Bernstein Center for Computational Neuroscience Berlin
Berlin School of Mind and Brain
Science of Intelligence

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Program Overview

**Keynote Lecture**

*Prof. Dr. Christoph Lütge – “Ethics of AI with a View on Business”*

Wednesday, 10 March, 17:30 – 19:00

**Good Scientific Practice**

*Prof. Dr. Ulrich Dirnagl – “Doing good: What Good Scientific Practice is, and why it is good for YOU”*

Thursday, 11 March, 9:00 – 12:30

**Joint Sessions**

Monday, 8 March, 9:00 – 17:00
Wednesday, 10 March, 9:00 – 17:00
Thursday, 11 March, 9:00 – 17:00
Friday, 12 March, 9:00 – 17:00

**Empirical / Philosophical Track**

Tuesday, 9 March, 9:00 – 17:00

**Group Work**

Thursday, 11 March, 13:30 – 17:00

**Social Event on Wonder.me**

Monday, 8 March, 17:30 – 19:00
A recent survey in Germany has found that people increasingly like to see AI in a variety of application fields. Although this is most probably due to the multiple opportunities AI can offer, serious, especially ethical, issues arise with its use. While these problems are usually addressed with ethical guidelines, the AI4EO project at the TUM IEAI, for instance, revealed that many scientists find it hard to apply them in practice. One of the main challenges for ethics in AI will therefore be how to develop tangible and applicable recommendations that can be directly used and implemented in AI systems.
Prof. Dr. Christoph Lütge

1999 – Doctorate in philosophy (Dr. phil., "summa cum laude")
1999-2010 – Assistant professor, University of Munich
2003 – Visiting Professor, Venice International University
2005 – Habilitation in philosophy, University of Munich
2007-2008 – Acting Professor of Management, Business Ethics and Social Change at Witten/Herdecke University
2007 – Heisenberg Fellowship, German Research Foundation (DFG)
2008-2010 – Acting Professor of Philosophy, TU Braunschweig
since 2010 – Full Professor and Chair of Business Ethics, Technische Universität München
2015 – Guest Professor, Taipei and Kyoto
2019 – Visiting Researcher, Harvard University (Berkman Klein Center for Internet and Society)
since 2020 – Distinguished Visiting Professor, University of Tokyo
Program

Monday, 8 March 2021

Introduction and Joint Sessions

10:30 – 11:00 Welcome & Distribution of Group Work Topics

11:00 – 17:00 Prof. Dr. T. Schmidt (Humboldt-Universität zu Berlin)

Ethics: Thinking About Right and Wrong

The three Monday sessions will provide a survey of important issues in normative ethics and in the theory of moral responsibility. Moreover, they will introduce basic ethical concepts and theories. The overall aim is to give a reasonably broad overview over and, at the same time, to enable sufficiently deep acquaintance with important conceptual and argumentative tools employing which facilitates discussing ethical issues in a methodologically controlled way. The topics of the three Monday sessions will be:

- Ethics: Mapping the Field
- Core Issues in Normative Ethics
- Moral Responsibility
Tuesday, 9 March 2021

Please note, when registering you had to decide which track you would like to attend: either the philosophical or the empirical track. You cannot switch between the tracks.

**Philosophical Track P1**

9:00 – 17:00 **Prof. Dr. T. Schmidt** (Humboldt-Universität zu Berlin)

*Philosophical Ethics: Objectivity and Principles*

In the Philosophical Track on Tuesday, we will discuss selected topics in philosophical ethics (including metaethics) and selected problems at the interface between philosophical ethics and the empirical sciences. The four sessions in the Philosophical Track on Tuesday are meant for those of you who are interested in a somewhat more in-depth treatment of the philosophical side of issues related to the overall theme of the Winter School. The topics of the sessions will be:

- Moral Objectivity
- Ethics of Neuroscience/Neuroscience of Ethics
- Moral Principles
- Moral Obligation

**Empirical Track E1**

09:00 - 10:30 **Dr. P. Krause** (Charité - Universitätsmedizin Berlin)

*Deep Brain Stimulation and Ethics*

Deep Brain stimulation (DBS) is an established and relatively safe treatment for movement disorders like PD, dystonia and tremor. In neuropsychiatric diseases such as major depression, OCD and anorexia nervosa DBS is still at an experimental stage. Despite its therapeutic successes in so far established indications and low serious side effect rates, surgical brain intervention bears potential high risks with regard to physical integrity. DBS needs a multi-disciplinary team, specialized centers, and ethical awareness not only in the clinical application but also the experimental indications of the method.
11:00 – 12:30 Dr. M. Haase (Technische Universität Berlin)

Data Protection and Data Security: A Lawyer’s View on Personal Clinical Information

This lecture will deal with basic principles on European data protection and data security law, including the ethical and philosophical reasoning enshrined in the law. Specific attention will be attributed to the General Data Protection Regulation.

