

BIographies

The UofM EMBS Student Chapter would like to thank the following for participating in our conference workshops:

- Dr. Digvir Jayas** Currently the Assoc VP (Research) and Canada Research Chair in Stored-Grain Ecosystems at the UofM, Dr. Jayas has received professional awards from the Canadian and Assoc VP (Research) American Societies of Agricultural Eng, and APEGM. His research includes the mathematical modelling of biological systems, and digital image processing for food grading. U. of Manitoba
- Dr. Richard Gordon** An adjunct professor to the Electrical and Computer Engineering department, Dr. Professor Gordon is highly interested in the relationship between embryonic structure and evolution. He publishes on AIDS, microrobotics, and medical imaging, and recently even Dept. of Radiology U. of Manitoba contributed to the Romanow Report on national health care.
- Dr. Jeff Bews** Dr. Bews obtained his Ph.D. from the University of Manitoba and serves as Assistant Assistant Prof Professor there in residence at Cancercare Manitoba. He teaches on topics of radiotherapy physics and develops virtual reality and other techniques for the planning and Dept. of Medical Physics delivery of radiation therapy.
- Tom Scatliff** Mr. Scatliff graduated from Computer Engineering at the UofM in February 2001 and works full-time on the development of adaptive computer devices for rehabilitation. He Rehabilitation Engineer currently chairs the Manitoba chapter of the Tetra Society, a group which supports Health Sciences Centre independent living for the disabled community.
- Dr. Zahra Moussavi** Dr. Moussavi graduated from the UofM in 1997 specializing in the signal processing of Assistant Prof EMG signals under trigger-point disorders. She currently leads the UofM Biomedical Dept. Electrical and Engineering Laboratory and serves as the Winnipeg IEEE-EMBS Chapter Chair. Her Computer Eng research involves signal processing for the interpretation of physiological measurements U. of Manitoba and modeling of physiological systems.
- Dr. Dean Kriellaars** Currently the Chair of the M.Sc. in Rehabilitation program at the UofM, Dr. Kriellaars Associate Prof has served on a number of local, national and international committees and advisory Medical Rehabilitation boards discussing exercise science research. He studies the neuro-mechanical perform- U. of Manitoba ance of human motion.

ENGINEERING IN MEDICINE AND BIOLOGY SOCIETY STUDENT BRANCH CHAPTER – UOFM

The Engineering in Medicine and Biology Society of the IEEE advances the application of engineering sciences and technology to medicine and biology. The EMBS is interested in the application of many interdisciplinary methods covering the very broad spectrum from formalized mathematics through experimental science and technological development to practical clinical applications. Officially recognized in September 2002, the UofM Student Branch Chapter is one of the newest in the world. The chapter sponsored many great events this momentous year including participation in the EMBS Distinguished Lecturer Series and CSBEC 2003.

Chair	Liza Lazareck	Treasurer	Sarah Kelso
Vice-Chair (Grad)	Michael Potter	Industry Liason	Dawn Nedohin-Macek
Vice-Chair (Undergrad)	Ali Erfani	Promotions Dir.	Julian Nedohin-Macek
Secretary	Ric Rodd	Activities Dir.	Dustin Isleifson
	IEEE Advisor		Dr. R. Gordon

UNIVERSITY OF MANITOBA

ENGINEERING IN MEDICINE
AND BIOLOGY SOCIETY
STUDENT BRANCH CHAPTER



Student Chapter

presents

February 28 and March 1, 2003

CSBEC 2003

CANADIAN STUDENTS BIOMEDICAL
ENGINEERING CONFERENCE

SCHEDULE OF EVENTS

Friday February 28, 2003

8:30am-9:00am	Registrant Sign-in — Canad Inn St. James Hotel
9:00am	Bus leaves Canad Inn St. James Hotel
9:30am-11:30am Health Sciences Centre	<p>HSC Clinical Engineering Dept. Tour — Mr. Petr Kresta P.Eng The hospital equipment experts for “cutting edge” electromedical diagnosis, therapy, and monitoring at the “bottom line”.</p> <p>HSC Rehabilitation Engineering Dept. Tour — Bill Brereton Assistive technology brings independence and quality of life through prosthetic, orthotic, electronic, and mechanical designs.</p>
12:00pm-2:00pm Canad Inn Hotel	<p>Lunch Invited Address — Dr. Digvir Jayas <i>Are engineers missing out an opportunity by not understanding biology?</i></p>
2:00pm-3:00pm	<p>EMBS Roundtable Discussion <i>The Next Step</i> An open forum responding to the invited address and the future efforts of our EMBS chapter.</p>
3:15pm-4:15pm	<p>Mini-Workshop— Dr. Richard Gordon <i>How would an engineer build an embryo (hands off)?</i> How does an embryo autonomously build all of us from scratch? How could we design one?</p>
4:30pm-5:30pm	<p>Mini-Workshop — Dr. Jeff Bews <i>Virtual reality tracking as a surgical tool</i> Examine how VR technology allows you to see a tumor and take surgery to the next generation.</p>
6:30pm	Dinner — Aaltos Buffet
8:00pm	Bus leaves Canad Inn St. James Hotel
8:30pm-10:30pm	Activity — Academy Lanes Bowling

Saturday March 1, 2003

9:00am-12:00pm U. of Manitoba Fort Garry Campus (Engineering Library)	<p>“Junkyard Ward” Design Challenge — Tom Scatliff 351 Engineering (Library Study Hall) Design an important medical device to meet the real-world needs of nurses and sick children. Build it with basic “junkyard” materials and have it stand up to the test — it’s the “Junkyard Ward” challenge!</p>
12:00pm	<p>Awards Lunch Everybody wins with pizza!</p>
1:30pm-5:00pm	<p>Full Workshop A — Dr. Zahra Moussavi <i>Biomedical applications of LabView programming</i> 465 Engineering Learn the concept of LabView and its programming. Design systems for data acquisition and signal conditioning then try it out on your own EMG, ECG, or respiratory signal.</p>
	<p>APEGM Sponsored Coffee Break 3:00-3:30pm</p>
	<p>Full Workshop B — Dr. Dean Kriellaars <i>Biomedical applications of GPS — a hands-on introduction</i> 351 Engineering (Library Study Hall) Learn GPS as a tool for measuring real time kinematics and put it to the test in head-to-head competition. Use basic GPS theory and application in a treasure hunt and other games.</p>
5:15pm	Bus leaves University of Manitoba Fort Garry campus
6:00pm	Dinner — Rae & Jerry’s
8:30pm	Bus leaves Rae & Jerry’s
8:45pm	Activity — Tijuana Night Club (Canad Inn St. James Hotel)

SPECIAL ACKNOWLEDGEMENTS

The UofM EMBS Student Conference could not have happened without the support of those who believe in students and engineering. We thank you.

IEEE Winnipeg Region

IEEE EMBS Executive

IEEE McNaughton Centre, UofM

UofM Engineering Endowment Fund

UofM, Office of Research Services

UofM Alumni House

UofM Engineering, Dean’s Office

APEGM

UMSU

UofM Bookstore

Mr. Petr Kresta

Mr. Bill Brereton

Dr. D. Jayas

Dr. R. Gordon

Dr. J. Bews

Mr. Tom Scatliff

Unknown Judge

Dr. Z. Moussavi

Dr. D. Kriellars

Lisa Lazarek

And thanks to our volunteers:

Michael Potter

Julian Nedohin-Macek

Dawn Nedohin-Macek

Dustin Isleifson

Ric Rodd

Sarah Kelso

Chris Otto

Owen Preston