

## Centro de Investigação em Matemática e Aplicações Departamento de Matemática Programa de Doutoramento em Matemática

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## Sets as Properties

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Abstract According to the *iterative conception* of set, sets are "built in stages" in a process to be pursued "as far as possible". It is notoriously difficult to make sense of the "building" analogy unless the mind-dependence of sets is accepted. In this talk I will sketch the sets as properties view, according to which set theory is nothing but a part of cumulative (modal) type theory. I will offer some reasons for thinking that the sets as properties view, broadly based on (Linnebo & Rayo 2012, Degen & Johannsen 2000) delivers a more satisfactory realist understanding of the iterative conception, and its "building" analogy, than those presently available. In addition, I will address Button and Trueman's (2022) "no bootstrapping" objection to the sets as properties view, and show how my reply paves the way to a neoRussellian form of logicism about set theory.

**Keywords:** Set theory, cumulative type theory, higher-orderism, iterative conception, logicism.

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