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Seminar

Approximation by bounded mappings of Sobolev mappings into complete manifolds

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Abstract

Smooth maps are known to be dense in a Sobolev space of integrability p from the unit ball of dimension m into a manifold N if and only if either the integrability exponent p is critical or supercritical or if the target manifold has the homotopy group of order integer part of p being trivial. We are interested in the case where N is not anymore bounded. In this case, the major question is whether Sobolev maps taking their value in a compact subset are dense. Surprisingly, this is not anymore the case already when p is in {2, …, m}. We characterize by a new "trimming condition" the manifolds for which density holds. This trimming condition is also necessary for every Sobolev map to have a weak-bounded approximation.

This is joint work with Augusto C. Ponce (Louvain-la-Neuve, Belgium) and Pierre Bousquet (Toulouse, France).

Date :	November 28, 2016 (Monday)
Time :	10:00am – 11:00am
Venue :	Room 222, Lady Shaw Building, The Chinese University of Hong Kong

All are Welcome