



IEEE NEWSLETTER

KITCHENER - WATERLOO SECTION



January 1997

MEETING

Mark this date on your calendar:

Monday, January 20th: Professor Stanley Lipshitz on The Quantization Quandary in Digital Audio and Its Solution: A Lecture/Demonstration, University of Waterloo, Davis Centre, Room 1302, 5:30 p.m. (see page 2).

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PROFESSOR LIPSHITZ ON THE QUANTIZATION QUANDARY IN DIGITAL AUDIO AND ITS SOLUTION: A LECTURE/DEMONSTRATION

Date: Monday, January 20th, 1997
 Time: 5:30 p.m.
 Place: University of Waterloo Davis Centre Room 1302
 Subject: The Quantization Quandary in Digital Audio and Its Solution: A Lecture/Demonstration

Speaker: Stanley Lipshitz is a Professor in both the Applied Mathematics and Physics departments, and conducts research in audio and electroacoustics in the University of Waterloo's Audio Research Group. His current interests include the mathematical theory of dithered quantization and noise shaping, physical acoustics, and digital signal processing for audio. He is a member of the IEEE.

Subject: The audible distortion of finite-wordlength quantization in digital audio can be quite disturbing. It will be shown how the use of dither of triangular probability density function can convert these errors into a benign noise, which can then be made inaudible by psychoacoustically-designed inband noise shaping. Audio examples will be used to illustrate all these phenomena. Comparable techniques can and should be applied in all areas where data quantization or requantization occurs.

ADVANCE NOTICE - STUDENT PAPERS NIGHT WEDNESDAY MARCH 19TH

Presented by: K-W Section; Student Branch B, University of Waterloo; and Student Branch, Conestoga College.
 Time: 7.00 p.m. Wednesday March 19, 1997
 Place: University of Waterloo Davis Centre rooms 1301 and 1302

You are cordially invited to the annual Student Papers Night. Students from Conestoga College and 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. Refreshments will be provided.

CONFERENCES IN CANADA

For more information about some of these conferences, look on the Internet for http://ece.uwaterloo.ca/~ieec_kw/newsletter.html, and click on the latest date. Find Conferences: then you can click on any e-mail address to send a message, or on a URL to get the conference home page.

- 1997**
- Feb 23-26 1997 MTT-S International Topical Symposium on Technologies for Wireless Applications. Vancouver. Richard A Sparks 617-862-3000, e-mail: r.sparks@ieee.org
 - May 12-15 Int'l Conference on 3D Digital Imaging and Modeling. Ottawa. Marc Rioux 613-993-7902 e-mail: rioux@iit.nrc.ca

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.

