# Geometric Analysis and General Relativity

November 21-23, 2019
Lecture Hall, Graduate School of Mathematical Sciences, the University of Tokyo

Program:

Thursday, November 21

9:30–10:30 **Stefan Hollands** (University of Leipzig)
"Stabiltiy of higher dimensional black holes under axi-symmetric perturbations"

10:40–11:40 **Jeff Jauregui** (Union College)
"Recent developments on Bartnik's quasi-local mass"

13:00–14:00 **Marcus Khuri** (Stony Brook University)
"Geometric Inequalities for Quasi-Local Masses"

14:10–15:10 **Miyuki Koiso** (Kyushu University)
"Variational problem for anisotropic surface energy"

15:30–16:30 **Koya Sakakibara** (Kyoto University and RIKEN)
"Numerical analysis of discrete total variation flow with manifold constraint"

Friday, November 22

9:30-10:30 **Peter Topping** (University of Warwick)
"Gradient flows for the harmonic map energy"

10:40-11:40 **Tatsuya Miura** (Tokyo Institute of Technology)
"Some estimates of mean curvature integrals for convex surfaces"

13:00-14:00 **Lan-Hsuan Huang** (University of Connecticut)
"Minimial mass extensions and vacuum stationary"

14:10–15:10 **Asuka Takatsu** (Tokyo Metropolitan University)
"Equality in the logarithmic Sobolev inequality"

15:30–16:30 **Michiaki Onodera** (Tokyo Institute of Technology)
"Foliated solutions to Bernoulli's free boundary problem"

16:40–17:40 **Makoto Nakamura** (Yamagata University)
"On the semilinear partial differential equations in homogeneous and isotropic spacetimes"

Saturday, November 23

9:30–10:30 **Ngo Quoc Anh** (VNU University of Science and University of Tokyo)
"A new point of view on the solutions to the Einstein constraint equations with arbitrary mean curvature"

10:40-11:40 **Richard Schoen** (University of California, Irvine)
"The problem of quasi-local mass in general relativity"

Abstract： https://pc1.math.gakushuin.ac.jp/~yamada/gagr-todai.abstract.pdf

Organizer:
Sumio Yamada (Gakushuin University)
Yosikazu Giga (The University of Tokyo)
Richard Schoen (University of California, Irvine)