at UCSD and the Center for Wireless and Population Health Systems at the California

Institute for Telecommunications and Information Technology (Calit2). His work has been funded by the Swiss National Science Foundation, the European Union, Boeing, the US NSF, NIH and AHRQ.

Christoph Winkler is the endowed professor and founding program director of the Hynes Institute for Entrepreneurship & Innovation at Iona College in New Rochelle, NY. As a well-respected leader in entrepreneurship education, Dr. Winkler has been pushing boundaries and re-envisioning traditional academic practices in higher education. He presently serves as vice president of Pedagogy and Learning at The United States Association for Small Business and Entrepreneurship® (USASBE), as well as the co-executive editor of the journal Entrepreneurship Education and Pedagogy (EE&P), playing a pivotal role in advancing the field of entrepreneurship education. Dr. Winkler received his Ph.D. in educational psychology from the Graduate School and University Center of the City University of New York (CUNY) and currently holds a joint faculty appointment at Iona College's School of Arts & Science (Psychology) and the LaPenta School of Business (Management).

Sebastian Wrede is head of the research group on Cognitive Systems Engineering established in 2009 by the Cluster of Excellence in Cognitive Interaction Technology CITEC (EXC 277) and Bielefeld University's Faculty of Technology. The group aims at improved engineering methods and software architectures to support the modeling, integration, development and analysis of cognitive systems with advanced human-robot-interaction capabilities. Dr. Wrede is principle investigator in different (inter-)national projects exploring model-based control of compliant human-robot interaction such as the H2020 RobMoSys ITP VeriComp or the H2020 CogIMon EU project. He coordinated the BMBF project FlexiMiR in the framework of the leading-edge cluster on intelligent technical systems (it's owl) exploring human-robot interaction for the configuration of flexible assembly systems in Industry 4.0 environments. Since January 2019 he serves as the managing director of the Research Institute for Cognition and Robotics (CoR-Lab) at Bielefeld University, Germany.

Burkhard Wrenger is Prof. for Autonomous Sensor Systems at OWL University of Applied Sciences and Arts. His teaching and research are dedicated to the application of intelligent and autonomous sensors and the analysis of the data acquired by sensors. In 2011, he introduced multicopter drones as a replacement for tethered and non-tethered drones in meteorology and environmental monitoring. In the meantime, multicopter drones have become standard tools for these application areas. Another relevant field of application of autonomous sensors is agriculture. It is part of the digital transformation process in agriculture and leads to a big shift in the work of nowadays farmers and the education of young farmers. Therefore, science and education are closely related in his work. Between 2011 and 2017 he was Vice President Teaching and Internationalisation at OWL University of Applied Sciences & Arts, since 2018 he is head of the study program Precision Farming. PhD: Univ. of Rostock, 1997, Physics; Diploma: Univ. of Bielefeld, 1992, Physics.