Department of Mathematics Seminar

The homotopy theory of gauge groups of 4-dimensional manifolds

By

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Abstract: Gauge groups, originating from physics, are topological groups describing local symmetries that preserve Lagrangians and are closely linked to hot topics in geometry. A longstanding problem is the classification of gauge groups of 4-dimensional manifolds up to homotopy. While extensive work has been done for the special case of 4-manifolds with trivial fundamental groups, the general case of 4-manifolds with non-trivial fundamental groups is notably more challenging and less explored. In this talk I will present my work on classifying the homotopy types of gauge groups for 4-manifolds with non-trivial fundamental groups, and will outline several future projects in this direction.

Date: February 26, Wednesday, 2025
Time: 13:00 (Turkey)
Place: ZOOM
This is an online seminar. To request the Zoom link, please send a message to turker.ozsari@bilkent.edu.tr