



School of  
Mathematics

**September 24, 2018 -  
April 12, 2019**

**The special year will  
include:**

**Weekly Seminars**  
September - April

**Fall Workshop**  
November 5-9, 2018

**Spring Workshop**  
March 4-8, 2019

Institute for Advanced  
Study

School of Mathematics  
1 Einstein Drive  
Princeton, NJ 08540

Phone: 609-734-8100  
Fax: 609-951-4459  
E-mail: [math@math.ias.edu](mailto:math@math.ias.edu)

# Special year on Variational Methods in Geometry

During the 2018-19 academic year, the School will have a special program on Variational Methods in Geometry. Fernando Codá Marques of Princeton University will be the Distinguished Visiting Professor. Richard Schoen and André Neves will be attending in the Fall term.

Geometric variational problems have been studied by mathematicians for more than two centuries. The theory of minimal submanifolds, for instance, was initiated by Lagrange in 1760. Minimization principles have been extremely useful in the solution of various questions in geometry and topology. Most recently, and remarkably, minimax principles and unstable critical points have given us new tools and played a key role in the solution of old problems.

Many basic questions about existence and regularity remain to be solved. Recent advances suggest this is an exciting time for the field. This program will cover a variety of topics, including minimal submanifolds, harmonic maps, Willmore and constant mean curvature surfaces, eigenvalue extremal problems, systolic inequalities, connections with phase transition partial differential equations and others. The goal of the program is to develop further the variational theory of these objects and to find new connections between the themes.

**Applications for the visiting positions will be accepted in fall 2017.**

**The deadline for School applications, as well as for the supporting letters of recommendation, is December 1, 2017.**

**To apply to the School of Mathematics, please go to  
<https://www.mathjobs.org/jobs>.**