

Proceedings of
National Conference on Recent Trends in
Mathematical Computing

NCRTMC'13

23rd & 24th August, 2013

Editors Dr.D.S. Sankar
Dr.C. Vijayalakshmi

Organized by
Mathematics Division
School of Advanced Sciences (SAS)
VIT University- Chennai Campus



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Proceedings of National Conference on Recent Trends in Mathematical Computing - NCRTMC'13

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Pro-Vice Chancellor's Message



Dr. Anand A. Samuel, BE, MS, PhD,
Pro-Vice Chancellor

23rd August 2013

Importance of Mathematics in Engineering education cannot be underestimated. It is not just understanding the concepts in various fields of mathematics, but the application of the same in various fields of engineering that is of prime importance. Pure and applied mathematics should go hand in hand and leaving one and concentrating on the other will make education impaired.

At VIT Chennai, utmost concentration is given to teaching and testing the higher order thinking skills as per Bloom's Taxonomy. The students learn mathematics with great interest when the concepts are taught through various applications.

It is gratifying to note that Dr. kalyani Desikan and her team are taking steps to bring mathematicians and engineers under one roof and make them interest and appreciate each other's strengths. I am sure conference like this will strengthen engineering and more so teaching of mathematics in engineering institutions.

I wish this conference a grand success!

May God bless!

A handwritten signature in green ink, appearing to be 'Anand A. Samuel'.

Dr. Anand A. Samuel
Pro-Vice Chancellor
VIT Chennai

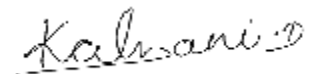
Dean's Message

Mathematics is regarded as the mother of all Sciences. The technological and industrial advancements witnessed during the last century have clearly shown that Mathematics is not merely an intellectual pursuit but it forms the backbone of Technology and Industry.

This conference aims to provide an interactive platform to researchers from academia, research laboratories and industries to share their expertise and knowledge for strengthening Mathematical research. It also provides an avenue for exploring emerging research areas in Mathematics and its applications.

I congratulate the organizers of this conference for providing a forum to both young and experienced researchers to understand and appreciate current research techniques in Mathematical Computing.

I wish this conference a success.



Dr. Kalyani Desikan
Dean, School of Advanced Sciences
VIT Chennai

About VIT University

VIT University for the past 25 years has made a mark in the field of higher education in India imparting quality education in a cross-cultural ambience, intertwined with extensive application oriented research. Established by well-known educationalist and former Parliamentarian, **Dr.G. Viswanathan, Founder and Chancellor**, is a visionary who transformed VIT into a center of excellence in higher technical education. His dream has taken the shape of VIT Chennai. **Dr.V. Raju, Former Professor of State University of New York, USA, currently the Vice Chancellor**, strives to internalize the world class educational standards. **Dr.Anand A. Samuel, Pro-Vice Chancellor**, leads the team in Chennai with the following objectives:

- To maximize Industrial Connectivity
- To create Centers of Excellence in niche areas of research
- To enrich Technological and Managerial Human Capital nurtured in a multicultural ambience
- To provide a common platform for the agglomeration of ideas of personnel from various walks of life for learning enrichment
- To create opportunities and exploit the available resources to benefit industry /society
- To encourage participation in the National Agenda of knowledge building
- To foster International collaborations for mutual benefits in areas of research.

About Department

The School of Advanced Sciences at VIT Chennai imparts state-of-the-art education and training in the Mathematics, Chemistry and Physics disciplines. The faculty of the school comprises qualified and goal-oriented members whose research expertise includes all frontier areas in Mathematics, Chemistry and Physics.

The Division of Mathematics, School of Advanced Sciences, VIT Chennai, is a strong team of 26 faculty members, which includes 17 doctorates. The Mathematics Division offers M.Phil and Ph.D. programmes.

The faculty has a rich and vast research and teaching experience. The team is highly committed to make Mathematics simple and interesting and learning Mathematics as fun. To this end, the first year students are taught the concepts of Engineering mathematics through MATLAB, a powerful computational tool.

The Mathematics Division comprises:

- Dr. Kalyani Desikan
- Dr. P. Vanchinathan
- Dr. Indra Rajasingh
- Dr. Mini Ghosh
- Dr. V. Prabhakar
- Dr. M. Kaliyappan
- Dr. S. Hariharan
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- Prof. B. Jaganathan
- Prof. S. Vasanthika
- Prof. S. Dhanasekar
- Prof. A. Berin Greeni
- Ms. M. Ranjitha (Secretary)

About Conference

The Two Day National Conference on Recent Trends in Mathematical Computing (NCRTMC) sponsored by the Council of Scientific and Industrial Research (CSIR) aims to bring together researchers from academics, scientific labs and engineering industries under one roof to share their expertise. The focus of the conference is on current research techniques involving computational aspects and developments in different areas of mathematics, including their applications in various disciplines. The Conference not only provides a platform for strengthening the mathematical research, but also gives an opportunity for the participants in knowing the emerging areas of research.

Conference Committee

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Dr.G. Viswanathan, Chancellor, VIT University

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Dr. Anand A. Samuel, Pro Vice Chancellor, VIT Chennai

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Prof.S. Jaganathan, SAS, Mathematics Division, VIT, Chennai

NCRTMC'13 – Program Schedule

Venue: Administrative Block, VIT University, Chennai Campus, Chennai-127

23rd August 2013

Room No: 201

TIME	NAME
9 AM TO 9.30 AM	Inaugural Function
9.30 AM – 10.30 AM	Invited talk by Dr. A. Ram Mohan Rao, CSIR – SERC, Chennai
10.30 AM – 10.45 AM	Tea Break
10.45 AM - 11.45 AM	Invited talk by Dr. K. G. Subramanian, USM, Malaysia
11.45 AM - 1.15 PM	Paper Presentation - I
11.45 AM - 1.15 PM	Paper Presentation - II
1.15 PM - 2.00 PM	Lunch
2 PM - 5.00 PM Academic Block AB206 (Lab)	MATLAB Session Dr. M. Kaliyappan and Dr. A. Vanav Kumar

24rd August 2013

Room No: 201

TIME	NAME
9 AM TO 10.30	Invited talk by Dr. P. Veeramani, IIT, Chennai
10.30 AM – 10.45 AM	Tea Break
10.45 AM - 11.45 AM	Invited talk by Dr. R. Usha, IIT, Chennai
11.45 AM - 1.15 PM	Paper Presentation - III
11.45 AM - 1.15 PM	Paper Presentation - IV
1.15 PM - 2.00 PM	LUNCH
2 PM - 5.00 PM	Paper Presentation - V

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