

Title: *Invitation to Geometric Analysis*

Abstract: *“Geometric Analysis”, in the sense of this talk, is a mixture of the analysis of partial differential equations and differential geometry. A geometric question, such as finding the shape of a soap film spanning a wire loop, is asking about the solution of a partial differential equation. Only very rarely can solutions be written down explicitly, but we can still hope to prove that solutions do (or do not) exist and, when they do, say something about them. The setting is frequently a global one, on a “manifold” with interesting topology. This is a large and highly active area in modern mathematical research and there are many connections to other fields such as topology, algebraic geometry and mathematical physics. In the talk we will sketch, with variable detail, a few of the famous results in this area.*