

not

The Institute of Electrical and Electronics Engineers Inc.

Hyderabad Section



NEWSLETTER

Vol. 1 No. 1 February 1987

Science and technology... unite humanity in a single and interconnected system. As science progresses, the worldwide cooperation of scientists and technologists becomes more and more of a special distinct intellectual community of friendship, in which there is... a mutually advantageous sharing of work, a coordination of efforts, a common language for the exchange of information, and a solidarity, which are in many cases independent of the social and political differences of individual states.

—Zhores Aleksandrovich Medvedev,
Soviet biologist, social critic, and
author (1970)

The benefits of belonging to the IEEE are often cited in textbook terms or statistics. But as Medvedev's words suggest, the affinity that brings electrical, electronics and computer engineers together goes far beyond the wearing of nametags or paying of dues. The following comments by Institute members — who were asked to reflect on the quotation — capture some of the tangible and intangible rewards of IEEE membership

a community of friendship...

"The kinship of the IEEE has been a powerful force for me; I've met 90 percent of my closest friends through meetings, symposiums, and other member get-togethers. We all have a common base, and are motivated by many of the same things. Even though we have differences, the tie that still binds us as engineers is the desire to solve technical problems and to advance our profession. If I weren't an IEEE member, I would have lost a lot of opportunities to network with other professionals in my field."

the exchange of information...

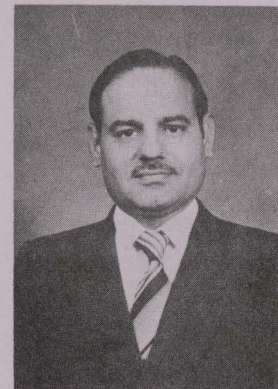
"As a researcher in the fields of signal processing and circuits and systems, my work depends in many ways on the opportunities offered by the IEEE. The Institute's technical publications and conferences provide a flow of information that I would not find anywhere else. This aspect of my membership in the IEEE has kept me in touch with the forefront of electrotechnology."

a solidarity

"I'll never forget the camaraderie among the IEEE members with whom I served on committees and projects. No matter what obstacles there were, we worked them out toward a common goal. I'd been involved in conflicts with outside entities concerning professional issues such as licensing and pension rights. Our opponents were actually surprised by the dedication and strength of our coalition; nevertheless, we were highly respected for this."

independent of social and political differences...

"As part of a scientific delegation from the IEEE, I spent a month in India's technical community giving and attending lectures, and forging new professional contacts. But the experience had a deeper meaning for me: India's socio-economic conditions preclude the use of hydroelectricity. Instead they use silicon solar cells to power a radio or recharge a battery in remote villages. All along I'd misjudged the use of this technology from a North American context—but understanding the application of the solar cells in a global context revealed the true meaning of 'engineering for the benefit of mankind'."



Cover page photograph shows three of the Section's past Chairmen. Left are Prof. G.L. Deekshatulu, Gp. Capt. R.S. Sivaswami, and Prof. Bhagiratha Rao and Prof. Thomas Kallath.

From the Chairman

Dear Fellow Members,

We are at the threshold of "Information Revolution" and the exchange of views and knowledge at this juncture needs no emphasis. Starting of this 'Newsletter' is a modest attempt to ensure that all who are interested in the advancements of Electrical and Electronics Engineering share their thoughts through this medium.

IEEE is a premier organisation which has generated tremendous wealth of information and has cut across all continents, regions and races to unite humanity thus deriving benefits for the peaceful co-existence of mankind.

Within the Indian Sub-continent, Hyderabad comes very close to Bangalore in the field of Electronics and Electrical Industry. Necessity of starting the subsection/section was greatly felt. It was thus in the middle of 1981 that we started this subsection with a strength of 25 members under the dynamic leadership of Gp. Capt. R.S. Sivaswami, who is the only Chairman to have a 'hat trick' to his credit.

Emergence of 1984 saw us through to a status of "Section" and the strength by then had risen to 80. Since then we have never looked back—thanks to the active participation of all the members and the dynamic leadership provided by Professor Deekshatulu and Dr. E.B. Rao.

We had the distinction of having amongst us almost all the IEEE leaders both from within India and abroad. The programmes organised by this Section have been well attended. The activities of this small but dynamic Section have earned the praise of all our senior colleagues in IEEE.

We have just 'bid farewell' to 1986, which has been our busiest year in terms of the activities organised by this Section. I am confident that with your kind and active co-operation, we shall be able to surpass the '1986 record'. I take this opportunity in wishing all the members a very Happy and Prosperous 1987.

M. Rama

Contents

• About the Hyderabad Section and Its Activities	2
• IEEE Hyderabad Section Bylaws	6
• Main Points from Energy Options Conference	7
• Revisions to India Council Bylaws Proposed	8
• The Genius Behind Artificial Intelligence	9
• Points the IEEE President Made	10
• An Appeal	10
• Minutes of the AGM	11

About the Hyderabad Section and its Activities



C. Satish
Vice Chairman

A small group of IEEE members in Hyderabad thought that they must form a subsection of IEEE at Hyderabad. So a subsection of IEEE was formed at Hyderabad in the middle of 1981 with about 25 members. Gp Capt. R. S. Sivaswami, then General Manager of HAL was its first Chairman. It organised 2 short courses each of 2 days duration one on Signal Processing in 1982, another on Parallel

Processing in 1983 apart from over 20 lectures on various topics by speakers including some by Presidents of a few IEEE societies. By the middle of 1984 the subsection has become a Section with about 80 members and several student members. The Section organised a 9-day course on Secure Communications in 1984, a 6-day course on Artificial Intelligence in 1986, a 2-day Conference on "Energy Options for Power Generation" in 1986, a 6-day course on "Array Processing" in 1986. All the courses attracted a large number of participants from all over India.

