

## Ontology Meets Science

Claudio Calosi [CC]<sup>1</sup> & Robert Michels [RM]<sup>2</sup>

<sup>1</sup>claudio.calosi@unige.ch; <sup>2</sup>robert.michels@unige.ch

[MA3, Thursdays, 10.15-11.45 am, U365]

Moodle Link: <https://moodle.unige.ch/course/view.php?id=8829>

The seminar addresses the relation between formal ontology and the metaphysics of science. In particular, we will investigate some alleged formal ontological notions---namely, identity, essence, parthood, and dependence---and their possible applications to a vast range of scientific contexts, with a focus on physics and biology.

**Week 1, Sept. 24: Introduction. Formal Ontology and Its Applications** (CC & RM---No reading)

**Week 2, Oct. 1: Mereology 1** (CC) Suggested Reading\*: Varzi, A. 2016. Mereology, *SEP*. At: <https://plato.stanford.edu/entries/mereology/>

**Week 3, Oct. 8: Mereology 2** Torre, S. 2015. Restricted Diachronic Composition and Special Relativity, *British Journal for the Philosophy of Science* 66 (2): 35-255.

**Week 4, Oct. 15: Mereology 3** Petersen, S. 2019. Composition as Pattern. *Philosophical Studies* 176 (5): 1119-1139.

**Week 5, Oct. 22: Identity 1** (RM) Suggested Reading \* – Quine, W.V.O. 1950. Identity, Ostention, Hypostasis. *Journal of Philosophy* 47 (22): 621-633.

**Week 6, Oct. 29: Identity 2** Müller, F. 2015. The Rise of Relationals. *Mind* 124 (493): 201-237.

**Week 7, Nov. 12: Identity 3** (Guest Lecture: Jonas Waechter) Suggested Reading\*: French, S., and Krause, D. 2006. *Identity in Physics*. Oxford: OUP [Ch. 4].

**Week 8, Nov. 19: Essence 1** (RM) Suggested Reading\*: Mackie, P. 2006. *How Things Might Have Been*. Oxford, OUP [Ch. 1].

**Week 9, Nov. 2: Essence 2** Wilson et al. 2007. When Traditional Essentialism Fails: Biological Natural Kinds, *Philosophical Topics* 35 (1-2): 189-215.

**Week 10, Dec. 3: Essence 3** Ereshefsky 2010. What's Wrong with the New Biological Essentialism, *Philosophy of Science* 77 (5): 674-685.

**Week 11, Dec. 10: Dependence 1** (Guest Lecture: Fabrice Correia). Suggested Reading\*: Correia, F. 2008. Ontological Dependence, *Philosophy Compass* 5: 1013-1032.

**Week 12, Dec.17: Dependence 2** McKenzie, K. 2014. Priority and Particle Physics. *British Journal for the Philosophy of Science* 65(2): 353-380.