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January 02–05, 2006

Editors

R.W. Barnard
S. Ponnusamy

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Proceedings of the

International Conference on Geometric Function Theory, Special Functions and Applications

(ICGFT)

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Sponsored mainly by

- **Council of Scientific and Industrial Research, India**
- **Department of Science and Technology, India**
- **Department of Science and Technology, Government of Pondicherry, India**
- **National Board for Higher Mathematics (DAE), India**
- **National Science Foundation, USA**

Preface

Forum d'Analystes(Chennai) and The Bharathidasan Govt. College for Women, Pondicherry had organized an "International Conference on Geometric Function Theory, Special Functions and Applications" during January 02-05, 2006, to honor *R. Parvatham* on her completion of sixty years of age. The aim of this conference was to bring together peers with a broad spectrum of interests mainly connected to Geometric Function Theory and related topics. This conference was organized with *S. Chandra*, The Bharathidasan Govt. College for Women as local convener and *S. Ponnusamy*, Indian Institute of Technology Madras, Chennai as the academic secretary.

A delegation of American experts led by *R.W. Barnard*, the coordinator of National Science Foundation, USA (Grant Number 0536665), a group of experts from Finland led by *M. Vuorinen* and several other experts from various other countries (Australia, Iran, Japan, Korea, Mexico and Nepal) had actively participated in the conference and India was also well represented by several participants from all over the country. *Thiru N. Rangasamy*, Honorable Chief Minister, Government of Pondicherry had inaugurated the conference; the academic program of the conference had started with the key note address by *R.W. Barnard*. There were five plenary lectures of duration of one hour each, sixteen invited talk's duration of half an hour each, six sessions of selected paper presentations and one problem discussion session, devoted to the main topics of the event.

The organizers appreciate the support of the following, for their generous financial grants:

- Council for Scientific and Industrial Research, Govt. of India, New Delhi, India
- Department of Science and Technology, Govt. of India, New Delhi, India

- Department of Science and Technology, Govt. of Pondicherry, India
- National Board for Higher Mathematics, Mumbai, India
- National Science Foundation, United States of America

This event was cosponsored by

- Achariya Arts and Science College, Pondicherry
- M O P Vaishnav College for Women, Chennai
- North Orissa University, Baripada
- Rajiv Ghandhi College of Engineering and Technology, Pondicherry
- Pondicherry Engineering College, Pondicherry.

The Chief Minister, Government of Pondicherry hosted a dinner and The Secretary, Department of Education; Government of Pondicherry hosted a dinner and arranged a cultural program by Bharathiar Kalai Koodam, Pondicherry, in honor of the delegates of the conference. A lecture-demonstration on Yoga was presented by *Yogini Meenakshi Devi*, Pondicherry. An excursion, covering many interesting places in Pondicherry, was arranged on the afternoon of January 4, 2006.

Here we place on record our sincere thanks to *R. Balasubramanian*, Director, The Institute of Mathematical Sciences, Chennai and Vice President, Forum d'analystes, Chennai, the convener *S. Chandra*, her colleagues and the Principal of the host institution Bharathidasan Govt. College for Women, Pondicherry for providing all facilities for the smooth conduct of this conference. The organizers appreciate the assistance and help rendered especially by *Swadesh Kumar Sahoo* and *Brock Williams*.

A one week international workshop on *Quasiconformal Mappings and their Applications* had preceded this conference. Selected research scholars from around the world participated in this workshop. This workshop was organized by *S. Ponnusamy* at Indian Institute of Technology Madras, Chennai.

This volume contains the proceedings of the conference on Geometric Function Theory with most of the plenary lectures and invited talks delivered at the conference and selected papers presented there in. Each paper was refereed and screened by the Special Editors of this volume. Special Editors of this volume place on record their gratefulness to *St. Ruscheweyh*, Chief Editor, Journal of Analysis, for giving them the possibility to publish the proceedings in this journal and dedicating the proceedings to *R. Parvatham*.

We emphasize that this material is based upon work supported by the National Science Foundation under Grant No. 0536665. Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation (NSF).