The President of IEEE Dr. Weinschel visited our Section on 3-2-1986. With the surpluses generated so far, the Section now intends to have a fixed building/address and build innovative continuing education activities from there. These activities may include a library and video courses. The Section Congress in USA in October, 1987 is concentrating on two topics: 1) Enhancing Program support for Section and Members, and 2) Strengthening continuing education programs worldwide. Send your ideas to me. If we have good projects, IEEE will give funds to implement.

We have after a long drawn struggle got 4 video courses package released from Bombay Customs/Censor Board. These are being converted from NTSC to PAL format to suit the VCRs in India. These tapes have courses on Project Management, Robotics, Information Technologies. We requested Region 10 to acquire video courses on "Fibre Optics" Expert Systems & Prolog.

The Hyderabad Section though very small in size is able to accomplish so much because of few IEEE members volunteered to do some selfless work to their profession. The Hyderabad Section is indebted to these volunteers particularly to its past Chairman Gp Capt. R. S. Sivaswami, Prof. B.L. Deekshatulu, Dr. E. Bhagiratha Rao for the personal care they took in building the Section as one of the most active Sections in the world.

Sections of IEEE are the key groupings of IEEE members within geographical areas. These units bring IEEE services to the members and provide technical, educational and professional activities for them. Some of the major concerns to the Section are money, programs and voluntary workers. Sections get a meagre rebate which is not adequate. Additional funds may be generated by Section sponsored conferences and continuing education courses. An important Section activity is conducting short courses and lectures. Recruiting speakers, arranging for facilities, audio visual services, and publicising the programs are difficult and time consuming. But the results of a successful course or lecture are increased knowledge for members, a sense of satisfaction and unity and income for better/expanded Section activity.

Hyderabad Section Reports

A subsection of the IEEE was formed at Hyderabad (India) in 1981 and by the middle of 1984 it was upgraded into a section with a membership of about 100 engineers and students.

In these 4 years we organized about 40 technical lectures, about five of them by the Presidents of various societies of the IEEE.

In addition, we ran two short courses, one on Signal Processing and the other on Parallel Processing, and a nine-day intensive course on Secure Communications.

In February 1986 we plan to organize a three-day conference on "Energy Options for Power Generation". About 100 delegates from all over India are expected to attend (See meeting announcement in the "Other Meetings" section of this Review).

One of our Section's problems is finding suitable speakers, particularly in the Power Engineering field. We want to organize lectures and application-oriented (inexpensive) self learning programs. As our average incomes are about one tenth of those in USA, most of the IEEE courses as well as other courses are beyond our reach.

There may be several ways that PES members would assist us. One is that those PES members travelling in India for business or pleasure volunteer to lecture or even to conduct short courses. Another way would be for IEEE/PES to supply audio or video tape self-learning programs of our section and other sections in India.

— "IEEE Power Engineering Review"

January 1986

Artificial Intelligence Course

Press Trust of India

Hyderabad: An intensive six day lecture course in the frontier area of "artificial intelligence" and its applications began here on Monday. The International President of the Institute of Electrical and Electronics Engineers (IEEE) Dr. Bruno Weinschel in his address to about 64 participants of the course, underlined the need for closer interaction between laboratory developments in this highly sophisticated area and its industrial applications.

Artificial intelligence is a branch of computer science that provides facilities for computers to tackle problems as human beings do. The lecture series has been organised by the Hyderabad branch of the IEEE. Artificial intelligence has, during the past few years, found several applications in areas like robotics and natural language understanding.

The Secretary of the IEEE, Mr. C. Satish, in his report said the course would have a series of talks on artificial intelligence.

— from "NEWSTIME", Hyderabad
February 5, 1986

These activities provide excellent opportunities to test and develop leadership and managerial skills. The IEEE Presidents and Region 10 Directors have been emphasising that the "dedication" and "enthusiasm" of the Section leaders and members is remarkable and the voluntary work of these people is IEEE's great strength and asset and unique feature of IEEE. Section offers its membership a way to participate through local programs and to create a strong sense of unity within IEEE by bringing together members of divergent technical interests.

The job at the Section level cannot be done by three or four persons. We need several active volunteers to share the work in our Section. You can work as an office bearer, member of Executive Committee, Program Committee, Lecture Committee, Membership Development Committee, Finance Committee. Work involves Planning Conference/Lecture/course topics, contacting speakers, finding out and fixing up of facilities, lecture halls and co-sponsors, publicity, membership development, preparation of lecture notes. Please build up your professional society and derive personal satisfaction. Let us work together.

Need to Conserve Conventional Energy Sources

By a staff reporter

Andhra Pradesh Electronics Development Corporation Managing Director U. V. Warlu today stressed the need for developing scientific methods for efficient use of conventional sources of energy like fire wood, dry cow dung cakes and agricultural wastes.

Speaking at the inaugural session of the two-day conference on "Energy Options for Power Generation" organised here by the Institute of Electrical and Electronics Engineers, Hyderabad Section, Mr. Warlu wanted conversion of bio-mass into liquid fuel instead of dumping agricultural waste into compost pits for making manure, the waste could be utilised effectively for two purposes. The agricultural waste could be converted into liquid fuel as an alternative to oil and the waste from this conversion could be more effectively used as manure, he explained.

He said that photo-voltaic source of energy should be tapped to provide power supply to remote villages to improve their living standards.

Stating that tremendous effort was going on in the development of renewable sources of power, Mr. Warlu pleaded for giving more

encouragement to the development of nuclear energy in view of the limited resources of oil and coal, Hydel, nuclear and solar energy, should get priority to meet the power needs in future, he added. Though thermal station needs little time for its erection, priority should be given to thermal generation to save coal reserves and to avoid pollution, he said.

