Prof. Christian Wüthrich (christian.wuthrich@unige.ch)
Dr. Claudio Calosi (claudio.calosi@unige.ch)

Département de philosophie
Université de Genève

Fundamentality between Metaphysics and Physics
Syllabus

Se 2h. A Me 12-14
Salle PHIL006, bâtiment des Philosophes
Modules: MA3

Description. Talk of fundamentality is ubiquitous in philosophy and the empirical sciences, metaphysics and physics in particular. Usually it is supposed to capture the intuitive idea that some items are basic, and everything else is built up from---or can be explained in terms of---those basic items. The seminar aims at addressing the recently flourishing literature on fundamentality. In the first part, we will address general questions about fundamentality: can it be defined, or should we take it as a primitive notion? What theoretical work is fundamentality supposed to do? What entities, if any, are eligible for being fundamental? How does fundamentality relate to some other crucial notions, e.g. supervenience, dependence, invariance? Is there a fundamental level?, and so on. In the second part, we will address specific questions about the role of fundamentality in physics, such as: what is it for a physical theory or a physical law to be fundamental? Does physics provide any evidence for a natural hierarchy of different levels of fundamentality?

(Tentative) Schedule

Sept. 19 **General Introduction.** No Reading.

Sept. 26 **Background.** Schaffer, J. 2009. On what grounds what. In David J. Chalmers, David Manley & Ryan Wasserman (eds.), *Metametaphysics: New Essays on the Foundations of Ontology*. Oxford, OUP, pp. 347-383.

Oct. 3 **Defining Absolute Fundamentality.** Bennett, K. 2017. *Making Things Up*, Oxford, OUP: ch. 5.

Oct. 10 **Features of Fundamentality. Well-Foundedness:** Cameron, C. 2008. Turtles all the way down. *Philosophical Quarterly*, 58: 1-14.

Oct. 17 **Features of Fundamentality. Well-Foundedness:** Morganti, M. 2015. Dependence, justification and explanation: Must reality be well-founded? *Erkenntnis* 80: 555-572.

Oct. 24 **Features of Fundamentality: Well-Foundedness:** Bliss, R. 2013. Viciousness and the structure of reality. *Philosophical Studies*, 166. 399-418.

Oct. 31 **Relative Fundamentality:** Guest Lecture Fabrice Correia. Reading: Bennett, K. 2017. *Making Things Up*, Oxford, OUP: ch. 6, pp. 137-162. Supplementary reading: Correia, F. forthcoming. The logic of relative fundamentality. *Synthese*.

Nov. 7 NO SESSION (semaine de lecture)

Nov. 14 **Fundamentality in Physics. Introduction.** Healey, R. 2017. *The Quantum Revolution in Philosophy*, Oxford, OUP: ch. 13

Nov. 21 **Fundamentality in Physics. Physical Theories.** Guest Lecture Karen Crowther. Reading: Crowther, K. MS. *When Do We Stop Digging? Conditions on a Fundamental Theory of Physics.*

Nov. 28 **Fundamentality in Physics. Laws and Modality.** Hoefer, C. and Smeenk, C. 2016. Philosophy of the Physical Science. In Humphreys, P. (Ed). *The Oxford Handbook of Philosophy of Science*, Oxford, OUP.

Dec. 5 **Fundamentality in Physics. Laws.** Hoefer, C. 2003. For fundamentalism. *Philosophy of Science* 70: 1041-1412.

Dec. 12 **Fundamentality in Physics. The Fundamentality *of* Physics.** Ney, A. MS. *Physics and Fundamentality*. Available at: https://philpapers.org/archive/ALYPAF.pdf

Dec. 19, NEW TIME AND ROOM: 18:15-19:45, L208, **Fundamentality in Physics. Against Fundamentality.** Guest Lecture Kerry McKenzie. Reading: McKenzie, K. 2011. Arguing against fundamentality. *Studies in History and Philosophy of Modern Physics* 42: 244-255.