- May 12-16 Particle Accelerator Conference. Vancouver. E.Driessen. 604-222-7352, e-mail: pac97@triumf.ca
- May 20-22 IEEE Instrumentation & Measurement Technology Conference IMTC 97. Ottawa. R. Myers 310-287-1463, e-mail: bob.myers@ieee.org
- May 26-28 CORS'97 Canadian Operational Research Society Annual Conference. Ottawa. D. Meister 613-520-2600 x2397, e-mail: cors97@business.carleton.ca
- May 27-30 Joint Int'l Conference on Open Distributed Processing and Distributed Platforms. Toronto. John Botsford 416-488-2096, e-mail: icodp97@sce.carleton.ca
- May 25-28 1997 Canadian Conference on Electrical and Computer Engineering. St.John's Nfld. Paper deadline 97 Feb 21. D. Collett 709-737-1372, e-mail: t.d.collett@ieee.org
- May 28-30 ISMVL'97 IEEE Int'l Symposium on Multiple-Valued Logic. Antigonish Nova Scotia. Gerhard Dueck e-mail: gdueck@stfx.ca URL:<http://julyet.stfx.ca/~gdueck/ismvl97/>
- Jun 3-6 IEEE International Conference on Multimedia Computing and Systems. Ottawa. Nicolas D. Georganas 613-562-5800 x6225, e-mail: georgana@mclab.uottawa.ca URL: <http://www.mclab.uottawa.ca/ICMCS97.html>
- Jun 8-12 ENM-97 First IEEE Enterprise Networking Mini-Conference. Quebec. Bhumip Khasnabish e-mail: bhumip@gte.com
- Jun 8-12 ICC'97 - IEEE International Conference on Communications. Montreal. Roland Oliver 514-870-3060, e-mail: oliverr@stentor.ca or Celia Desmond 905-615-6655, e-mail: c.desmond@ieee.org
- Jun 8-12 1st IEEE Enterprise Networking Mini-Conference (ENM-97) in Conjunction with ICC'97. Montreal. Vijay Bhagavath e-mail: bhagavath@bell-labs.com
- Jun 9-12 1997 IEEE Digital Cross-Connect Systems Workshop VII. Whistler BC. James H. Simester 908-949-7336, e-mail: sims@bostare.ho.att.com
- Jun 10 A Wireless Mini Conference. Quebec. Vino Vinodrai 416-789-5039
- Jun 16-19 DCS-97 1997 Digital Cross Connect Systems Workshop. Alberta. Richard Hamley 613-763-4591, e-mail: hamleyrd@stentor.ca
- Jul 13-18 IEEE AP-S International Symposium and URSI Radio Science Meeting. Montreal. D. Ruest 613-993-9228, e-mail: ursiaps97@nrc.ca or doris.ruest@nrc.ca; or P. Bhartia 902-426-3100x133, e-mail: bhartia@drea.dnd.ca Deadline for papers: January 10 1997
- Jul 21-23 1997 IEEE Signal Processing Workshop on Higher Order Statistics. Banff, Alberta. Keh-Shin Lii 909-787-3836, e-mail: ksl@ucrstat.ucr.edu
- Jul 24-25 DMS'97 Pacific Workshop on Dist. Multimedia Systems. Vancouver. Deadline for papers Jan 15 1997. Taieb Znati 412-624-8490, e-mail: znati@cs.pitt.edu
- Aug 24-28 World Power Beaming Conference. Montreal
- Aug 25-27 1997 10th International Symposium on High Voltage Engineering. Montreal. Farouk A.M. Rizk 514-652-8210
- Sep 21-26 ISS'97 World Telecommunications Congress (International Switching Symposium). Toronto. 'Intent to submit' deadline Dec 21 1996. Final paper deadline Feb 21 1997. Irving Elbert 416-588-3522 <http://www.ISS97.org/> e-mail: info@ISS97.org/
- Oct 6-9 OCEANS'97. Halifax. Ms. Michael Ellis 908-562-5362, e-mail: m.ellis@ieee.org
- Oct 5-8 1997 IEEE Ultrasonics Symposium. Toronto. Stuart Foster 416-480-5716, e-mail: stuart@srcl.sunnybrook.utoronto.ca
- 1998**
- May 4-7 1998 IEEE/IAS Industrial and Commercial Power Systems Technical Power Conference (I&CPS). Edmonton. M. Bince 403-468-6673
- May 18-21 1998 IEEE Vehicular Technology Conference (VTC). Ottawa. Tara Hennessy 613-990-4711, e-mail: hennessytara@ic.gc.ca
- 1999**
- Jul 18-22 1999 IEEE Power Engineering Society Summer Meeting. Edmonton. D. Fraser 403-448-3554

ADVANCE NOTICE - 1998 CANADIAN ELECTRONICS AND COMPUTER ENGINEERING CONFERENCE

The Kitchener-Waterloo Section of IEEE will host the annual Canadian Electronics and Computer Engineering Conference in 1998. Your section is already working on the arrangements. We will keep you posted.

1997 IEEE AP-S AND URSI STUDENT PAPER COMPETITIONS

Graduate students are invited to submit papers about their work for competition. The URSI competition has a first prize of \$1000.00 and the AP-S competition \$300.00; in addition, the three URSI finalists will get travel and subsistence expenses to attend the combined meeting in Montreal in July 1997 where the awards will be made (see Conferences in Canada).

Deadline for papers January 10th 1997 (15 hard copies - not fax or e-mail!). For more information check the web site <http://www.nrc.ca/confserv/apsursi97/welcome.html>

HOMEPAGE FOR K-W SECTION

News about this section, including recent newsletters, can be found on the World Wide Web by calling up http://ece.uwaterloo.ca/~ieee_kw/ieee_home.html and clicking on any topic that interests you.