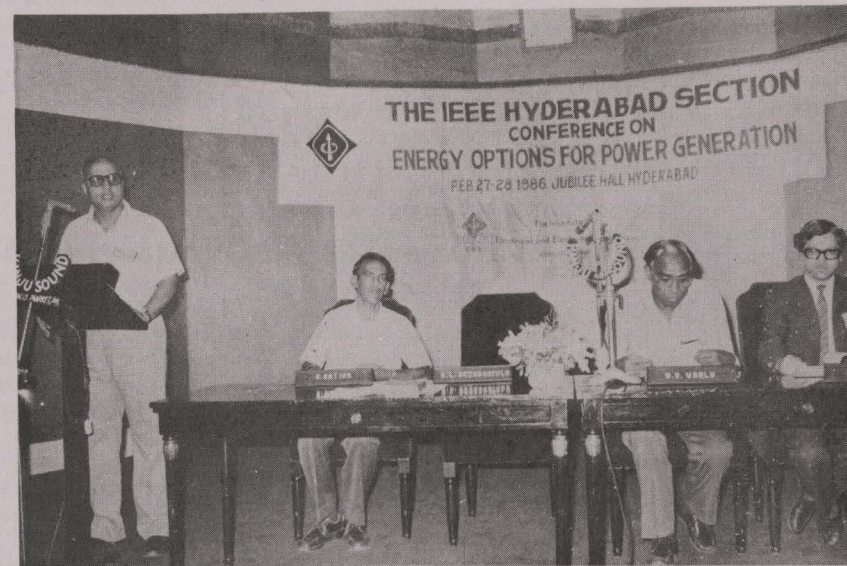
Dr. E. V. R. Sastry, Deputy Director, Department of Non-conventional Energy Sources, New Delhi, in his keynote address suggested close coordination between the implementation of rural electrification and renewable sources of energy programs. He said that photo voltaic source of energy was most suited for India. If the costs were brought down to one-fourth through better technology and research, this energy could be more useful, he added. He also explained in detail about the programmes undertaken by the Government in developing non-conventional energy sources.

Prof. B. L. Deekshatulu, and Mr. C. Satish of IEEE Hyderabad Section also spoke.

— from "DECCAN CHRONICLE", Hyderabad
February 28, 1986



IEEE President's Address during Artificial Intelligence Course at Hyderabad
Left to Right are Mr. Satish, Prof. B.L. Deekshatulu, Dr. V.P. Prasad Kodali and IEEE President Dr. Bruno Weinschel (3-2-86)



Inaugural of the IEEE Hyderabad Section Sponsored Conference by Mr. U.V. Warlu. Left to Right are Prof. B.L. Deekshatulu, Mr. Satish, Mr. U.V. Warlu, Dr. E.V.R. Sastry (27-2-86)



Some of the participants of the Course on Array Processing with Program Chairman Dr. E. Bhagiratha Rao and two Faculty Members (5-12-86)

I ON THE WORLD

India Hyderabad Section holds host of conferences; visited by IEEE President Bruno Weinschel

Hyderabad, India—The Section here in south-central India is relatively small—only 100 members. But what it lacks in size it makes up for in vigor, according to C. Satish, vice chairman of the local group of IEEE members.

February was a particularly busy month for the Section. A glimpse of its activities shows how influential a small but dedicated group of IEEE volunteers located half a world away from Institute Headquarters can be.

Section members organized a six-day course on artificial intelligence Feb. 2-7, including a lecture by IEEE President Bruno O. Weinschel on microwave measurement. Weinschel was in India visiting the Sections in New Delhi, Bombay, Hyderabad, and Bangalore. He also met with the science advisor to the President and the science advisor to India's defense secretary.

On Feb. 16, the Hyderabad Section held its annual general meeting, and on Feb. 27-28 it hosted a two-day conference on "Energy Options for Power Generation." According to Satish, the conference "stressed the urgent need for a national energy policy."

The artificial-intelligence course attracted 64 persons from all regions of India. Among those registered for the intensive session were 27 specialists from India's Defense Department, 13 from the Department of Space, and 23 from the Department of Industry. The five-member faculty for the course was drawn from the Indian Institute of Science at Bangalore and the Indian Institute of Technology at Madras and Kanpur.

Weinschel, who was in Hyderabad Feb. 2-4, underscored the need for closer interaction between laboratory developments and industry applications in AI. He also emphasized the importance of the IEEE's continuing-education programs. (In addition, Weinschel gave a lecture



President Bruno O. Weinschel (top) addresses 64 specialists during an artificial-intelligence course. Later Weinschel gave a lecture to professionals (below) on microwave measurements, in a session organized by the Hyderabad Section.

later for members and nonmembers on his area of technical expertise—microwave measurements.)

On Feb. 3, the IEEE President met informally with members of the Section. Weinschel spoke of services available from the IEEE and pledged to send a list of potential lecturers in the areas of microwave technology, computers and other technical Societies' specialties. He added that it would be helpful if the Section used a permanent mailing address for sending educational materials.

At the Section's annual general meeting Feb. 16, E. Bhagiratha Rao, the director of the Defense Electronics Research Laboratories in Hyderabad, was elected chairman. "A free and frank discussion then followed," according to Satish, on subjects including some of Weinschel's suggestions, such as creating a Section office and providing more inexpensive application-oriented technical activities.

The energy conference at the end of the month was cosponsored by a host of industry giants and govern-

ment laboratories. Nearly 30 papers were presented in the two days. The IEEE slide show "Energy Perspective," by the U.S. Activities Board and Technical Activities Board, was shown and acclaimed as a good program for arousing public awareness on energy issues, according to Satish, who coordinated the conference.

