



## Summer School on Novel Superconductors at UCSB (August 2-15, 2009)

**Santa Barbara** is distributed over an area of 41.4 sq miles (111.6 km<sup>2</sup>), has a population of 89,456 and is located about 90 miles (140 km) north of Los Angeles, along the Pacific coast. This stretch of coast along southern Santa Barbara County is often referred to as "American Riviera" because its geography and climate are reminiscent of the French and Italian Riviera coast along the Mediterranean. The Santa Ynez Mountains, an east-west trending range, rise dramatically behind the city, with several peaks exceeding 4,000 feet (1,200 m).



The University of California, Santa Barbara (UCSB) is ranked 42<sup>nd</sup> among the "Best National Universities" in the US.

The Summer School on Novel Superconductors was organized by the "International Center for Materials Research" (ICMR) at UC Santa Barbara, in collaboration with the Graduate School of Excellence "Materials Science in Mainz" (MAINZ). In particular, Malcolm Beasley (Stanford University), Nicola Spaldin (UCSB) and Claudia Felser (Johannes Gutenberg University Mainz, Germany)

were involved in planning and execution of this Summer School.

In the evening of August 2, 2009 all students registered and housing was provided in the Manzanita village dormitory. Lectures started on August 3, 2009 in the morning.



The areas covered in the lectures of the summer school were:

- Basic concepts and formalism
- Novel superconductors, in particular the pnictides
- Oxide high-T<sub>c</sub> superconductors
- New directions



The lectures on the first two days were directed towards the concepts of BCS and Ginzburg Landau theories and the rest of the week was about Iron-based superconductors. On Thursday evening in the first week we had a nice Mexican dinner at the El Paseo Restaurant in downtown Santa Barbara.

On the weekend everybody was free for excursions. In the second week, the schedule was more intense and covered mainly Oxide superconductors with the Cuprate centrality and new directions along with the two last topics.

Lectures finished on Friday August 14, 2009 and after breakfast on Saturday all students left the UCSB.

This summer school covered different aspects of superconductivity; therefore, it was a good opportunity for students to improve their knowledge and find a direction for their future scientific research. It was also an exceptional opportunity to meet PhD students and professors from the community of superconductivity and to network as well as exchange views.



Participants Summer School "Novel Superconductors", UCSB 2009