



IEEE Bangalore Section

**BROADCAST**<http://www.ieee.org/bangalore/>email: [ieeeblr@vsnl.net](mailto:ieeeblr@vsnl.net)**CHAIRMAN'S COLUMN**

Dear Members,

**W**e are already at the end of the year 2003; hard to tell how time flies and one more year has come to a close. It is time to reflect and look forward.

Hope you all enjoyed the October issue of Broadcast, which was published as a TENCON 2003 special issue and carried full color photos of the event. Our Region 10 Director was impressed with Tencon and the Section's activities, and he has sent a special grant of \$1000 from Region 10 to the Section to encourage students' activities.

There is more good news. Our colleague and Vice Chairman Dr. Surendra Pal has been elected Fellow by the IEEE; it is indeed quite an honour to him as well as to the Section. Also our EDSSC Chapter has won the 2002 Outstanding Chapter Award globally, conferred by the IEEE Solid State Circuits Society and communicated to Prof. Navakant Bhat, the founding Chairman of this young Chapter. This carries a cash award also for the Chapter.

Our annual symposium and student paper contest went off very well as usual, thanks this time to the excellent efforts put in by Dr. Pandian and Dr. Srinivas, and the many volunteers. The symposium had an excellent attendance. The student contest winners are declared. Please see inside for the symposium report and student contest winners.

Amidst all this good news and pleasant activities, there is indeed one sad news. Our dear Execom colleague and long-standing IEEE volunteer Mr Pradeep Madan passed away in a tragic accident. This came as a total shock to all of us who knew him. It is a great loss to the IEEE community in India.

The AGM is coming up soon, on February 14, 2004. This Broadcast carries the AGM notice and the Slate proposed for the 2004 Execom. Please do make it convenient to attend and participate. It will also be the occasion for me to say adieu to you all as outgoing Chairman.

Wish you all a VERY HAPPY AND PROSPEROUS NEW YEAR !!

Warm Regards  
Prof. S V Sankaran

**Inside...**

- Annual Symposium Report
- AGM Notice

**CONGRATS TO DR. PAL**

Dr. S Pal

**O**ur Section Vice Chairman **Dr. Surendra Pal** has been elected IEEE FELLOW this year. The announcement came recently, and we are delighted for him and the Section on his receiving this great honour. The citation reads "**For contributions to space-borne communication systems**".

*Dr. Pal has been a volunteer and contributor to IEEE for several years besides being professionally very active working with ISAC/ISRO. He has been the Vice Chairman of the Section since four years and has just been named for the Section Chairman in the Slate 2004.*

*Our Hearty Congratulations to him !!*

**BRV VARDAN STUDENT PAPER CONTEST PRIZE WINNERS**

The following were declared winners of the **BRV Vardan Undergraduate Paper Contest for 2003**

**FIRST PRIZE**

**Akshay Bhat**, M S Ramiah Institute of Technology, Bangalore.  
Line Tracking Robot

**SECOND PRIZE**

**Md. Zubair Ahmed and Mukundan Venkataram**, Golden Valley Institution of Technology, KGF  
A Non-AMID based congestion control Algorithms for real time Streams.

**Congratulations to the Winners !!**

**For Private Circulation**

Publisher : IEEE Bangalore Section  
Editor : Prof S V Sankaran  
Ph: 080-860 4667 e-mail: [svsan@ieee.org](mailto:svsan@ieee.org)





## REPORT ON 12TH ANNUAL SYMPOSIUM ON MOBILE COMPUTING AND APPLICATIONS



*Dr. Swamy Manohar delivering his plenary talk*

The 12th Annual Symposium of the IEEE Bangalore Section was held in Bangalore during November 21-22, 2003 in Hotel Capitol, Raj Bhavan Road, Bangalore. This is a major annual event of the Section and this year the theme was MOBILE COMPUTING AND APPLICATIONS, a hot technical area. The process started more than three months earlier, through announcement and inviting papers for the symposium and also inviting papers from the students for the B R V Vardan Student Paper contest, to be held simultaneously as part of the symposium and as has been the tradition for some years. A total 47 papers were received for the symposium, out of which 32 papers were selected for the presentation. Each paper was reviewed by two independent reviewers. 20 student papers were received out of which 7 papers were selected for the presentation.