The highlight of the meeting, in the vice chairman's view, was a panel discussion stressing the need for an Indian energy policy. Greater emphasis should be placed on two options, the participants decided: conservation, including increasing the efficiency of existing systems; and development and application of such renewable energy sources as photovoltaic power, solar thermal energy, and hydroelectric power.

A summary of the discussion is to be sent to policymakers and to the scientific and engineering community in India, Satish said. He added that inspiration for the conference came from a President's Column in THE INSTITUTE by 1983 President James B. Owens.

— from "THE INSTITUTE", News Supplement to IEEE Spectrum, May 1986

IEEE Hyderabad Section Bylaws

The Bylaws of IEEE Hyderabad Section, which were adopted on 20th March, 1985 are as follows:

ARTICLE 1 Name, Territory and Purpose.

- Sec. 1 This organisation shall be known as the Hyderabad Section of the Institute of Electrical & Electronics Engineers Inc.
- Sec. 2 The territory of this Section as designated by IEEE includes the whole of Andhra Pradesh State in India.
- Sec. 3 This Section shall have its principal office in Hyderabad or Secunderabad from where it shall carry on its management and administration.
- Sec. 4 The Section shall have for its purpose the advancement of the theory and practice of IEEE designated fields and the maintenance of high professional standards among its members. The above is realised among other ways by holding lectures, discussions, exchange of knowledge, continuing education programs and thus aiding Section members with their day-to-day operating problems and to contribute to their long term professional development. The Section shall also endeavour to promote understanding of the influence of technology (in its field of competence) on the public welfare.

ARTICLE 2 Officers, Nomination and Election.

- Sec. 1 The elected officers of the Section shall be Chairman, Vice Chairman, Secretary, Treasurer.
- Sec. 2 A nominating committee of 3 members who are then not Section officers shall be appointed by the Section Chairman with the approval of the S E C.
- Sec. 3 The panel of names for various offices submitted by the nominating committee shall be intimated to all Section members and a minimum of 28 days allowed for additional nominations by petition. To be valid a petition must be signed by at least 15 members.
- Sec. 4 If only one nomination is made for each office, the announcement regarding unanimous election shall be made at the Annual General Meeting. If additional nominations are made, election will be made by ballot mailed to members and the vote will be counted by the Nominating Committee.
- Sec. 5 The suggested time table for the election procedure is as follows:

September 01	Appointment of Nominating Committee
October 01	Announcement of the Nominations
November 15	Mailing of ballots if necessary
December, 15	Annual General Meeting

The names of Section elected officers shall be reported to IEEE India Council, IEEE head quarters and to bank handling section funds within 20 days following election by the outgoing Chairman/Secretary.

ARTICLE 3 Management

- Sec. 1 The Section shall be managed by the Section Executive Committee abbreviated as S E C. S E C shall consist of the elected officers, three elected members, immediate past Chairman. More members not exceeding three can be co-opted by the S E C.
- Sec. 2 S E C will meet ordinarily four times in a year and will be called to meet by Section Chairman or by a request of any three members of S E C.
- Sec. 3 Five members of S E C shall constitute a quorum and the business conducted shall be by majority vote.
- Sec. 4 S E C can appoint committees for programs, finance, membership development etc.
- Sec. 5 Section shall receive its funds from IEEE head quarters or India Council. Funds can be generated within the Section by charging fees for courses/conferences/continuing education programs/meetings or by voluntary financial contributions.
- Sec. 6 The Section funds shall be utilised only for the IEEE and Hyderabad Section's objectives/purposes.
- Sec. 7 The Treasurer jointly with any one of the other three officers shall be authorised to draw funds as long as they are within a budget approved by S E C in advance.
- Sec. 8 The administration of the Section shall be carried out as per the Section Bylaws and where a point is not covered by Section Bylaws, by the operations Guide "Policy and Procedures Manual" of IEEE.

ARTICLE 4 Term of Office

- Sec. 1 The terms of office of the S E C shall normally be for one calendar year, but in any case shall continue until the successor S E C is elected and take office.
- Sec. 2 Any vacancy in S E C arising during its term shall be filled by S E C.

— continued on page 8

Main Points from Energy Options Conference

The IEEE, Hyderabad Section, held a Conference on "Energy Options for Power Generation" on the 27th & 28th February, 1986 at the Jubilee Hall, Hyderabad. The main points that emerged from the discussions and deliberations of the Conference are briefly outlined here.

Availability of Energy is fundamental to the economic development of the society.

Development and evaluation of new energy options for the future is an important area in technology and public policy. The IEEE Hyderabad Section in a two-day conference on 27th and 28th February, 1986 at Hyderabad has got some of the issues in the energy technology and policy examined by professional community. Papers on a broad spectrum of topics both conventional and non-conventional sources, technological, and policy matters were presented and discussed. Towards the end of the conference there was a very free and spontaneous informal panel discussion in which a large number of delegates, invited speakers spoke after the Course Coordinator Mr. C. SATISH initiated the discussion. A summary of the views of the participants in the conference is given below.

1. There is no single energy option for future. We must diversify our energy sources. A suitable blend and sometimes a hybrid technology is needed. For the rural needs the renewable energy source options are more appropriate/economic. While the output of any individual unit in non-conventional energy centres cannot match that of a conventional fuel based unit, a very large number of small and distributed non-conventional energy centres is an economically viable option particularly if the costing of the conventional energy systems is properly done taking into account the subsidies, avoided and hidden costs in those energy systems.
India can be world leader in this field particularly in application side. We should develop these technologies more vigorously and adequate funding has to be provided by the Government for these new technologies.
2. The second major energy planning strategy should be greater emphasis on conservation, cogeneration, waste heat recovery, increasing the efficiency and reliability of the existing systems. In this field the opportunities for savings in economy and consumption of energy resources are quite high and the investment required is relatively less. It is felt that presently the policies and incentives for conservation etc. are very inadequate and need to be strengthened after detailed studies/discussion. We can improve the energy efficiency of all sectors of our economy.

