



IEEE NEWSLETTER KITCHENER - WATERLOO SECTION



January 1993

Contents

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The Kitchener-Waterloo Section of the Institute of Electrical and Electronics Engineers serves all members whose mailing address is in Bruce, Grey, Perth, Waterloo or Wellington Counties.

DR. CASTLE ON MODERN APPLICATIONS OF ELECTROSTATICS

Presented by the KW Section, IEEE.

Time: 4.30 p.m Wednesday 27th January 1993

Place: University of Waterloo Davis Centre, Room 1304

Subject: Modern Applications of Electrostatics in Industry

Speaker: Dr. G.S.P. Castle, University of Western Ontario

Dine with the speaker after the presentation if you like. Phone Shesha Jayaram 885-1211x5337 or Ed Spike 885-1211x3716 for reservation.

Subject: Electrostatics, the oldest of the electrical sciences, has undergone a phenomenal resurgence in the last few decades. The scope of the field will be considered by reviewing the definition of electrostatics and considering the range of phenomena to which it applies. Selected examples from modern industry will be discussed with particular emphasis on laser printing (electrophotography), painting (electrostatic painting and powder coating), air pollution control (electrostatic precipitation) and plastics recycling (electrostatic separation). Evolving and future applications will also be reviewed.

Speaker: Dr. Castle was born in Belfast, Northern Ireland. He received a B.E.Sc. in Electrical Engineering at the University of Western Ontario in 1961, M.Sc.Eng. and D.I.C. at Imperial College of Science and Technology, London, England in 1963, and Ph.D. from Western in 1969.

From 1963 to 1966 he was in the R and D Laboratories of Northern Electric Company, Ottawa where he worked on development of microwave striplines. Since 1966 he has been at Western University where he was Assistant Dean (Undergraduate Affairs): he is presently Professor and Chair, Department of Electrical Engineering.

His research interests are in the field of applied electrostatics, including electrostatic precipitation, corona discharges, painting, application of pesticides, electrostatic separation and electrophotography. He has published extensively in these fields and is the holder of 5 patents, 3 of which are in commercial application.

Dr. Castle has been on the executive of the Electrostatic Processes Committee of the IAS/IEEE since 1970, including a term as Chair, as well as Session Organizer and Paper Review Chair at a number of Annual Meetings. He is a Fellow of IEEE and a Registered Professional Engineer of Ontario.

STUDENT PAPERS NIGHT

Presented by: K-W Section; Student Branch B, University of Waterloo; and Student Branch, Conestoga College.

Time: 7.00 p.m. Wednesday March 17, 1993

Place: University of Waterloo Davis Centre room 1302

You are cordially invited to the annual Student Papers Night.

Students from Conestoga College and from the University of Waterloo will deliver oral presentations of their technical papers. The best paper from the College is awarded the Ken McKenzie Award and the best paper from the University receives the George Dufault Award: the awards include cash prizes.

Coffee and donuts will be provided.

ICR EVENING LECTURE SERIES

Monday, January 25, 1993, 8:00 p.m., DC 1302, David Wang - How to make a lighter, faster and cheaper robot.

Monday, February 22, 1993, 8:00 p.m., DC 1302, Anthony Vannelli - Recent Advances in Large-Scale Optimization to Solve VLSI Circuit Layout Problems.

Monday, March 22, 1993, 8:00 p.m., DC 1302, Grant Weddell - Object-oriented Database Systems.

TORONTO INSULATION CHAPTER - SPARLING ON AMORPHOUS METALS

Date: Wednesday, March 24, 1993

Time: 6:00 p.m. - 7:30 p.m. (Refreshments 5:30 p.m.)

Place: Ontario Hydro Research
800 Kipling Avenue, Toronto

Speaker: Brian Sparling, Moloney Electric

Topic: Amorphous Metal Transformers
10 Years of Operating Experience

Amorphous Metals are a new class of metal that, like glass, have no crystalline structure. These metals generally have high strength, spectacular toughness and excellent magnetic properties. As a core material, they have yielded ultra efficient transformers for upgrading electric utility and industrial distribution systems. This reduces energy consumption, stretches generating capacity, reduces environmental costs and increases operating productivity.