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R. Parvatham

R. Parvatham was born in the city of Madras (now known as Chennai), India on September 14, 1945 as the last and third child of *K. Rajagopalan* and *R. Meenakshi*. Having lost her father in early years, *R. Parvatham* was brought up by her brother *R. Krishnan*, a business man in Chennai. She had been educated in Stella Maris College, then affiliated to the University of Madras. After getting the Master's degree in Mathematics from the University of Madras through Stella Maris College, she had proceeded to do research in Theory of Functions under the supervision of *K.S. Padmanabhan*, at The Ramanujan Institute for Advanced Study in Mathematics, University of Madras and obtained her doctorate degree from the University of Madras for her work in Theory of Functions. Then, to continue her research work further, she went to the Institut Fourier, Université de Grenoble, France. During her *sejourn* of nearly four years in the Institut Fourier, she was mainly associated with the equipe of *M. Blambert*, working on Dirichlet Series.

Upon her return to India, *R. Parvatham* worked in the faculty of Mathematics, Madurai Kamaraj University for a short while and then in Anna University. In June 1982, she had joined The Ramanujan Institute for Advanced Study in Mathematics, University of Madras as a faculty member and retired from the university services as Professor on September 30, 2005. During her career she had guided many students for their Master of Philosophy degrees and six students for their Doctor of Philosophy degrees in the University of Madras. She has collaborated with many Mathematicians and co-authored more than sixty publications in various internationally reputed research journals in Mathematics. She has visited many countries to participate and delivered invited lectures in several national and international conferences.

R. Parvatham is a member of The Indian Mathematical Society, The Ramanujan Mathematical Society, The Association of Mathematics Teachers of India and The American Mathematical Society. She has organized an international conference on the "New Trends in Geometric Function Theory and Applications", during July 26-29, 1990 under the auspices of the University of Madras and brought out the proceedings of the conference jointly with *S. Ponnusamy*. As an offshoot of the international conference *R. Parvatham* with her friends has founded the *Forum d'Analystes* and also started the *Journal of Analysis* in which the Proceedings of this international conference are being published.

The Honorable Chief Minister, Govt. of Pondicherry presides over the inaugural function

R. Balasubramanian is lighting the kuthivillaku

National Science Foundation coordinator R.W. Barnard with R. Parvatham

S. Ponnusamy sums up the proceedings of the conference

Contents

Preface i

R. Parvatham v

Roger W. Barnard, Eric M. Murphy and G. Brock Williams 1
Some Results on Spaces of Packable Riemann Surfaces

Roger W. Barnard and Kent Pearce 17
The Verification of an Inequality

V. Ganesh and M. Subbiah 43
On An Eigenvalue Problem Of Hydrodynamic Stability

Peter A. Hästö 53
The $p(x)$-Laplacian and Applications

Ilkka Holopainen and Aleksi Vähäkangas 63
Asymptotic Dirichlet Problem on Negatively Curved Spaces

Tsoy-Wo Ma 111
Vector Bundles over Holomorphic Manifolds on Locally Convex Spaces

W. Ma and D. Minda 145
Geometric Properties of Hyperbolic Polar Coordinates

W. Ma and D. Minda 167
Hyperbolic Geometric Characterizations of Convex Regions

S. Ponnusamy and P. Vasundhra 195
Starlikeness of Nonlinear Integral Transforms

R. Michael Porter 211
Local Geometry of Circles and Loxodromes

Premalatha and A.K. Kalyani 221
Harmonic Extensions on an Infinite Network

Antti Rasila and Matti Vuorinen 229
Experiments with Moduli of Quadrilaterals II

T. Ram Reddy and P. Thirupathi Reddy 239
Neighbourhoods of a Certain Subclass of $SP(\beta)$

Stephan Ruscheweyh 247
Some Properties of Prestarlike and
Universally Prestarlike Functions

V. Srinivas 255
On Inverse Coefficients

Lindsay E. Stovall and Shanshuang Yang 263
Quasisymmetric Structure and Quasisymmetry on
1-manifolds

Open Problems 273
List of Participants 279