University of Crete
Departments of Mathematics and Applied Mathematics

Analysis Seminar

1:15pm, Tuesday, 29 November, 2016
Room A-303

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Large cardinal axioms

The axiomatic system of ZFC set theory is nowadays generally accepted as the current foundation of mathematics. However, and despite the expressive and deductive power of this system, it is widely known that many problems and questions, coming from diverse mathematical areas, are (provably) independent from the ZFC axioms. In the direction of reinforcing this basic theory with additional assumptions, one dominant family of candidates for new axioms consists of the so-called large cardinal axioms. These postulates, which have been intensively studied during the last decades, assert, roughly speaking, the existence of stronger and stronger forms of infinity, thus creating a hierarchy of very potent assumptions beyond ZFC. In this talk, we will present (some of) the large cardinal axioms, while underlining their (very useful and) powerful reflection properties. Moreover, we will mention some connections and applications of these axioms in the context of other mathematical areas.