3. Though hydroelectric power is cheaper, over 80% of the country's hydro-potential is not yet tapped. This was due to high capital investment requirements, long gestation period for hydro-projects and to meet the then immediate goals of increasing the installed capacity of the Power Plants in a short time. But now the time is ripe for exploiting hydro-power for lowering the cost of electrical energy which had risen recently rather steeply. For this the states do not have the financial resources and the areas where the sites are located are not having adequate infrastructure and industrial loads. It is therefore necessary for the Centre to earmark funds in the annual Plans to develop the infrastructure over a period in these areas. By this strategy the gestation periods of hydro-electric power projects can be reduced and energy consuming load centres located near these power stations.
4. The participants noted that one of the main drawback in our energy development programs is the lack of coordination between the research work in the Universities, the industry, the professional societies, the State Electricity Boards, the Central Government and consumers. Integration of the work done at isolated centres saves duplication of effort and greater feedback for directed and well defined and well coordinated roles for research, production and application.
5. Energy awareness appears to be very low in our country. Public education in the scientific principles and importance and ways of better utilisation of energy resources should be one of the main activities of the specialists, the professional societies, Universities, Government, mass media etc.
6. The environmental protection and public safety and welfare aspects of energy generation, delivery and use can no longer be neglected. Severity of the problem is more in the nuclear coal and large hydro-energy options. These costs should be included for a realistic energy pricing and economic comparison of the various options.
7. The participants felt that urgent need for a clear long term national energy policy after a thorough debate and analysis and with the active involvement of scientists, engineers, economists, policy makers working in the R&D, production, funding and implementation sectors. The basic elements of such a national energy policy can include the points mentioned in paras 1 to 6 above. The details of such a policy should be widely publicised as the energy decisions have major influence on the public welfare.

— C. Satish, Vice Chairman, Hyderabad Section

Revisions to India Council Bylaws Proposed

Chairman
IEEE, India Council &
Don Suppers
Staff Director
IEEE Field Service

The IEEE Hyderabad Section Executive Committee which met on 21-8-1986 decided to recommend and communicate to you the following revisions to India Council Bylaws (Article Numbers referred below pertain to existing Bylaws).

- Under Article I add the words "and Territory" to "Name". After the word "council" in the above Article I, add the sentence "The Geographical territory of the India Council shall encompass the participating Sections in the country of India".

- Replace paras 2 and 3 of the Article V "quorum" as follows:

"A quorum for a council committee meeting shall consist of a majority of the voting members of the committee or their alternates. At least one-half of the Section Chairmen or their alternates must be present. If one-half of the Section Chairmen or their alternates are not present, decisions can be taken subject to written concurrence from those not present being obtained."

A quorum for a standing committee meeting shall be a majority of the voting members of that committee or their alternates.

- Replace Article VI as follows:

Management

The council committee shall consist of the following council officers:

VOTING:

- Chairman
- Vice-Chairman
- Secretary
- Treasurer
- Past Chairman
- Chairmen of Sections/Alternates.

NON-VOTING:

- Chairmen of the Council Chapters.
- Student Activities Committee Chariman.
- Awards and Fellowship Committee Chairman.
- Conference and Education Committee Chairman.
- Membership Committee Chairman.
- Co-ordinator Publicity and Publications.

The term of office of the Chairman shall not exceed two consecutive years. The committee shall meet at least four times during a year.

- Under Article VIII the subheading "Conference Committee" will be changed to "Conference and Education Committee". Under Article IX the words "Members at large" will be deleted.

- Para 1 of Article X nominations committee will be replaced by the following sentences:

"The Nominations Committee shall consist of at least three members. These members should be drawn from amongst the current Section Chairmen. The members will elect the Chairman from amongst themselves at their first meeting which can be organised by a convenor nominated by the Council Chairman. No member of the Nomination Committee shall be eligible to be a candidate either as a nominee of the Nomination Committee or as a petitioner.

- In Article XIII Finance, the para (A) is to be changed as follows:

INCOME

All the Sections/chapters rebates paid by the Institute shall be sent to the council and in turn council shall remit the respective share to the Sections/chapters after retaining a small percentage as per the formula approved by the Council Committee in the previous year. The Council Committee with at least one-half of the Section Chairmen shall decide this percentage and the proportion in which any surpluses or deficits left in the council account will be distributed to various Sections after closing of the accounts for each year.

— C. Satish, Vice Chairman, Hyderabad Section

Copy to: All the members of the Hyderabad Section Executive Committee.

Continued from page 6

ARTICLE 5 General Body Meeting

Sec. 1 General body meeting will be called by Section Chairman or by a request of any 10 members of the Section.

Sec. 2 At least eight members must be present to constitute a quorum for a General Body Meeting.

Sec. 3 At the Annual General Meeting the following reports will be presented:

- Meeting and Activities in the year.
- Financial Report.

ARTICLE 6 Amendments

Sec. 1 Proposals for new Bylaws of amendment of Section Bylaws can originate in SEC or by a petition signed by at least 10 members.

2/3rds of all votes cast at SEC meeting discussing the above proposals shall be required to approve any new Bylaws/Amendments.

