



IEEE Power & Energy Society Winnipeg Section PRESENTS...A LUNCHEON MEETING

TOPIC: PRESENTER: TIME AND DATE: LOCATION:	Robotized Live Transmission Line Maintenance: Accomplishments and Continuing Challenges Nariman Sepehri 12:00 Noon, Tuesday, March 26, 2013 Holiday Inn South, 1330 Pembina Highway, Winnipeg
---	--

◇ Cash bar available at Noon.
 ◇ Lunch served at 12:15 PM.
 ◇ Meeting concluded at 1.30 PM.
 ◇ Cost of the meal (payable at the door).

Early registration (*On or Before 22nd Mar.*)
 IEEE Members - **\$16.00**
 Non-Members - **\$20.00**

Late registration (*After 22nd Mar.*)
 IEEE Members - **\$18.00**
 Non-Members - **\$22.00**

The IEEE PES Winnipeg Chapter must guarantee a minimum attendance to the hotel, so please take a moment to register early by RSVP to **Kang Liu** by **Friday Noon, 22nd March 2013**, in one of the following ways:

Phone: 204-360-6419
 Email: kliu@hydro.mb.ca

Abstract: Electrical utility linemen have to work on structures of varying heights, and under often extreme weather conditions. They have to concentrate on every detail of a given task, from operating the bucket that carries them, to working on energized high voltage lines. Often, personnel must use hot sticks and perform various maintenance tasks. Uncomfortable standing position in the bucket, awkward posture, extended arm in a suspended position while supporting a load or applying force and repetition of some motion patterns are amongst what linemen experience while holding hot sticks. Many of these operations can be performed by multi-functional manipulators via direct commands from operators or through automatic generation of paths. In this talk, we will present results of a research conducted with the support from Manitoba Hydro and MITACS, over two years, to robotize live line maintenance. We will describe how we have adapted existing technologies and combined them with our own developed approaches, towards constructing a field operate-able prototype telemanipulator system that incorporates an acceptable balance between human supervision, computer intelligence and robot capabilities to replicate desired manipulation of linemen holding hot sticks. The talk will conclude with a summary of achievements and future challenges.

Biography: Nariman Sepehri, is a Professor of Mechanical Engineering at the University of Manitoba, Winnipeg, Canada, and is currently the Associate Dean (Undergraduate Programs). Dr. Sepehri received his Ph.D. degree in 1991, from the University of British Columbia, Vancouver, Canada. His publications include over 90 articles in refereed journals, 140 conference papers and book chapters. He holds 5 patents. Research and development activities of Professor Sepehri are primarily cantered in all fluid power systems and tele-robotics aspects. He has developed undergraduate courses on “Mechatronics Systems Design”, and “Industrial Process Control” as well as graduate-level courses on “System Design for Robots and Teleoperators”, and “Modeling and Simulations”. He is a senior member of IEEE, Fellow ASME, Fellow CSME, Chair of ASME Division of Fluid Power Systems and Technology, and co-chair of the IEEE Winnipeg Control and Robotics Chapter.

Re: IEEE PES Luncheon Meeting at 12:00 Noon on Tuesday, March 26, 2013

Name: _____ Any Diet Restrictions: _____
 Company: _____
 Telephone no.: _____ Number in party: _____

Please visit our website: <http://winnipeg.ieee.ca/pes>.