The symposium witnessed a good response of 133 registrations, of which 48% were IEEE non members, 16% were IEEE members, 20% were student non members and 16% were student members. The delegates comprised of a good cross-section of professionals from the industry, academics and research organizations as well as students from colleges and IISc.

The symposium was inaugurated by The Section Chairman Prof. S.V. Sankaran. There were two plenary talks, on the first day by Dr. Swamy Manohar of Picopeta Simputer on "Challenges and Opportunities in Mobile computing" and on the second day by Dr. Narendranath Udupa of Philips Innovation on "Next generation Architecture for Multimedia and Mobile Applications".

There were technical sessions on (1) Protocols, (2) Architecture, Management and Applications, (3) WLAN, (4) Coding and RF and (5) UG Student Paper Presentation. The student papers and their presentation were evaluated by a panel of judges headed by Prof. Rajgopal, Past Chairman of the Section and the winners were selected.

The symposium was concluded with the announcement of student contest results.

### Technical Program

#### Day 1 (Friday, 21 Nov 2003)

**Inauguration:** Chair: Prof. S. V. Sankaran, Chairman, IEEE Bangalore Section

**Plenary Talk:** Dr. Swamy Manohar, Picopeta Simputer Pvt Ltd: CHALLENGES AND OPPORTUNITIES IN MOBILE COMPUTING

#### Session : PROTOCOLS

(Chair: Prof. Chockalingam A, Department of Electrical Communication Engineering, Indian Institute of Science, Bangalore)

**S. Malarvizhi, Avisesh. B. Jain, Kripa Shankar. K. S. , M. Meenakshi,** BER based Adaptive rate control for CICRMA(Coded Incremental Collision Resolution Multiple Access) Protocol for Wireless networks.

**Aarti Raghavan, Vikhyath Rao,** On Demand Link Expiration Time Based Ad hoc Routing for MANET (FORP Based)

**Aseem Sethi,** Mobility with Dynamic IP Addresses

**Aseem Sethi,** Bridging PPP for inter Mobile Wireless communication

**Devaraj Das,** IPSec-based Delegation Protocol and its Application

**Seenappa B, Pandian A,** A Multiple Access Control Scheme for Fixed Wireless Networks by Packet based TDMA

**Ravikiran A,** SS7/IP: Building Innovative Cost Efficient Signaling Networks

**Srinath Nathan,** Distributive Peer to Peer Wireless Network

**K.Prabhakar Y.Sreedhar,** Effective Bandwidth Utilization: Using Reliable Routing Selection Process

#### Session : ARCHITECTURE, MANAGEMENT & APPLICATIONS

(Chair: Prof. A. Selvarajan, Department of Electrical Communication Engineering, Indian Institute of Science, Bangalore)

**S. Rajeev, K. Duraivel, Santosh G. Rao, P. Pradeep and S. N. Sivanandam,** Policy based provisioning for wireless differentiated services

**Nitin Swamy, Frank L. Lewis,** Routing algorithms in a novel hierarchical mesh network

**A. Shanmugam, G. Umamaheswari, D. Karthikeyan,** The Design and Implementation of VLSI Array Architecture for Modular Exponentiation

**P. V. Ananda Mohan,** A Scalable Processor for mobile computing applications using Residue Number System

**Sujatha Bhagwat,** Different packet scheduler strategies in 3G networks

**Arul Ganesh,** Event Based View for Data Management In Sensor Network

**Siddharthan. E, Sureshkumar. K,** Tracking and positioning of mobile phones in telecommunication network using the concept "time of arrival"

**Harihara Subramanian, Pethuru Raj,** An efficient, faster and J2ME-based security solution for mobile messaging

#### Session : WLAN

(Chair: Dr. Pandian A, Wipro Technologies, Bangalore)

**Guruprasad I Naik,** Quality of Service in IEEE 802.11 Wireless LAN

**Anoop Nair,** Performance Characterization of 802.11 Mixed Mode Networks



*Dr. Srinivas presenting memento to plenary speaker Dr. N Udupa*





(L to R) Dr. Pandian, Prof. Sankaran, Wg. Cdr. Parthasarathy and Prof. Rajgopal during the concluding session

**B. Ramachandran S. Radha S. Shanmugavel**, Performance analysis of IEEE 802.11 MAC in multi-hop wireless networks: towards cross layer design

**Rony Gabriel**, IEEE 802.11 Wireless Network Planning and Management

**Day 2 (Saturday, 22 Nov 2003)**

**Plenary talk : Dr. Narendranath Udupa**, Philips Innovation: NEXT GENERATION ARCHITECTURE FOR MULTIMEDIA AND MOBILE APPLICATIONS