In passing

'The genius behind artificial intelligence'

Kamal Gopinath

India lost him to the 'Kennedy Syndrome.' The Indian Institute of Technology, Kanpur, did not want him as he was still a young man of 26. But, when the Stanford University, USA, recognised Prof Thomas Kailath's talent and appointed him as an associate professor one-and-half years later, it was too late for India. And now, the 52-year-old professor, who is the Director of the Information Systems Laboratory at Stanford University, is one of the world's top computer information systems' expert working on the computer of the future.

This telecommunications engineer, Indian by birth, deals with what in electronic jargon is called 'Very Large Scale Integration,' (VLSI) an electronic wonder which is yet another step towards man's quest for artificial intelligence. According to an advertisement in the Wall Street Journal by 'Motorola,' the American computer giant, a VLSI computer manufactured by them is capable



Thomas Kailath

of transmitting the Shakespearean classics, King Lear, Hamlet and Macbeth, over an ordinary telephone line in just 3.29 seconds! And Prof Kailath is the brain behind it.

"By using VLSI chips, the functions being performed now by large IBM computers can be performed by an ordinary desk-top computer," the professor explains. "While an ordinary computer chip contains just a few hundred transmitters, a VLSI chip contains a few thousand integrated into smaller or those to a equal chip size! And these chips are capable of intricate and complex arithmetical computations one never dream of before!"

But what are their applications from a layman's point of view. "For developing a computer with advanced artificial intelligence, the computation needs are higher and within a feasible time span. A computer depends on sheer logic, without any help from intuition, unlike human beings. The present-day

ordinary computers are prone to computation constraints and time delay due to lesser transmitter capability. This is where VLSI scores," explained the brilliant engineer who has been made a member of the US National Academy of Engineering, the highest honour given to an engineer in that country.

Another important advantage stresses the telecommunications graduate from Poona University, who branched off to specialise in electrical engineering at the Massachusetts Institute of Technology, is that the 'new generation computers' eliminate the need for a programmer: "This electronic 'chip' allows the manufacture of computers programmed to the needs of a particular profession. A professional can get a computer manufactured and programmed to his needs."

To put it simply, the VLSI are smaller, more powerful, high speed computers which are already in application in picture transmission, speech analysis and signal processing in the United States.

Digressing from his actual field of interest, Prof Kailath, who has authored three books on various computer information systems, spoke about the 'supercomputer' for which India has placed orders with the United States. "The supercomputer has the ability to expedite the making of a nuclear bomb."

The professor, who never misses his yearly trip to India explained: "Because of its high technological content, the super computer speeds up intricate computations which are essential for the development of a nuclear programme, the computations which would take not less than a few months or years on an ordinary computer, the supercomputer can do within a few hours or days." He feels that the reluctance of the USA to impart this technology to India may be due to the fear that the technology might be leaked out to some countries hostile to the US.

The professor's intense interest in the country of his birth is evident when he speaks about it. "India should develop more interdisciplinary research, a blend of computer science and electrical engineering, to lay a strong foundation for a fledgling electronic industry in the country."

He also feels that young electronic engineers should turn entrepreneurs and start small scale industries so that the ground work in the country is strong when it wants to 'take off' on computers.

Prof Kailath was in the city recently, on an invitation from the Hyderabad section of the Institute of Electronics and Electrical Engineers (IEEE), an international organisation with which he has close links.

As the professor got up to leave for Bangalore to join the select band of 11 who have been conferred honorary fellowship by the Institute of Electronics and Telecommunication Engineers, he answered the query, "Will machines overtake man by the year 2001 AD." He said, "We will never come to that. This is just another industrial revolution, which would expand human capabilities rather than constrain them."

— from "NEWTIME", Hyderabad, December 8, 1986

Tirupati Student Branch

An IEEE Student Branch was formed at S.V. University College of Engineering, Tirupati in the middle of 1986. In December 1986 an IEEE video presentation on Robotics was organised.

According to its Chairman, Mr. C. Babu Reddy, the Student Branch has plans to: 1) start a student branch library 2) buy a personal computer 3) revive the College HAM Club and 4) arrange industrial training for students. It is also organising an All-India symposium on Computer Aided Engineering on the 27th and 28th of February, 1987.

The Student Branch would like IEEE members and others from Hyderabad to visit Tirupati and give lectures. Those who can accept their invitation may kindly contact the Student Branch Counsellor Dr. D. Raghurami Reddy, Faculty Member ECE Department, S.V. University College of Engineering, Tirupati-517502.

Minimum Income Reminder

(IEEE Bylaw 109.7)

The 10 years after graduation requirement for special IEEE consideration on minimum income has been removed.

If the person's 1985 Annual Income did not exceed \$5,000 (U.S.), they may take advantage of a fifty per cent reduction in IEEE dues and assessment (if any).

If they qualify for this reduction, they may also take 50% off the higher grade member fee for the membership and publications of one Society.

If they are entitled to this option, they should complete the form on the reverse side of their renewal letter and return with their IEEE membership dues renewal bill and appropriate payment.

Points the IEEE President made *An Appeal*



Bruno Weinschel
President

At the meeting with the members of the Hyderabad Section, held on February 3rd 1986, the IEEE President, Bruno Weinschel, touched various aspects. The following are some of the important points made by him.

1. Continuing Education Programs: Lists of distinguished speakers in the areas of Micro-wave and Computers would be sent. Travel grants from NSF would

be solicited to enable them to travel to India.

2. Publications: The contents of the journals were more often theoretical. It required much persuasion to make the industry leaders to write articles on practice. The highly competitive industry would make the practice information proprietary.

3. Other Services: There were no services restricted to members of a particular region. But for the services to be extended they would have to be paid for, such as group insurance.

