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**EDITORIAL**

Now that Y2K is dead and buried, and in spite of the occasional problem with the Internet, we are planning to use e-mail for our publications, in two ways. Notices of meetings which are received at the editor's desk too late for inclusion in this newsletter, besides being posted on bulletin boards, will be sent by e-mail to you if we have your e-mail address. Send us your address if we don't already have it - see page 3.

To help the Paperless society along, if you like, we can send you each issue of the newsletter as well by e-mail instead of hard copy by mail: this will save trees and the section's postage bill. See page 3

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.

## **YOUR E-MAIL ADDRESS PLEASE**

Did you receive an e-mail notice about a meeting on February 3<sup>rd</sup>? This meeting was arranged on rather short notice, so that it did not appear in the January issue of this newsletter. This can happen from time to time. If you did not receive the notice, that means that we do not have your e-mail address on our data base.

Please send us your e-mail address to [tieast@ieee.org](mailto:tieast@ieee.org), then you will receive notices which are not in the newsletter.

Starting with the next issue, we are also planning to send this newsletter by e-mail to any of our members who would prefer it to the hard copy which comes to you by Canada Post or internal mail. Save the trees!

Please send me a message if you want the e-mail version and not the printed version. AE-mail please@ and your name will do: to [tieast@ieee.org](mailto:tieast@ieee.org)

## **STUDENT PAPERS NIGHT WEDNESDAY 15 MARCH**

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

Date: Wednesday 15 March 2000

Time: 6 pm.

Place : University of Waterloo Davis Centre Room 1302

Refreshments will be provided.

You are cordially invited to the Annual Student Papers Night. Students from Conestoga College, Guelph University and the University of Waterloo are expected to deliver oral presentations of their technical papers. The best paper from the college will receive the Ken McKenzie Award and the best paper from the University of Waterloo will receive the George Dufault Award. The best papers from each institution will be awarded cash prizes. The best paper of the whole evening will receive an additional award. So far, Conestoga College has three papers being prepared.

For further information contact Richard Hornsey at 519 885 1211 ext 5336  
e-mail: [rhornsey@venus.uwaterloo.ca](mailto:rhornsey@venus.uwaterloo.ca)

## **SLAWO WESOLKOWSKI WINS MEDAL**

An IEEE Millenium Medal has been awarded to Slawo Wesolkowski, Vice-chair and past Treasurer of this Section. He has been a competitor and then a judge in our Student Papers Night. He has been active in the GOLD program (Graduates Of the Last Decade).

## **PROFESSOR EL-GHALAZY DESCRIBED GLOBAL MODELLING OF MILLIMETRE WAVE CIRCUITS**

On February 3<sup>rd</sup>, the Microwave Chapter presented Prof. El-Ghalazy at the University of Waterloo.

Information about this talk was received too late to be included in the January issue of this newsletter, but a notice was sent by e-mail to members of this section whose e-mail addresses are on file, and the talk was well attended. (See page 3).

The method described covers both active and passive components, and takes account of interaction between adjacent parts. The model has to cover several wavelengths in size to a resolution of 0.1 microns, in two or three dimensions, with a sampling time of 0.01 femtoseconds. A new device described was the Air bridge MESFET@ which has higher gain than the conventional MESFET above 80 GHz.

### **NEW IEEE STANDARDS FOR DATES, PHONE NUMBERS**

Starting this year, IEEE wants all documents to have a uniform method of writing dates and phone numbers: On e-mail messages, the date will be in the order DD MMM YYYY with the first three letters of the month spelled out thus:

29 Feb 2000

On formal letters the month will be spelled out in full thus:

29 February 2000

Phone numbers will include all digits, divided up into groups by spaces, not using / or ( ), thus:

519 885 1211

Strictly speaking, the country code should be on the front, but this newsletter will ignore that requirement.

