Institut für Philosophie
Seniorprofessur für Theoretische Philosophie
Im Rahmen des Forschungskolloquiums laden wir ein zum Vortrag von

Prof. Gerhard Schurz
(HHU Düsseldorf)

Dienstag, 08.11.2022
18:00 – 19:30 Uhr, Raum: 24.53 01.81

Justification of Logics - Epistemology or Metaphysics? Both!

Abstract: In recent work I tried to show that systems of non-classical logic can be translated into systems of (extended) classical logic, under preservation of meaning. This implies that the justification of a system of logic has an epistemological and a metaphysical dimension:
In the epistemological dimension, it is asked: Which system of logic is most universal in regard to its power of representation? Since non-classical logics can be translated into classical logic, I argue that in this dimension classical logic is preferable, in particular as a universal meta-logic.
In the metaphysical dimension it is asked: Which system of logical operators - whether they are represented in classical logic or in a non-classical logic - is most adequate for describing a particular domain? This is a question of an inductive metaphysics that involves, beyond simplicity considerations, abductive inferences from empirically given data.

Speaker: Gerhard Schurz is a Senior professor of philosophy at the University of Düsseldorf. From 3/2002 till 2/2022 he was the Chair of Theoretical Philosophy at HHU. Previously, he was an associate professor at the University of Salzburg and a visiting professor at the University of California, Irvine and Yale University. His research interests include philosophy of science, logic, epistemology, and metaethics. Gerhard Schurz is the author of numerous articles in international journals. His book publications include: *The Is-Ought Problem* (Kluwer 1997), *Einführung in die Wissenschaftstheorie* (Wissenschaftliche Buchgesellschaft 2004, 4th ed. 2014), *Evolution in Natur und Kultur* (Spektrum Akademischer Verlag 2011), *Philosophy of Science: A Unified Approach* (Routledge 2014), Wahrscheinlichkeit (De Gruyter 2015), Logik (de Gruyter 2018, 2nd ed. 2020), Hume's Problem Solved: The Optimality of Meta-Induction (MIT 2019), Erkenntnistheorie (Metzler 2021).

Nina Nicolin, BA
(HHU Düsseldorf)

19:30 – 21:00 Uhr, Raum: 24.53 01.81

Trope-Ontological Interpretation of Quantum Field Theory – A Case Study of Inductive Metaphysics

Abstract: In quantum field theory (QFT), Kuhlmann (2010) suggested to interpret particles as bundles of tropes. Metaphysics, so far, lacks an empirical foundation for a trope ontological approach. In the framework of inductive metaphysics (IM), the findings derived from empirical data are part of an essential basis for theory formation. If one wants to justify trope ontology of QFT in the sense of the IM programme (and not merely 'purely metaphysically'), it must be shown that a 'bundle understanding' of particles can be justified by empirical data. Therefore, a metaphysical discussion of the 'Cheshire Cat Effect' demonstrated in recent experiments, which show that one can separate a particle's properties from each other in a matter-wave interferometer, is relevant for trope theoretical interpretation of quantum particles.

Speaker: Nina Nicolin studies physics and philosophy at HHU, Düsseldorf. Currently, she is a research fellow of the DFG research group Inductive Metaphysics at the institute of philosophy at HHU. Her research interests are in the field of philosophy of physics, philosophy of science and metaphysics.