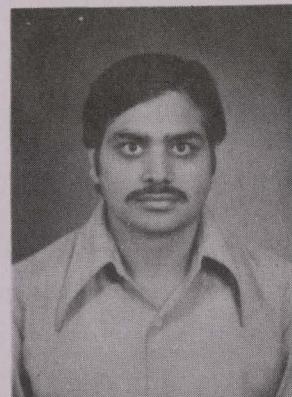
4. Minimum Income Clause: IEEE President would take-up with the Board the waiver of the newly introduced 10 years clause so that 50% concession would continue to be applicable.

5. Educational Materials: It might be possible to make available the education materials provided there was a permanent address for IEEE in India and a full time office was established. The Tokyo Section office is located in the NTT building. This exemplifies support of industry to a professional society. Ultimately it is the industry that is the beneficiary if the competency of its professionals increase. Indian industry can emulate.

6. Preferred Status to Educational Institutions: This would have to be looked into.

7. Sections Congress, 1987: The Congress organisation is going on.

8. India Council: The funds of the Council must be available to the Sections/Chapters. The management of the Council must be by the Sections and the Council should not function independently. The tenure of the office-bearers of the Council must not be more than 2 years and as a policy other members must be inducted as office-bearers. The nominations committee



V.K. Mehrotra
Secretary

Dear Friends,

A new Executive Committee has been chosen to carry on the activities of IEEE Hyderabad Section, and I have been honoured to be chosen as its Secretary. We are indeed fortunate that our predecessors have provided such a solid foundation to build upon and the 100-member strong Hyderabad Section is already well known for its professional activities, seminars and courses.

However, it should be remembered that the future of any organisation depends upon its ability to maintain a healthy rate of growth by the enrollment of new members and to maintain its existing membership by taking proper action to satisfy the interests, needs and aspirations of the members. This can only be achieved by the involvement of all the members in the membership drive and their interaction and feedback on the organisational activities. Since IEEE Hyderabad Section has decided to bring out this Newsletter, I thought that this itself can be used as an effective vehicle of communication and medium of idea-exchange.

A brief summary of the future events planned for this year appears elsewhere in the Newsletter. We would welcome your reaction to the proposed activities. It may be possible to include a few more activities and we would solicit your suggestions regarding the same.

May I request the members to write to me or to any of the Executive Committee members regarding their interests, needs and aspirations so that the organisational activities can be suitably tailored to reflect these. Enrollment of new members is another area where I solicit the co-operation of all the existing members.

Concluding, this appeal is directed towards active involvement of the members in various activities, free exchange of ideas and dynamic interaction which can only foster the growth of a professional society like ours.

Thanking you,

Yours faithfully

V. K. Mehrotra

could comprise Section office-bearers. Apart from business people, the IEEE activities would benefit if more technical people participate.

Minutes of the AGM

The Annual General Meeting was held on 11th January, 1987. The following members attended the meeting:

1. Mr. N.S.S. Prasad
2. Mr. C. Satish
3. Mr. R.N. Sharma
4. Mr. V.K. Mehrotra
5. Mr. Hayat, Mohd. Khan
6. Dr. S.C. Bhargava
7. Mr. V.G.G. Nayar
8. Mr. Ananta P. Sastry Chitti
9. Mr. Gp. Capt. R.S. Sivaswami
10. Prof. B.L. Deekshatulu
11. Dr. S.K. Chaudhuri
12. Mr. S. Raghunathan
13. Mr. Shailesh B. Amin
14. Dr. V. Nagarajan
15. Dr. M. Sridharan
16. Dr. Banbri Narasimha Rao
17. Mr. Hanuma S. Vemuri
18. Mr. Srinath
19. Mr. Krishna Prasad Pinapala
20. Mr. Prasanta Kumar D.K.
21. Mr. V.N. Srinivasa Gupta
22. Mr. P. Sada Siva Sarma
23. Mr. B.S. Nagaraja
24. Mr. Francis
25. Mr. K.V. Rathna Kumar
26. Mr. B.M. Mehtre
27. Mr. K. Kundu
28. Mr. K. Venkata Reddy
29. Mr. B. Narasimha Rao
30. Mr. Ranjit M. Lal

1. Mr. R. N. Sharma, Chairman, welcomed the members to the AGM and reviewed the role of IEEE in Hyderabad and India. He complimented Section's previous chairmen for building such an active Section in Hyderabad. He noted that 1986 was a very active year for the Section.

2. Mr. V.K. Mehrotra, Secretary, presented his report containing information on the size of the Section's membership, establishment of a Student Branch at Tirupati. He gave details of the technical lectures/courses/conference conducted in 1986. He indicated that the Section's first Newsletter is being mailed shortly.

3. Mr. N. S. S. Prasad gave an indication of the Section's finances and indicated that the audited statements of accounts will be ready shortly.

4. Mr. B. S. Nagaraja, Nominations Committee Member read the names in the panel for the Section Executive Committee for 1987 submitted by the Nominations Committee. Since there were no petition candidates, he declared the above panel as elected unanimously.

5. A discussion by members on the various operations of IEEE in general and the Section in particular then followed. Important points from that discussion are:

A) The suggestion made in the last AGM regarding the compilation and supply of the Section Membership Directory is not implemented. It was noted that this is getting delayed for various reasons. The present AGM hoped that it will be ready in the next couple of months.

B) Modern continuing educational programs like video courses should be started this year. The AGM was told four video courses are received and conversion of these tapes from NTSC to PAL format is being taken up. The AGM felt that Section should give preference to building up a video lectures/courses library.