Literature:

13:30 – 15:00 Dr. A. Kuhlen (Humboldt-Universität zu Berlin)

Ethics Committee: Practical Work of a Local Ethics Committee

Institutional ethics committees evaluate research proposals with respect to the ethical aspects of conducting studies on human subjects. This talk will give an introduction to the working principles of ethics committees on the example of the ethics committee established since 2009 at the Department of Psychology at the Humboldt-Universität zu Berlin. I will discuss ethical relevant aspects of a research project, introduce guidelines by which to judge these, and will give information on the procedures of submitting a research proposal for ethical evaluation.

15:30 – 17:00 Prof. Dr. L. Lewejohann (Freie Universität Berlin)

Animal Experiments – Practical Implications

For animals tested in scientific experiments, we must assume a degree of severity caused by the experiment. As an important ethical requirement, the degree of severity has to be kept as low as possible to counteract any potential discomfort. This can be achieved by improving the experimental design as well as by improving the housing conditions of the experimental animals.
Joint Sessions
09:00 – 10:30 Prof. Dr. A. Beck
(Health and Medical University Potsdam)

Ethical Issues of Neuroenhancement

Cognitive neuroenhancement as being the improvement of intellectual capabilities via psychoactive substances has been debated for more than a decade. Currently, more than 100 pharmaceuticals are being investigated or already offered as "cognitive enhancers". One important aspect in the current debate regards the ethical implications of neuroenhancement with the following core questions:

1. Are "cognitive enhancers" only advantageous or do also deficits occur?
2. Is there a risk of addiction and further medical risks?
3. What consequences can arise from (a gentle pressure to use) cognitive enhancers?

Literature:

11:00 – 12:30 Prof. Dr. V. Hafner (Humboldt-Universität zu Berlin)

Robot Ethics

As robots are becoming more and more autonomous and also part of our everyday lives, there is a growing need to discuss the arising ethical questions. In this talk, I will give an overview on the current state of research in robotics, in particular on artificial agents that are able to learn in an open-ended manner, anticipate the consequences of their behaviour and make decisions.
13:30 – 15:00 Dr. P. Kellmeyer (Universität Freiburg)
*Ethics of AI in Neuroscience: Brain-Computer Interfaces*

The convergence of microsensor technology, machine learning with artificial neural networks and progress in robotics enables a new generation of highly adaptive and closed-loop brain-computer interfaces (BCIs). For clinical applications, for example for paralyzed patients in neurology, these AI-based BCIs promise substantial advances in assistive care and mobility. At the same time, however, the merging of AI and neurotechnology is also driving research and development in the consumer neurotechnology domain. These developments raise important ethical, legal and societal questions, both at the level of individual patients or consumers, at the relational level between health care professionals and patients as well as regarding broader questions, such as the governance of brain data from neurotechnological devices. In his talk, Dr Kellmeyer will give an overview of current developments in clinical and consumer BCIs and address the international ethics debate around BCI technology.

15:30 – 17:00 Prof. Dr. J.-D. Haynes (Charité - Universitätsmedizin Berlin)
*Brain Reading*

The ability to read another person’s thoughts has always exerted an enormous fascination. Recently, new brain imaging technology has emerged that might make it possible to one day read a person’s thoughts directly from their brain activity. This novel approach is referred to as “brain reading” or the “decoding of mental states.” This lecture will provide a general outline of the field, and will then proceed to discuss its limitations, its potential applications, and also certain ethical issues that brain reading raises.

