*This news release was distributed at the event on November 28, 2005

November 28, 2005

**Province funds intelligent wireless communications research**

New iCORE Professor to head $5.5 million Intelligent RF Radio Technology laboratory

Calgary...Alberta researchers working on broadband wireless communication systems will benefit from a leading-edge laboratory at the University of Calgary, headed by newly-appointed iCORE Professor and Canada Research Chair in Intelligent RF Radio Technology, Dr. Fadhel Ghannouchi.

"Wireless communications technology is a priority for research and development in Alberta," stated Victor Doerksen, Minister of Innovation and Science. "It is a coup for iCORE to have attracted Dr. Ghannouchi to Alberta to continue his research in this exciting field. Technology transferred from this lab will result in innovative new Alberta products for global markets."

This laboratory is thought to be the first of its kind in Canada to address global challenges in intelligent RF radio technology research and education. The laboratory will provide a unique platform for pre-competitive research, and industrial and technological development, generating close collaboration between university and industry researchers.

Dr Ghannouchi aims to develop innovative intelligent software-hardware solutions to enable faster, cheaper and more efficient broadband wireless communications.

"This laboratory will be positioned at the crossroads of several fields relevant to the highly promising area of broadband wireless communication systems," says Dr. Ghannouchi. "The proposed research program will train graduate students and engineers across several disciplines related to radio frequency and microwave technology, high speed digital electronics and communication systems; areas which are commonly considered and categorized as "independent" and "sovereign" disciplines in academia."

"This research program will also promote the training of highly qualified personnel who will have a positive impact on Albertan and Canadian society," continued Ghannouci.

Dr. Ghannouchi's iCORE Professor grant provides $1.5 million over five years. Additional funding is provided by the Canada Foundation for Innovation, NSERC, the University of Calgary, TRLabs, plus industry cash and in-kind contributions.

For more information, visit www.icore.ca

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**Editor's Note:**

See attached backgrounder

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# Backgrounder

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The Alberta Informatics Circle of Research Excellence (iCORE) was established in October 1999 by the Government of Alberta to foster world-class university-based research to support the Information and Communications Technology sector. More than 20 research chairs have been established to focus on emerging areas such as wireless communications, artificial intelligence, and quantum and nanocomputing.

**Dr. Fadhel Ghannouchi**
**iCORE Professor, Intelligent RF Radio Technology**
**Electrical and Computer Engineering, University of Calgary**

Dr. Ghannouchi has received an iCORE Professor grant of $1.5 million over five years. The total budget for the lab is $5.5 million, which includes contributions from industry; student and laboratory support from TRLabs; the Canada Foundation for Innovation; NSERC and the University of Calgary. Dr. Ghannouchi is a Tier 1 Canada Research Chair.

**Research Program Overview**

This laboratory will be devoted to advanced research and development activities in Intelligent RF Radio Technology applicable to broadband wireless communications systems. The main objective of the research is to investigate scientific and technical problems related to the characterization and modeling of transistors, amplifiers and transmitters in order to develop more spectrum-efficient and/or power-efficient transmitters for 3 rd and 4th generation wireless applications.

**Biographical Information**

Dr. Ghannouchi comes to Alberta from the University of Montreal. He is an outstanding professor, researcher and engineer, internationally known for his accomplishments in academia and technology development. He has published over 250 scientific or technical papers, written one textbook, holds seven US patents (two pending), trained more that 50 graduate and visiting students, developed at least five innovations, and founded a university spin-off company (AmpliX Inc.) that was acquired by Mitec Telecom in 2001. As CEO, he guided development of an innovative line of products for the satellite communications market. This product line is now manufactured by Mitec Telecom and sold worldwide.

Dr. Ghannouchi is part of a network of influential people in academia, and in the RF, microwave, digital signal processing, wireless and satellite communications sectors in Canada, the U.S., Japan and Europe.

**Research Team**

The Laboratory will be located at the Electrical and Computer Engineering Department of the University of Calgary. A new faculty member with expertise in digital signal processing, multiple-input, multiple output (MIMO), and broadband wireless communication systems will be hired. Post-doctoral and visiting

researchers will play an important role in training students and conducting leading-edge research projects. These researchers will reinforce the international reputation of the lab and help to recruit top students from around the world. The number of graduate students is expected to jump from ten to thirty by the end of the fifth year of the program.

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