Tentative schedule

Wednesday 9 december

13:00-13:30 Welcome - Coffee

13:30-15:00 Shoucheng Zhang,
Models, Materials and Experiments of Topological Insulators.

15:00-16:30 Hartmut Buhmann,
HgTe quantum wells and the quantum spin Hall effect.

16:30-17:00 Coffee

17:00-17:45 Carlo Beenakker,
Spintronics in inverted-gap semiconductors.

17:45-19:15 Joel Moore,
Introduction to Berry phases in solids.

19:45 Buffet

Thursday 10 december

08:30-10:00 Hartmut Buhmann,
Spin Hall and quantum spin Hall effect.

10:00-10:30 Coffee

10:30-12:00 Shoucheng Zhang,
The General Theory of Topological Insulators.

12:00-13:00 Zahid. Hasan,
Introduction to quantum Hall-like effects without magnetic field: Mini Tutorial.

13h00-14h30 *Lunch*

14:30-16:00 Ashvin Vishwanath,
Topological Band Insulators 1: Models, topological metals and defects.

16:00-16:45 Carlo Beenakker,
Topological Anderson insulators.

16:45-17:15 Coffee

17:15-18:30 Bjoern. Trauzettel
Phase-coherent transport in 2D topological insulators.

18:30-19:15 Chao-xing Liu
Realization of three dimensional and two dimensional topological insulators in Bi2Se3 type of materials.

20:00 Restaurant

Friday 11 december 09

08:30-10:00 Joel Moore,
Three-dimensional topological insulators and related materials.

10:00-10:30 Coffee

10:30-12:00 Carlo Beenakker,
Majorana fermions in topological insulators.

12:00-13:00 Zahid Hasan,
Experimental Realization of 3D Topological Insulators: Spin-Momentum Locking and absence of backscattering.

13:00 – 14:30 *Lunch*

14:30-15:30 M. Zahid Hasan,
Experimental Roadmap toward topological quantum computing: Superconductivity and Magnetic impurity/proximity effects in a Topological Insulator Matrix.

15:30-17:00 Ashvin Vishwanath,
Topological Band Insulators 2: Topological defects (contd), correlation effects and perspectives.