



# FMSP Lectures

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Topic on minimal submanifolds

September 26, October 3, 10, 17, 24, 31 (Thu)

13:00~15:05, Room 002

Abstract: The main theme of these lectures will be theory about minimal submanifolds, which are higher dimensional generalizations of geodesics. A naive motivation is that one tries to understand the geometry from its special submanifolds (minimal, etc.).

For minimal submanifolds, the equations are no longer ODEs, but elliptic PDEs. This increases the difficulties. The study are very good examples for the application of methods from PDEs and calculus of variations. We will try to explain some important results in this theory, which stimulate many of the researches today.

Here are some specific materials we plan to cover: Simon's work based on the second variational formula, Sacks - Uhlenback theorem on the existence of minimal 2-spheres, the theory of stable minimal hypersurfaces by Schoen-Simon-Yau.