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NEWS FROM INDIA

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BY

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FSTTCS and IPEC 2010 The 30th edition of FSTTCS, the annual conference of the Indian Association for Research in Computing Science (IARCS) was held at the Institute of Mathematical Sciences, Chennai from December 15–18, 2010. The conference was colocated with the 5th International Symposium on Parameterized and Exact Computation (IPEC 2010, formerly IWPEC), which was held before FSTTCS from December 13–15, 2010.

The Programme Committee for FSTTCS 2010 was chaired by Kamal Lodaya and Meena Mahajan from the Institute of Mathematical Sciences, Chennai. The invited speakers for FSTTCS 2010 were Rajeev Alur (U Penn, USA), Bruno Courcelle (LaBRI, Bordeaux, France), Pavel Pudlák (Math. Institute, Academy of Sciences, Czech Republic), Santosh Vempala (Georgia Tech, USA) and Wiesław Zielonka (LIAFA, Paris 7, France).

The Programme Committee for IPEC 2010 was chaired by Venkatesh Raman and Saket Saurabh from the Institute of Mathematical Sciences, Chennai. The invited speakers for IPEC 2010 were Anuj Dawar (Cambridge, UK), Fedor Fomin (Bergen, Norway) and Toby Walsh (New South Wales, Australia).

FSTTCS 2011 will be held in IIT Bombay. The Programme Committee will be chaired by Supratik Chakraborty (IIT Bombay) and Amit Kumar (IIT Delhi). The call for papers will soon be available at <http://www.fsttcs.org>.

TECS Week 2011 The ninth TCS Excellence in Computer Science Week (TECS Week 2011) was held at TRDDC, Pune, from 3–7 January. It was jointly conducted by Tata Research Development and Design Centre (TRDDC) and the Indian Association for Research in Computing Science (IARCS).

TECS Week is an annual event featuring a series of lectures on a topic related to computer science and engineering. It aims at providing high-quality computer science education to students, faculty and practitioners from developing countries. The topic for this year's TECS Week was *Computer Networks*. This year there were 90 participants.

The speakers at TECS Week 2011 included Albert Greenberg (Microsoft, USA), Shivkumar Kalyanaraman (IBM Research, Bangalore, India), Vitaly Shmatikov (University of Texas, Austin, USA), and Dr. K K Ramakrishnan (AT&T Labs Research, USA). In addition, this year's program also included guest lectures by V.S. Subrahmanian (University of Maryland, College Park, USA), Natarajan Shankar (SRI International, USA) and Pravin Bhagwat (CTO, AirTight Networks).

Mysore Park Workshop on Algorithms and Complexity The workshop on *Recent advances in Algorithms and Complexity* was held during October 21-24, 2010 at the Mysore Park campus of Infosys. There were around 60 participants from various academic institutes and research labs in India. The aim of this workshop was to bring together researchers and students working in algorithms and complexity in India in order to discuss recent developments in this area. The organisers were Manindra Agrawal (IIT Kanpur) and Kavita Tellekapalli (TIFR, Mumbai).

The main talks held here were the following:

- *A recent attempt at proving $P \neq NP$* by Manindra Agrawal (IIT Kanpur).
Manindra discussed some details of the flawed proof of $P \neq NP$ claimed by Vinay Deolalikar, and also summarized the events in the weeks following the announcement of the “result”.
- *A new breakthrough result on Steiner tree approximation* by Naveen Garg (IIT Delhi).
Naveen presented an improved LP-based approximation for Steiner trees by Byrka, Grandoni, Rothvoss, and Sanita which won a best paper award at *STOC 2010*.
- *Recent advances in communication complexity* by Navin Goyal (IBM IRL, Delhi) and T.S. Jayram (IBM Almaden, USA).

The talks by Navin and Jayram looked at two recent results in the field of communication complexity. Both problems discussed were in the framework of the two-party model, where two parties have to compute a function $f(x, y)$, but each only holds a part of the input. The common idea in the two

results was to use information theoretic techniques to obtain bounds on the amount of communication required.

- *A new faster approximation for max flow* by Nisheeth Vishnoi (MSR, Bangalore).

Nishit spoke on the recent paper “Electrical Flows, Laplacian Systems, and Faster Approximation of Maximum Flow in Undirected Graphs” by Christiano, Kelner, Madry, Spielman and Teng on faster approximation algorithms for max flow in undirected graphs. The main ingredients in the new algorithm are the use of electrical flows and the near linear time algorithm of Spielman and Teng for solving symmetric, diagonally-dominant linear systems approximately.

- *A survey talk on subexponential parameterized algorithms* by Venkatesh Raman (IMSc, Chennai).

Venkatesh gave a survey talk on subexponential parameterized algorithms. Some major open problems in this field are subexponential algorithms for directed k -paths, Steiner trees on planar graphs and better algorithms for feedback vertex set in general directed graphs.

- *Matrix norms and communication complexity* by Satya Lokam (MSR, Bangalore).

Sayta spoke on matrix norms and communication complexity. He reviewed the analytical methods of Sherstov, Linial, Shraibman to show the strict containment of the following classes: $P^{CC} \subset BPP^{CC} \subset PP^{CC} \subset UPP^{CC}$.

Mysore Park Workshop on Concurrent and Distributed Computing The next Mysore Park Workshop, entitled *The Chemistry of Concurrent and Distributed Programming*, will be held in mid-February, 2011. The workshop will focus on issues related to the development of distributed and concurrent systems. Topics of interest include correctness criteria, specification mechanisms, design patterns, platform independence, verification and synthesis. The workshop is organized by Madhavan Mukund (CMI, Chennai), Madan Musuvathi (MSR, Redmond, USA) and Ganesh Ramalingam (MSR, Bangalore). More details about the workshop can be found at <http://research.microsoft.com/en-us/um/redmond/events/mysorepark/ccdp11.htm>.

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