



# Oberwolfach Seminar

## Moduli Spaces of Canonical Metrics: Metric Riemannian Geometry and Topology

Organizers: Fei Han, Singapore  
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Date (ID): 23 – 28 November 2025 (2548a)  
Deadline: 15 September 2025

How to “visualize” the shape of a manifold? More technically, how can one describe the topological and geometric structures of manifolds in a quantitative way? In modern differential geometry, a fundamental strategy is to appropriately “normalize” the shape by canonical metrics — the Riemannian metrics that satisfy certain nonlinear partial differential equations. The week-long seminar will be devoted to investigating canonical metrics and address several basic questions, such as

- regularity theory: how well do the canonical metrics perform?
- degeneration theory: which kinds of complications may appear?
- moduli space theory: what does the space of all canonical metrics look like?

The lectures will focus on degenerations and moduli space of Einstein metrics, global structures and compactifications of moduli space, moduli space and global topological invariants, etc. For details, see

[www.mfo.de/occasion/2548a](http://www.mfo.de/occasion/2548a)

The seminar takes place at the Mathematisches Forschungsinstitut Oberwolfach. The Institute covers board and lodging. By the support of the Carl Friedrich von Siemens Foundation travel expenses can be reimbursed up to 150 EUR in average per person (against copies of travel receipts). The number of participants is restricted to 24.

**Applications including title, ID and date** of the intended seminar, together with **one pdf-file attached** containing

- full name and university/institute address, incl. e-mail address
- short CV and publication list
- present position, university
- name of supervisor of Ph.D. thesis
- a short summary of previous work and interest

should be **sent by e-mail** via [seminars@mfo.de](mailto:seminars@mfo.de) until 15 September 2025 to:

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