INSTITUTE FOR COMPUTER RESEARCH SHORT COURSES, January to May 1997

Software Architecture: Definitions, Examples, and Analysis

January 13-14, 1997
(two days - \$500+GST)

Rick Kazman, Ph.D.
Adjunct Professor, Computer Science
Member, ICR Software Engineering Group and Computer Graphics Lab

Computer Vision

February 17-18, 1997
(two days - \$500+GST)

Andrew K.C. Wong, Ph.D.
Professor, Systems Design Engineering
Director, ICR Pattern Analysis and Artificial Intelligence Group

Wireless and Mobile Computing

March 19-20, 1997
(two days - \$500+GST)

Thomas Kunz, Dr.Eng.
Assistant Professor, Computer Science
Member, ICR Computer Communications Networks Group

Hypermedia, Multimedia, Metamedia, and the Web

April 8-9, 1997
(two days - \$600+GST)

Michael McCool, Ph.D.
Assistant Professor, Computer Science
Member, ICR Computer Graphics Lab

Using the C++ Standard Template Library

May 5, 1997
(one day - \$250+GST)

Darrell Raymond, Ph.D.
Adjunct Assistant Professor, Computer Science

A VHDL-Based Introduction to Digital and Analogue Hardware Description Languages

May 28-29, 1997
(two days - \$500 + GST)

Farhad Mavaddat, Ph.D.
Associate Professor, Computer Science
Member, ICR Software Engineering Group and Very Large Scale Integration Research Group

REGISTRATION

Everyone is welcome to attend the ICR Short Courses. You should register early as space is limited. Employees of companies that are ICR Corporate Partners/Corporate Associates may attend free-of-charge. ICR faculty members and graduate students supervised by ICR faculty members may attend free-of-charge, subject to availability of space.

Location/Schedule:

All short courses are held in the Davis Centre, Room 1304, University of Waterloo. Each course begins at 9:30 a.m. and ends at 4:30 p.m.

To Register:

Mail/Fax/Phone: Institute for Computer Research, University of Waterloo, Waterloo, ON N2L 3G1, attn: Jean Webster. Ph: 519-888-4530, fax: 519-885-1208, email: jrwebste@icr.uwaterloo.ca. Or, visit ICR's Website to register: <http://icr.uwaterloo.ca/ICR/>.

NEWS FROM INDUSTRY

CME Telemetrix of Parkside Drive, Waterloo manufactures a blood glucose monitor and other instruments for physiological monitoring. The company has raised a special warrant issue for over \$4M.

Descartes Systems of Randall Drive, Waterloo has raised over \$5M in warrant financing. They sell distribution software for dairy and other food companies around the world.

Research In Motion has expanded from Waterloo to Kitchener where they will assemble wireless modems and pagers. They are hiring production workers.

HISTORIC ENGINEERING LANDMARKS

All members of this section should have received the fall 1966 edition of the IEEE Canadian Review: in case you haven't, or haven't read it, you may have missed the item on page 9 which is a Call For Nominations by Parks Canada. They are seeking nominations of sites to be included in an inventory of outstanding pre-1955 Canadian Historic Landmarks.

Such a landmark should be at least one of the following:

- a recognized engineering achievement in itself
- representative of a type of structure or work that played a highly significant role in Canadian engineering
- illustrative of a major technological advance
- associated directly with the work of a renowned Canadian engineer or a master builder
- an engineered, clearly defined, geo-cultural area of national importance
- a cultural landscape formed (or transformed) by an engineering project.

For further information see the ad in IEEE Canadian Review or phone Commonwealth Historic Resource Management Limited at 604-688-7995.

USED COMPUTERS

K-W Surplus at 666 Victoria St North has opened a Computer Room, and advertises that they sell new and used computer equipment. You can also trade in your old computer equipment for cash or credit.

GUELPH STUDENT BRANCH

The University of Guelph has established a Student Branch. Contact person is Prof. Otman Basir.

A FRAGRANT THOUGHT

How many herbalists does it take to change a light bulb?
Only one, but it takes thyme.

SIGNIFICANT FIGURES

From London, England.

Museum visitor: How old is that dinosaur?

Attendant: 70 million years and three months.

Visitor: How can you be so precise?

Attendant: Well sir, when I started work here three months ago, they told me it was 70 million years old.