**Session : CODING & RF**

(Chair: **Prof. Vedavathi**, Department of Electrical Communication Engineering, Indian Institute of Science, Bangalore)

**A. Rajeswari, A. Shanmugam**, Performance analysis of multistage detectors in CDMA systems

**Nishchay Sinha**, Equalizer Optimization under a precoded transmission

**Ramya Banu**, Enhancement of DCT coded images for mobile Applications

**Kumaresh K, Saravanan S, T. R Rammohan**, Approach to Mitigate Frequency Offset for OFDM Mobile Systems

**Andhe Pallavi**, Crypto system based Turbo codes

**Meenakshi Patil, SD Apte, Asundi**, Audio watermarking for covert Communication

**Murali Deshpandi**, Design and Implementation of AC3 decoder system on Velocity Architecture

**Vinod Durdi, B S Nagabhushana, Grishchandra**, Simulation of Chaotic Communication in Single user & multi user CDMA scenarios

**P. Sharma**, Time Series models for Ricean and Rayleigh fading channels

**Saroj K. Patro**, A cost-effective linear rf power amplifier for High data rate QAM-modulated wireless base station

**A.V.Subba Rao, G.Chandrasekar, Jaison Martin P.J**, Performance analysis of synchronization techniques for high data rate 16-QAM burst demodulators

**Session : Undergraduate paper presentation**

(Chair: **Prof. K. Rajgopal**, Department of Electrical Engineering, Indian Institute of Science, Bangalore)

**Md. Zubair Ahmed, Mukundan Venkataram**, A Non-AMID based congestion control Algorithms for Real time Streams

**Akshay Bhat**, Line Tracking Robot

**Sharat Rao K**, VQ based techniques in Speech Enhancement

**Prakash**, Automated Attendance Recorder

**Malavika Bhaskaranand, Devendra Rai**, A Comparative Study of Sequential and Parallel Implementations for the game of Naughts and Crosses

**Karthik V, Chetak K S, Chandrashekar A**, An improved multiband spectral subtraction method with Perceptual post filtering for speech enhancement

**Siddarth Bharath**, Cost Effective Digital PID Controller

## PRADEEP K MADAN

8th November, 2003 was a sad day for IEEE Bangalore Section and IEEE India. It was on this fateful day evening that our beloved Execom colleague Mr. PRADEEP K MADAN was driving in his car near his home and was hit by a truck, and could not survive the accident. He passed away the same night.

**To recount briefly about Mr. Madan**



**Mr. P. Madan**

**Mr. P. Madan**, Senior Member IEEE, was a graduate in Electrical Engineering from REC, Rourkela. He had over 30 years of experience in the Electrical Power Industry sector with leading organisations like BSES, Crompton Greaves and SAE(I) Ltd. (now RPG Transmission Ltd.), and worked with Kirloskar Electric Co., Bangalore rising to the level of Vice President. He was heading the Strategic Business Group of Power Equipment & Power Projects comprising the divisions of Transformers, Switchgear, Projects & systems and Renewable Energy.

Mr. Madan was an active member of a number of professional associations, and was a Fellow of the Institution of Engineers (I) and the

Indian Society of Engineers. He was a Senior member of IEEE, ex-Chairman of the India Chapter of the IEEE Engineering Management Society and ex-Secretary of the IEEE Delhi Section, besides being the Founding Managing Editor of IEEE's Technology Magazine 'IEEE Asia Pacific'. At Bangalore, he served as the Vice Chairman of the IEEE CCEM Chapter and later as member of the Bangalore Section Execom. He has published a number of articles and presented papers at various forums including the IEEE EMS International Conference.

Here is what one of his close IEEE Delhi colleagues, Dr. S C Mukhopadhyay had to say on hearing the sad news:

"It is totally unbelievable that Pradeep is no more. Along with him, when he took over as IEEE Delhi Section Secretary, I took over as Treasurer in 1992 with Mr. Harbans L. Bajaj at the helm of affairs as Nomination Committee Chair..."

In the office when I got the message I couldn't believe..."