**Literature:**

Good Scientific Practice

09:00 – 12:30 Prof. Dr. U. Dirnagl (Charité - Universitätsmedizin Berlin)

Doing good: What Good Scientific Practice is, and why it is good for YOU

Conversation or teaching on Good Scientific Practice (GSP) is usually confined to a code of rules and recommendation aiming at preventing research misconduct (falsification, fabrication, plagiarism). While it is true that GSP prevents misconduct, it is much more. GSP is about how we plan and conduct research, how we record, analyze, report and disseminate its results. GSP makes our research trustworthy, useful, and ethical. We will discuss a conceptual framework for the responsible advancement of knowledge which forms the basis for GSP, and expose logical, ethical, and selfish reasons why you should care about GSP.

Literature:
Research integrity is much more than misconduct. Nature 570, 5 (2019).


Group Work

These sessions are only for participants who have indicated that they would like to receive credit for the event.

13:30 – 15:00 Group Work Preparation

Please prepare for this by reading your corresponding paper (found on Moodle in the respective folder). Prepare a short and concise presentation (max. 5 mins!) to be held in the plenary afterwards.

15:30 – 17:00 Group Work Presentation
Friday, 12 March 2021

Joint Sessions and Closing

9:00 - 10:30 Prof. Dr. K. Günther (Goethe-Universität Frankfurt am Main)

*Law’s Function for the Collective Brain*

The lecture will present and discuss theories of the evolution of normativity, in particular moral and legal normativity. The focus will be on theories about the interdependency of group size, brain development, economic advantages and the emergence of universal norms and sanctions (e.g. "altruistic punishment"), as they have been presented by Tomasello, Henrich, Dunbar and Boyd. (Legal) normativity can be understood as having an important function for the evolution of a collective human brain – in opposition to reductionist theories which consider normativity as a mere "illusion" or "facade", compared to laws of human biology.

11:00 – 12:30 Prof. Dr. K. Günther (Goethe-Universität Frankfurt am Main)

*Neurocriminology and the Mindset of Criminal Law*

The lecture shall present short summaries (1) of the standard conception of legal responsibility in criminal law, and (2) of recent discoveries of neurocriminology, in particular research on the interdependency of genetic, environmental and epigenetic factors which could trigger aggressive, anti-social behavior. The focus will be on the studies of Glenn and Raine.

13:30 – 15:00 Prof. Dr. G. Sartori (University of Padova)

*A Neuroscientist in the Courtroom*

- TBD -

15:30 – 17:00 Closing
Speakers

Anne Beck
Diploma in Psychology at Free University Berlin (2006)
PhD (Dr. rer. medic., "summa cum laude", tutor: Prof. Andreas Heinz) at the Charité – Universitätsmedizin Berlin (2011)
Approbation as Psychological Psychotherapy with focus on Behavioral Therapy at DGVT (2018)
‘Master of Advanced Studies Psychotherapy with focus on Behavioral Therapy’ at University of Bern (2019)
Clinical and Senior Psychologist, Department of Psychiatry and Psychotherapy, Charité - Universitätsmedizin Berlin (2019-2020)
Leader of the research group ‘Emotional Neuroscience’, Department of Psychiatry and Psychotherapy, Charité – Universitätsmedizin Berlin (2010-2020)
Professor for Clinical Psychology and Psychotherapy at Health and Medical University Potsdam (since 2020)

Ulrich Dirnagl
Director, Department of Experimental Neurology, Charité - Universitätsmedizin Berlin, Germany
Founding Director, QUEST Center for Transforming Biomedical Research, Berlin Institute of Health, Germany
Research fields: Stroke, cerebral blood flow regulation, brain imaging, good scientific practice

Klaus Günther
Studied Philosophy and Law in Frankfurt am Main, Graduation (1983)
Doctoral degree in Law (1987)
Scientific staff member in Frankfurt am Main (1983-1996)
Habilitation (1997)
Visiting Professor for Comparative Criminal Law at Buffalo Law School, State University of New York (2000)
Visiting Fellow at Corpus Christi College Oxford (2001)
Visiting Professor at London School of Economics, Department of Law (2012)
Visiting Professor SciencesPo Paris, Deparment of Law (2016)
Current position: Professor of Theory of Law, Criminal Law, and Criminal Trial Law at Goethe-Universität Frankfurt am Main
Research fields: philosophy of law, theory of responsibility, globalization, law as literature
**Martin Haase**  
Studies of Law in Hannover, Cergy-Pontoise (France) and Oslo (Norway)  
Scientific staff member at the Institute for Legal Informatics at Gottfried Wilhelm Leibniz Universität Hannover (2007-2014)  
Lecturer at the Technical University of Berlin (Private, Trade, Corporate and Innovation Law) (since 2014)  
Paralegal Scientific Associate at Dierks+Company Rechtsanwaltsgesellschaft mbH (since 2018)