Contact: John Chan @ (416)467-4071, Bal Gupta (416)231-4111 ext. 6016

CONFERENCES IN CANADA 1993

May 17-18 IEEE WESCANEX, Saskatoon. Ron Fleming (306)966-5226

May 19-21 IEEE Pacific Rim Conference on Communications, Computer and Signal Processing, Victoria. K. Nikita Dimopoulos (604)721-8902

May 23-26 IEEE IAS Cement Industry Technical Conference, Toronto. Jose Gonzales (416)822-1693

May 30 Canadian Workshop on Information Theory, Ottawa. Aaron Gulliver (613)788-5734

June 7-9 20th International Conference on Plasma Sciences, Vancouver. Andreq Ng (604)822-3191

June 8-18th Conference on Real-Time Computer Applications in Nuclear, Particle and Plasma Physics, Vancouver. Ruth Risto (604)22-1047.

CANADIAN SCIENCE AND ENGINEERING HALL OF FAME

The Canadian Science and Engineering Hall of Fame is a joint initiative of The National Research Council; Industry, Science and Technology Canada (Federal Government); The National Museum of Science and Technology (in Ottawa); and The Association of Partners in Education.

The names of the first 16 inductees have been announced; among them are names familiar to us:

- Alexander Graham Bell
- Reginald Fessenden
- Andrew G.L. McNaughton

The 15th Alexander Graham Bell Lecture held at McMaster University on November 12 was entitled "Fessenden and the Early History of Radio Science".

IEEE STANDARDS

The new 1993 Standards Catalogue will be available in early January. Copies are available free of charge from IEEE Canada Office. (see below)

All IEEE and IEEE/ANSI Standards are available directly from IEEE Canada Office - they ship the same day, they invoice in Canadian dollars and the membership discount for Standards remains at 30% on the first copy of each standard purchased.

IEEE Canada Office, 7061 Yonge Street, Thornhill, Ontario L3T 2A6. Phone: 416-881-1930. Fax: 416-881-2057. Email: ieeecan@ecf.utoronto.ca

ASK*IEEE, NEW DOCUMENT DELIVERY SERVICE

IEEE has joined forces with Dynamic Information Corp of Burlingame, Cal. to ship journals, magazines and conference proceedings from all publishers on an article-by-article basis. Phone 1-800-949-IEEE and have your membership number and credit card handy. Rates for articles from the IEEE collection are \$10 for IEEE members, and \$12 for others: this is said to cover all fees, including copyrights. Orders for IEEE items received by noon Pacific time are shipped the same day at no added cost.

SPELLBOUND

Rajeev Bansal, writing in the IEEE Antennas and Propagation Magazine for October 1992, says:

"A spell-checker bundled with your favorite word processing software may seem a panacea for typos like potatoe, but it can also make one look pretty dumb if used carelessly. Witness this spoof from the Wall Street Journal (August 4 1992):

I have a spelling checker
It came with my PC
It plainly marks for my revue,
Mistake I cannot see
I've run this poem threw it,
I'm sure your please too no
It's letter perfect in it's weigh,
My checker tolled me sew.

To get help with correct usage, one can, of course, turn to PC dictionaries. The latest in the electronic dictionary field is the CD-ROM version of the Oxford English Dictionary, Second Edition, with over 600,000 words defined. At \$895, it costs only one-third as much as the 20-volume hard-bound version, which also weighs a daunting 137 pounds."

[Some of our readers may not be aware that the Centre for the New Oxford English Dictionary at the University of Waterloo (affiliated with ICR) developed some of the software used by and for the Oxford University Press in preparing both the Second Edition OED and the Shorter OED. - Ed.]

ELECTROMAGNETIC HAZARD

Recent studies in Sweden indicate that there is a slight risk to health of children from exposure to fields from power lines. This departs from the conclusions of the IEEE Committee on Man and Radiation (COMAR) reported on in the last issue of this newsletter. We may hear more about the matter in IEEE publications.

CALL FOR PAPERS - HIGH VOLTAGE ENGINEERING 30TH MEETING OF THE CAGE CLUB, JUNE 20-22

The Cage Club is named after the Faraday cage which is used in their work. The meeting will be held at the University of Waterloo, June 20-22, 1993. If you wish to submit a paper, send the title and a brief abstract by February 5th to

Dr. Shesha Jayaram, Dept. of Electrical and Computer Engineering, University of Waterloo, phone 519-885-1211 ext. 5337, fax 519-746-3077 or

Dr. J.S. Chang, Dept. of Engineering Physics, McMaster University, Hamilton, L8S 4K1, phone 416-525-9140 ext. 4924.

FEEDBACK SURVEY

We want to hear from you!

- Let us know which topic/subject you would like us to schedule for this section?

Lecture/Presentation/Tour

- What would interest you to participate in our IEEE Section activities?

- Which nights of the week would be preferred for most activities?

Please tear off this form or copy it, and send it to Arvind Vyas, NCR Ltd, 580 Weber Street, Waterloo. N2J 4G5

