

GAUGE THEORY AND STRING GEOMETRY

Mini Courses Schedule: 24–28 November 2025

Mini-Course: Title (Lecturer)

- The Atiyah-Floer Conjecture (Aliakbar Daemi)
- $\mathbb{Z}/2$ Harmonic 1-Forms and Related Problems in Geometry (Siqi He)
- The Physical Mathematics of Gauged Linear Sigma Models (Johanna Knapp)
- Mirror Symmetry of Type A Affine Grassmannian Slices (Yixuan Li)
- Topological Stings on Calabi-Yau 3-folds (Emanuel Scheidegger)

Monday, 24 November 2025

09:30–10:00	Registration
10:00–10:50	Johanna Knapp (Lecture 1)
11:00–11:50	Yixuan Li (Lecture 1)
12:00–13:50	<i>Lunch Break</i>
14:00–14:50	Siqi He (Lecture 1: Gauge Theory with $SL(2, \mathbb{C})$ structure group)
15:00–15:50	Tutorials (Siqi He, Johanna Knapp, Yixuan Li)
16:00–18:00	Reception (BBQ)

Tuesday, 25 November 2025

09:30–10:20	Johanna Knapp (Lecture 2)
10:30–11:20	Siqi He (Lecture 2: Compactness of Flat $SL(2, \mathbb{C})$ Connections)
11:30–12:20	Yixuan Li (Lecture 2)
12:30–13:50	<i>Lunch Break</i>
14:00–14:50	Aliakbar Daemi (Lecture 1: Moduli of flat connections on Riemann surfaces)
15:00–15:50	Tutorials (Aliakbar Daemi , Siqi He, Johanna Knapp, Yixuan Li)
16:00–16:50	Tutorials (Aliakbar Daemi , Siqi He, Johanna Knapp, Yixuan Li)

Wednesday, 26 November 2025

09:30–10:20	Johanna Knapp (Lecture 3)
10:30–11:20	Yixuan Li (Lecture 3)
11:30–12:20	Siqi He (Lecture 3: Deformation of $\mathbb{Z}/2$ Harmonic 1-Forms)
12:30–13:50	<i>Lunch Break</i>
14:00–14:50	Emanuel Scheidegger (Lecture 1)
15:00–15:50	Aliakbar Daemi (Lecture 2: 3-manifold Lagrangians and symplectic instanton homology))

Time	Speaker (Affiliation)
16:00–16:50	Tutorials (Aliakbar Daemi, Siqu He, Johanna Knapp, Yixuan Li, Emanuel Scheidegger)

Thursday, 27 November 2025

09:00–9:50	Aliakbar Daemi (Lecture 3: An introduction to instanton Floer homology))
10:00–10:50	Yixuan Li (Lecture 4)
11:00–11:50	Siqu He (Lecture 4: Relations to Low-Dimensional Topology)
12:00–13:50	<i>Lunch Break</i>
14:00–14:50	Emanuel Scheidegger (Lecture 2)
15:00–15:50	Johanna Knapp (Lecture 4)
16:00–17:00	Tutorials (Aliakbar Daemi, Siqu He, Johanna Knapp, Yixuan Li, Emanuel Scheidegger)

Friday, 28 November 2025

09:00–9:50	Aliakbar Daemi (Lecture 4: Mixed equation and the Atiyah-Floer conjecture)
10:00–10:50	Emanuel Scheidegger (Lecture 3)
10:50–11:10	<i>Tea Break</i>
11:10–12:00	Emanuel Scheidegger (Lecture 4)
	<i>Free Afternoon</i>