[But this does not solve another pressing problem. We called the years 1990-1999 the Anineties@. What should we call the years 2000-2009, the Oh-Ohs? I have suggested AThe First Decade@. - Ed]

### **CONESTOGA COLLEGE STUDENTS ASK FOR HELP**

Students in their final year of Engineering Technology must design and build an electronic project. Students are encouraged to meet with engineers and technologists in industry for feedback on their proposed projects, or for project ideas. Some examples of past projects include:

- 4.2 GHz Microwave Dielectric Bandpass Filter
- Single Balanced Microwave Hybrid-Ring Mixer
- Four Channel PCM Time Division Multiplexed Digital Comm. System
- 6 Legged Walking Robot
- Infra-red Wireless Network
- Automatic Egg-Grading using Machine Vision
- Remote Monitoring and Alarm systems using the ISM band and Cell Phone System

IEEE members and their companies are asked to consider being a mentor and/or providing sponsorship of projects. Current and past sponsors have included RIM, COM-DEV, SST, SAF Drives and NCR. Interested members can contact Rudy Hofer, Faculty Advisor for the Conestoga College student branch at rhofer@conestogac.on.ca or 748-5220 x8102.

## CONFERENCES IN CANADA

### 2000

973 8668 e-mail [magnetism@courtesyassoc.com](mailto:magnetism@courtesyassoc.com)  
<http://internagconference.com/>

Apr 27-28 2000 IEEE-IAS Advanced Process Control Applications for Industry Workshop. Vancouver.  
Stephen Cheung 604 214 9248 e-mail: [scheung@udl.com](mailto:scheung@udl.com) <http://www.ieee-ias.org/apc2000>

Apr 30 2000 IEEE International Workshop on Defect Based Testing.  
Montreal. Y.K. Malaiya. 970 491 7031 e-mail: [y.malaiya@computer.org](mailto:y.malaiya@computer.org)

Apr 30-May 4 2000 IEEE VLSI Test Symposium. Montreal. IEEE Computer Soc. 202 371 1013  
<http://www.griao.iro.umontreal.ca/conferences/VTS/VTS00/>

May 7-10 2000 Canadian Conference on Electrical and Computer Engineering. Halifax. CCECE Secretariat.  
902 494 6198 e-mail: [ccece2000@ieee.org](mailto:ccece2000@ieee.org) <http://is.dal.ca/~ccece00/>

May 14-17 31<sup>st</sup> International Conference on Robotics  
Montreal. Contact ISR2000 613 241 9333 e-mail: [isr2000@goldenplanners.com](mailto:isr2000@goldenplanners.com)

May 15-17 2000 Optical Data Storage Topical Meeting. Whistler, BC. Elsie V. Cabrera 908 562 3897  
[e.cabrera@ieee.org](mailto:e.cabrera@ieee.org) <http://www.ieee.org/leos>

May 23-25 2000 IEEE 7<sup>th</sup> International Conference on Parallel Interconnects. Quebec City. IEEE Computer  
Society 202 371 1013

Jun 10-14 2000 27<sup>th</sup> International Conference on Computer Architecture. Vancouver. A. Berenbaum  
908 582 3655 e-mail: [adb@bell-labs.com](mailto:adb@bell-labs.com) <http://www.cs.rochester.edu/~ISCA2k>

Jun 12-16 2000 IEEE Intensive Course on Electrical Contacts. Montreal. Ms.M.Madden. 732 562 3875 e-  
mail: [m.e.madden@ieee.org](mailto:m.e.madden@ieee.org)

Jul 10-12 OAA 2000: Optical Amplifiers and their Applications. Quebec City. Meetings Dept. Optical  
Society of America. 202 416 1907 e-mail: [custserv@osa.org](mailto:custserv@osa.org)  
[http://www.osa.org/MTG\\_CONF/2000/oaa/](http://www.osa.org/MTG_CONF/2000/oaa/)

