Report on PRIMA Conference on Geometric Analysis

PIMS/UBC, Vancouver, Canada, July 20-30, 2010

1. Scientific Activities and Impact

The summer program is widely considered by the participants as a great success. This was already clear during the mini-course/workshop period and now it is further supported by the post-conference survey conducted by PIMS.

The first week of the program contained three excellent mini-courses: Richard Schoen (Stanford University) spoke on the interplay between positive curvature, minimal surfaces and the Ricci flow; Gang Tian (Peking University and Princeton University) outlined a Kahler Ricci flow approach to the minimal model conjecture in algebraic geometry and a new curvature flow on Hermitian manifolds and discussed the recent developments in the field. Warner Ballmann (Bonn University and Max-Plank Institute) lectured on Dirac operators on non-compact manifolds. Basic background accessible to graduate students in the field was introduced at the beginning of these lectures and many open problems were discussed at the end.

The workshop in the second week covered a fairly wide range of topics in geometric analysis: geometric evolution (Ricci flow, mean curvature flow, harmonic map flow, an L^2 curvature flow), Willmore surfaces, conformal geometry, compactness of manifolds with a lower Ricci curvature bound, the Yamabe problem on orbifolds and manifolds with boundary, Kobayashi-Hitchin correspondence for D-modules, and extremal Kahler metrics.

The topics selected and covered by the mini-courses and the workshop are among some of the most active and important areas in geometric analysis, and the cutting-edge results therein are addressed by the leading experts. It should have a very positive impact for future developments in the field and point to research directions for graduate students.

2. Participants

The conference drew over 72 participants from around the world, including the Pacific Rim, North and South America, Europe and the UK. There were 3 mini-course speakers, 16 workshop speakers and over 53 other participants. Among these were around 47 graduate students and postdoctoral fellows, 22 professors and 3 undergraduate students.

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