

Gauge compact indices of topological spaces

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PhD Candidate

Date: 6th May, 2015
Time: 3.30 to 4.30 pm
Venue: Journal Room (NIE7-03-16)

Abstract

Dewi will present about the gauge compact index of a space, which in certain sense, measures the degree for a space to be gauge compact. A gauge on a topological space is an assignment of an open neighborhood to each element in the space. The notion of gauges was first introduced in real analysis to give a Riemann type definition of Henstock-Kurzweil integral. Recently, gauges were used to obtain a new characterization of Baire class one function. In an earlier paper, Zhao investigated some topological properties which can be characterized by means of gauges, in particular the gauge compactness.

She will focus on the spaces with finite gauge compact indices. The main results include: (i) a Hausdorff space has a finite gauge index iff it is a finite space; (ii) a T1 space has gauge compact index 2 iff it is a singleton set; (iii) the Scott space of an algebraic poset has gauge compact index 2 iff it has a linking element; (iv) X is hyperconnected, if X is a T1 space with cardinality greater than 2 and has gauge compact index less than or equal to 3.

About the speaker:

Ms Dewi Kartika is a PhD candidate at the MME AG under the supervision of A/P Zhao Dongsheng and Ast/P Ho Weng Kin. Her research interests include general topology and real analysis. She received her Masters in Mathematics from Universitas Gadjah Mada in 2010 under the supervision of A/P Rini Indrati. She worked at the Department of Mathematics and Natural Science, Universitas Gadjah Mada, Indonesia for 4 years before starting her PhD in NIE-NTU.

All are Welcome!