Jul 13-15 2000 Integrated Photonics Research Topical Meeting. Quebec City. Meetings Dept. Optical  
Society of America. 202 416 1907 e-mail: [custserv@osa.org](mailto:custserv@osa.org)  
[http://www.osa.org/MTG\\_CONF/2000/ipr](http://www.osa.org/MTG_CONF/2000/ipr)

Jul 30-Aug 2 ANTEM 2000. Winnipeg.  
204 474 6469 e-mail to  
[antem@ee.umanitoba.ca](mailto:antem@ee.umanitoba.ca)  
<http://antem.ee.umanitoba.ca>

Aug 27-30 2000 IEEE International Conference on Parallel Computing in Electrical Engineering. Quebec City. A. Skorek. 819 376 5071 e-mail: a.skorek@ieee.org <http://www.parelec.com>

Sep 10-13 ICIP 2000 7<sup>th</sup> International Conference on Image Processing. Vancouver. R.K. Ward 604 822 6894  
e-mail: rababw@cicsr.ubc.ca  
<http://icip2000.ece.ubc.ca>

Oct 1-4 Adaptive Systems for Signal Processing Communications and Control. Lake Louise, Alberta. L. Brooks 905 525 9140 x 24291 e-mail: brooks@mcmaster.ca

Oct 15-18 CEIDP 2000 IEEE conference on Electrical Insulation and Dielectric Phenomena. Victoria. V.K.Lakdawala. 757 683 4665 e-mail : lakdawala@ece.odu.edu <http://www.eee/nist.gov/ceidp>

Oct 23-25 2000 IEEE International Carnahan Conference on Security Technology. Ottawa. L.D. Sanson 606 223 9840 e-mail: lsanson@lex.infi.net

## 2001

Apr 28-May 2 IEEE 43<sup>rd</sup> Cement Industry Technical Conference. Vancouver.  
A. Moore 604 946 0411  
e-mail: amoore@tilbury.lehighcement.com

May 12-19 IEEE 23<sup>rd</sup> International Conference on Software Engineering. Toronto.  
H.A. Muller 250 721 7630  
e-mail: hausl@csr.uvic.ca <http://www.csr.uvic.ca/icse2001>

May 13-17 2001 URSI International Symposium on Electromagnetic Theory. Victoria.  
C.M. Butler e-mail: ebutler@eng.clemson.edu or: staffan@tet.kth.se

Jul 7-13 ICCV: IEEE 8th International Conference on Computer Vision. Vancouver.  
IEEE Computer Society. 202 371 1013

Jul 15-19 2001 IEEE Power Engineering Society Summer Meeting. Vancouver.  
Y. Mansour 604 473 2730  
e-mail: [yakout.mansour@bchydro.bc.ca](mailto:yakout.mansour@bchydro.bc.ca)

Jul 16-20 NSREC 2001: IEEE Nuclear and Space Radiation Effects Conference. Vancouver. M. Shaneyfelt  
505 844 6137 e-mail: shaneymr@sandia.gov <http://www.nsrec.com/npssnews.htm>

Jul 25-28 IFSA/NAFIPS 2001: 9th International Joint Conference of the North American Fuzzy Information Processing Society. Vancouver. M.H.Smith 403 225 1024 e-mail: mhs@mining.ubc.ca  
<http://morden.csee.usf.edu/ifsanafips2001.html>

Aug 13-17 EMC 2001: IEEE International Symposium on Electromagnetic Compatibility. Montreal.  
B. Nadeau 514 822 6000  
e-mail: [bnadeau@ieee.org](mailto:bnadeau@ieee.org)

Sep 24-26 PCIC 2001 IEEE Petroleum and Chemical Industry Technical Conference. Toronto. F.A.DeWinter  
519 740 4736 e-mail: fadewinter@ra.rockwell.com

## 2002

Jun 24-28 IGARSS 2002: IEEE International Geoscience and Remote Sensing Symposium. Toronto.  
IGARSS Business Office 281 251 6067  
e-mail: tstein@phoenix.net <http://www.igarss.org>

### **GPS LOCATES AMBULANCES FOR WATERLOO REGION DISPATCHERS**

Ten of Waterloo Region=s ambulances are to be fitted with GPS receivers for a trial period. Together with a wireless interconnection, they were purchased from RIM of Waterloo, and will let a dispatcher know without asking which is the nearest ambulance to the site of an emergency. This will reduce the response time.

