

MATHEMATISCHES FORSCHUNGSINSTITUT OBERWOLFACH

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Partielle Differentialgleichungen

Organised by
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August 2nd – August 8th, 2009

ABSTRACT. The workshop dealt with partial differential equations in geometry and technical applications. The main topics were the combination of nonlinear partial differential equations and geometric problems, regularity of free boundaries, conformal invariance and the Willmore functional.

Mathematics Subject Classification (2000): 35 J 60, 35 J 35, 58 J 05, 53 A 30, 49 Q 15.

Introduction by the Organisers

The workshop *Partial differential equations*, organised by Tom Ilmanen (ETH Zürich), Reiner Schätzle (Universität Tübingen), Neil Trudinger (Australian National University Canberra) and Georg S. Weiss (University of Tokyo) was held August 2-8, 2009. This meeting was well attended by 46 participants, including 3 females, with broad geographic representation. The program consisted of 17 talks and 6 shorter contributions and left sufficient time for discussions.

New results combining partial differential equations and geometric problems were presented in the area of minimal surfaces, free boundaries and singular limits. Also there were several contributions to regularity of solutions of partial differential equations.

A major part of the leading experts of partial differential equations with conformal invariance attended the workshop. Here new results were presented in conformal geometry, for the Yamabe problem, Q-curvature and the Willmore functional.

The organisers and the participants are grateful to the Oberwolfach Institute for presenting the opportunity and the resources to arrange this interesting meeting.