**Verena Hafner**  
Master with distinction in Computer Science and AI, University of Sussex, UK  
PhD, Artificial Intelligence Lab, University of Zurich, Switzerland  
Associate Researcher, Developmental Robotics Group, Sony Computer Science Labs, Paris, France  
Programme committee member of the DFG Priority Programme The Active Self (SPP 2134)  
PI in the DFG Cluster of Excellence “Science of Intelligence”  
PI in the EU H2020 project ROMI on Robotics for Microfarms  
PI in the EU H2020 project HIVEOPOLIS  
Research interests: sensorimotor interaction and learning, joint attention, internal models, exploration strategies

**John-Dylan Haynes**  
Dr. rer. nat. (PhD) in Psychology at Bremen University  
Research Positions in Magdeburg, Plymouth, London, Leipzig (among others)  
Professor at Bernstein Center for Computational Neuroscience and Charité - Universitätsmedizin Berlin (Theory and Analysis of Large Scale Brain Signals)  
Principal Investigator in the Cluster of Excellence NeuroCure and in the Berlin School of Mind and Brain  
Director of the Berlin Center for Advanced Neuroimaging  
Research fields: neuroimaging, decision making, neuroethics

**Philipp Kellmeyer**  
Studies of Human Medicine in Heidelberg and Zurich  
Master of Philosophy, University of Cambridge  
Neurologist and Head of “Neuroethics and AI Ethics” Lab, Department of Neurosurgery, University Medical Center Freiburg  
Scientific member of the BrainLinks-BrainTools cluster of excellence, University of Freiburg  
Research Fellow in the “Responsible Artificial Intelligence” research group, Freiburg Institute for Advanced Studies (FRIAS)  
Affiliate of the Institute for Biomedical Ethics and History of Medicine, University of Zurich  
Research fields: neuroimaging, translational neurotechnology, challenges of neurotechnology, big data and artificial intelligence in medicine and research
**Patricia Krause**  
Studies of Human Medicine at Charité - Universitätsmedizin Berlin  
Approbation (MD) and specialist registrar in the Department of Neurology, focus on Movement Disorders, Charité - Universitätsmedizin Berlin (2008)  
Doctoral Thesis (2011)  
Qualification as medical specialist in neurology and senior physician in the Department of Neurology, Section of Movement Disorders and Neuromodulation (2019)

**Anna Kuhlen**  
Studied Psychology and Experimental Psychology at Humboldt-Universität and Stony Brook University  
PhD in Stony Brook, NY, USA (2010)  
Postdoctoral fellow at the Center for Integrative Life Sciences, Berlin, and the Berlin School of Mind and Brain  
Since 2015 scientific staff member of the research group Neurocognitive Psychology at Humboldt-Universität Berlin  
Member of the ethics committee at the department of psychology, Humboldt-Universität Berlin  
Research interests: cognitive and neural architecture supporting interpersonal communication and social interaction

**Lars Lewejohann**  
Dr. rer. nat in Biology at WWU Münster (1999)  
Research Assistant at the Institute for Neuro- and Behavioral Biology, WWU Münster (2004-2013)  
Managing Director, Otto Creutzfeldt Center for Cognitive and Behavioral Neuroscience, WWU Münster (2006-2010)  
Interim Professor in Behavioral Biology in Osnabrück and Göttingen (2013-2017)  
Since 2017 Professor for Refinement in Laboratory Animal Science at Freie Universität Berlin and Head of Laboratory Animal Science at the German Center for Protection of Laboratory Animals at the BfR, Berlin  
Research interests: behavioral phenotyping, cognition and emotion, stress, refinement, differences in behavior, pre- and postnatal effects on physiology and behavior

**Giuseppe Sartori**  
- TBD -

**Thomas Schmidt**  
Studied Philosophy, Mathematics and Economics in Göttingen and Oxford  
Professor of Philosophy at Humboldt-Universität (Chair for Moral Philosophy)  
Visiting Positions at Münster, St Andrews and Zurich  
Principal Investigator at the Berlin School of Mind and Brain  
Research fields: metaethics (objectivity, normativity, moral epistemology), normative ethics (deontology, moral principles, ethical pluralism)