### **NEWS FROM ACADEMIA**

**The University of Guelph** is supporting research by one of its graduate students, Ed Chau, into a hearing aid with directional properties to reject sound coming from directions other than the front. The work is also being supported by **NSERC** and by **dspfactory**, a Waterloo company.

### **Y2K AT BAY**

The Grand River Hospital (which includes Kitchener-Waterloo and Freeport Health Centres) had to check 2936 pieces of biomedical equipment and 511 suppliers of equipment to make sure everything was ready for the changeover by microprocessors from 99 to 00. No problems have been reported.

The Department of Defence quickly disbanded its emergency task forces when the feared riots did not take place.

### **NEWS FROM INDUSTRY**

**Com Dev International** of Cambridge will supply microwave equipment to Mitsubishi Electric Corporation for the Optus C1 satellite, to serve Asia, Australia and New Zealand. Com Dev has supplied part of MOPITT (Measurement Of Pollution In The Troposphere), which weighs over one sixth of a tonne.

**Finline Technologies Inc.** is acquiring **Impress Image Compression Inc.**, which has developed wavelet image compression for visual data. Both companies are in Waterloo. The shares of Finline have tripled in value since the announcement. Finline will use the wavelet method in its wireless systems for TV and internet services.

**Open Text Corporation** of Waterloo has received an order worth \$3M from Saudi Aramco for its Livelink products, which allows companies to handle information transfers to suppliers and internally.

**Pixstream** of Waterloo has split off its Compact PCI division to form **Kaparel Compact PCI** located on Weber Street North in Waterloo.

**Research in Motion (RIM)** of Waterloo has won the Mobile Product of the Year award from InfoWorld magazine for its BlackBerry interactive pager. It has sold 2000 of the pagers to Intel, and 2500 to Salomon Smith Barney, a US investment company. RIM shares have reached record highs on the TSE recently. Nortel has bought shares in RIM, which will use the money to develop new products. RIM gave a party for its employees at Lulu=s in Kitchener, with the Bare Naked Ladies providing the music in person (but not in the nude).

## NEWS FROM THE INTERNET

Parents who have left their children at the Peekaboo Child Care Centre in Kitchener can check on them through the internet. TV cameras hooked to a server in Seattle can be accessed by a parent who has the password.

If you want to know what traffic on highway 401 around Toronto is like, try <http://www.mto.gov.on.ca/english> and click on compass. You can get the picture from one of those TV cameras that hang out above the road

Bell Mobility is offering access to Yahoo! Canada internet server through PCS cellphones

The bad news is that someone found a way to jam (spam?) Yahoo!, Amazon.com, Buy.com, CNN and eBay, making them inaccessible for a few hours in early February.

Among the things you can buy on the Internet, besides cars, are Olivetti typewriters (remember those things?). Mark Cuban, a billionaire, bought a Gulfstream V jet aircraft: the whole transaction was done on the Internet except for a test flight and writing a cheque.

If you wanted to buy a Ducati MH900e motorbike this year, you had to buy it on the Internet, and you had to be quick because it sold out on New Years Day.

Ford and General Motors will be selling cars with limited Internet access in the next model year. Such a car will download your e-mail via the cellphone network and read it to you.

In Britain, when an act of parliament is ready for royal assent, it is signed Elizabeth R. by the Queen herself. To save time, the government is considering sending the act by e-mail to Buckingham Palace. A hundred years ago, Queen Victoria used voice mail: she would record a letter on a cylinder and mail it to her relatives in Germany.

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