**IEEE Bangalore Section's Execom, and the entire Bangalore Section express their deep sympathy on the sad and sudden demise of Mr Madan and convey our heartfelt condolences to his family.**





## AGM NOTICE

**K. Ramakrishna**  
Secretary, IEEE Bangalore Section

December 2003

Dear Member:

*Warm Greetings from the Section for a Happy and Prosperous New Year!*

This communication is to notify the Slate for the Executive Committee for the year 2004 (see below) and also call for the Annual General Body Meeting of the Section at which the Executive Committee and the Office Bearers for the year 2004 will be elected.

We solicit your attending the AGM and participation in the election for 2004.

### Annual General Body Meeting

*The AGM is scheduled to be held on Saturday, 14th February 2004 at Trinity Hall, Hotel Taj Residency, No.41/3 M.G. Road, Bangalore-560 001, Ph. 56604444 at 6.30 PM.*

This year 2003 has been a notable one for your Section with many significant activities, as in previous years. The membership has undergone changes, with new members and students and student branches to meet, and of course peers and seniors, from industries and academics, as usual to network with. Bid adieu to the outgoing Execom members. Participate in the 2004 Elections and get to know your new Execom members, Chairman and Office Bearers. As always, bring and express your suggestions and volunteer your services and support.

Members are encouraged to bring their spouse for this AGM and the dinner that follows it. The spouses will definitely enjoy the social interaction at this occasion and the chance to know about our various professional activities.

Please mark the date on your calendar! We look forward to your attending and active participation at the AGM.



## IEEE BANGALORE SECTION ELECTIONS TO THE EXECUTIVE COMMITTEE FOR 2004

Dear Member:

The Nominations Committee this year consisted of Prof. K. Rajgopal (Chairman), Dr. A.S. Prakasarao and Dr. P.V. Ananda Mohan. The Committee has proposed the following Slate for the Executive Committee (EXECOM) of the IEEE Bangalore Section for the year 2004:

Chairman	: Dr. SURENDRA PAL	ISRO	Fellow
Vice Chairman	: Prof. A. SELVARAJAN	IISc	M
Vice Chairman	: Mr. K. RAMAKRISHNA	POWER GRID	SM
Secretary	: Dr. A. PANDIAN	WIPRO	SM
Treasurer	: Wg. Cdr. PARTHASARATHY	C-DOT	M
Members	: Mr. A. RAJA RAO	BHEL(retd.)	SM
	Dr. T. SRINIVAS	IISc	M
	Mr. HITESH MEHTA	Eagle	
		Photonics	SM
	Mr. A.M. BHAGWAT	ISRO	M
	Mr. NIRANJAN PATIL	iSEVA	
		Systems	M
	Mr. V.V. SRINIVASAN	ISRO	SM
	Mr. L. CHARLES SANTHOSAM	C-DOT	M
	Mrs. SUJATA B. SHARMA	C-DOT	M
	Mr. A. RAVIKIRAN	Siemens	
		PCNL	M
	Mr. M. MOHAN BABU	Ittiam	M
	Mr. SATYAKI PANDA	Microsoft	M
Past Chairman	: Prof. S.V. SANKARAN	Daimler	
		Chrysler	SM

As per Bye-laws of the Section nominations of Office Bearers by petition are also welcome. Any such nominations should be duly signed by at least 15 active members and received

by me on or before 7th February, 2004. Elections will be conducted by due process as applicable at the AGM.

### ANNUAL GENERAL BODY MEETING

The AGM of the Section for the year 2003 will be held on Saturday, 14th February, 2004 at Hotel Taj Residency. The meeting will commence at 6.30 PM.

### AGENDA

- ◆ Welcome
- ◆ Presentation of the 2003 Activities Report
- ◆ Presentation of the 2003 Financial Report
- ◆ BRV VARDAN Students Paper Prize Awards
- ◆ Presentation of Fellow Plaque
- ◆ Election to Executive Committee for 2004
- ◆ Any other items

If you wish to have any item included in the agenda, the same may be communicated to me on or before 7th February, 2004.

The AGM will be followed by dinner. You are cordially invited to bring your spouse to the AGM and the dinner.

Please make it convenient to attend the AGM. Request you to please confirm your attendance by e-mail or fax to me (indicate 'with spouse' if applicable).

**Season's Greetings and Best Wishes  
for a Happy New Year !!**

Dec. 2003

**K. Ramakrishna**  
Secretary, IEEE Bangalore Section  
Ph: 080 226 3463, Fax: 080 225 9219  
E-mail: kappaganturk@yahoo.com