C) Members felt the IEEE membership dues is high and efforts to bring it down with

methods like indexing as proposed by Mr.M. V. Chauhan (Madras) to the M.D.C. in Canada in 1986 must continue. Possibility of payment of dues in Indian currency and collection of all new applications and renewal of memberships and papers by one IEEE agent/office in India and bulk mailing them to USA to be explored. This eliminates the botheration of each individual in getting foreign exchange and airmailing. If necessary, the council can be asked to take up this responsibility.

D) The need for a permanent address and building space for Section meetings, video courses, library etc, was accepted by the membership. It was felt that the location of the room/hall should be in a central place like in between Hyderabad and Secunderabad. Till a long term bigger place is built/purchased, immediately the Section can rent a modest room. There was also an opinion that we must keep some of our reserves for getting the services of experts for lectures/continuing education programs.

SEC was authorised to proceed keeping the above points in mind. It was felt that IEEE services should be increased in Hyderabad.

- E) It was proposed that we can request Prof. Deekshatulu, Prof. V.U.Reddy, Prof. P.N.Murthy to give their willingness to be considered for Region 10 distinguished lecture program. The Section can sponsor their names to Region 10 Director.
- F) It was felt that the Section should arrange lectures by engineers from Industry in the colleges and vice versa to help build some interaction between theory and application. Reliability, Signal Processing, Robotics could be some topics.
- G) Difficulty in attending an AGM on Sunday morning for members from HAL was expressed and the Executive Committee was asked to note it.

C. SATISH

Section Executive Committee 1987

		TELEPHONE	
		Office	Residence
Chairman	Mr. R. N. Sharma Managing Director HAL HYDERABAD-500 042	261978	
Vice Chairman	Mr. C. Satish IDPL 10-5-3/2/6, Masab Tank HYDERABAD-500 028	260541 Ext. 277	220004
Secretary	Mr. V. K. Mehrotra Consys Electronics B-50, Industrial Estate Sanathnagar HYDERABAD-500 018	262045	
Treasurer	Mr. N. S. S. Prasad ICRISAT 2, Badruka Apartments Begumpet HYDERABAD-500 016	224016 Ext. 434	
Members	Dr. S. C. Bhargava BHEL, R & D HYDERABAD-500 593	261874	825164
	Dr. R. Sadasiva Sarma Dept. of ECE College of Engineering Osmania University HYDERABAD-500 007	71951	
	Dr. V. Nagarajan A.V.D.B. HAL HYDERABAD-500 042	260136	
Past Chairman	Prof. B. L. Deekshatulu Director NRSA Balanagar HYDERABAD-500 037	263360	73423

IEEE Student Branch at Regional Engineering College, Warangal-506 004

Counsellor	Dr. R. G. Rajulu Dept. of Elec. Engg.
Chairman	Mr. A. Sreerama Chand
Secretary	Mr. K. Ramoji Rao

IEEE Student Branch at SV University College of Engineering, Tirupati-517 502

Counsellor	Dr. D. Raghurami Reddy, Dept. of ECE
Chairman	Mr. C. Babu Reddy
Secretary	Mr. K. Mohanakrishnaiah



IEEE Code of Ethics

Preamble

Engineers, scientists and technologists affect the quality of life for all people in our complex technological society. In the pursuit of their profession, therefore, it is vital that IEEE members conduct their work in an ethical manner so that they merit the confidence of colleagues, employers, clients and the public. This IEEE Code of Ethics represents such a standard of professional conduct for IEEE members in the discharge of their responsibilities to employers, to clients, to the community and to their colleagues in this Institute and other professional societies.

Article I

Members shall maintain high standards of diligence, creativity and productivity, and shall:

1. Accept responsibility for their actions;
2. Be honest and realistic in stating claims or estimates from available data;
3. Undertake technological tasks and accept responsibility only if qualified by training or experience, or after full disclosure to their employers or clients of pertinent qualifications;
4. Maintain their professional skills at the level of the state of the art, and recognize the importance of current events in their work;
5. Advance the integrity and prestige of the profession by practicing in a dignified manner and for adequate compensation.

Article II

Members shall, in their work:

1. Treat fairly all colleagues and co-workers, regardless of race, religion, sex, age or national origin;
2. Report, publish and disseminate freely information to others, subject to legal and proprietary restraints;
3. Encourage colleagues and co-workers to act in accord with this Code and support them when they do so;
4. Seek, accept and offer honest criticism of work, and properly credit the contributions of others;
5. Support and participate in the activities of their professional societies;
6. Assist colleagues and co-workers in their professional development.

Article III

Members shall, in their relations with employers and clients:

1. Act as faithful agents or trustees for their employers or clients in professional and business matters, provided such actions conform with other parts of this Code;
2. Keep information on the business affairs or technical processes of an employer or client in confidence while employed, and later, until such information is properly released, provided such actions conform with other parts of this Code;
3. Inform their employers, clients, professional societies or public agencies or private agencies of which they are members or to which they may make presentations, of any circumstance that could lead to a conflict of interest;
4. Neither give nor accept, directly or indirectly, any gift, payment or service of more than nominal value to or from those having business relationships with their employers or clients;
5. Assist and advise their employers or clients in anticipating the possible consequences, direct and indirect, immediate or remote, of the projects, work or plans of which they have knowledge.

Article IV

Members shall, in fulfilling their responsibilities to the community:

1. Protect the safety, health and welfare of the public and speak out against abuses in these areas affecting the public interest;
2. Contribute professional advice, as appropriate, to civic, charitable or other non-profit organisations;
3. Seek to extend public knowledge and appreciation of the profession and its achievements.

NOTE: The IEEE Code of Ethics, suitable for framing, is available as a 12" x 15 3/4" two color print on parchment paper. Order from the IEEE Service Center as #UH0123-0. Member price is \$2.00 for first copy, \$2.75 for each additional copy. Quantity discounts available.