

*The Electrical and Computer Engineering Program presents
ECEN Seminar Series*

An Intelligent Telemedicine Platform with Cognitive Support for Chronic Care Management

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12 – 1 PM

Lecture Hall 144

Providing accessibility to quality healthcare anywhere and anytime to all the citizens is one of the challenges of this millennium. Using Information Technology that has the prowess to face this challenge, we have developed an internet based telemedicine platform that has the capability to provide anywhere-anytime consultation and the system is highly scalable. With the addition of remote physiological sensors and artificial intelligence to the system, this stands out as the most advanced system in the field.

We have successfully tested this telemedicine system in conjunction with an analytic engine that provides alerts, status and care information about the disease state to both doctors and patients, in self-management of congestive heart failure (CHF) by the patients. A limited clinical testing at the Harris Methodist Hospital in Cleburn, TX, USA has shown that using our system the CHF patients can be successfully kept away from returning to emergency room for a period of 30 days from the initial discharge from the hospital.

We have also developed a model for incorporating telemedicine system along with the current setup to enhance utilization of the outpatient clinics without overbooking. This model has the capacity to address the problem that patients face in getting appointments with doctors within a reasonable time.



Lakshman Tamil (S·81–M·88–SM·05) is a Professor of electrical engineering at the University of Texas at Dallas (UTD), Richardson, TX, USA, where he is also the Director of the Quality of Life Technology Laboratory. He was also the Founder, CEO, and CTO of Yotta Networks Inc., which designed and marketed terabit-switching platforms. He has also directed research on advanced optical networks at Alcatel's Corporate Research Center, and he was a leader in creating both the early optical IP router and a wireless multichannel, multipoint distribution service. He has been an optical and wireless communication consultant to Raytheon Co., Electrospace Systems Inc., and Spike Technology. He has directed 18 doctoral dissertations, authored or coauthored more than 150 research publications and holds 22 U.S. patents. He is a fellow of the Optical Society of America, and Electromagnetics Academy and an elected member of URSI Commission B & D. He received the B. E. degree in electronics and communication engineering from Madurai Kamaraj University, India, in 1981, the M. Tech. degree in microwave and optical communication from the Indian Institute of Technology, Kharagpur, India, in 1983, and the M. S. degree in mathematics and the Ph.D. degree in electrical engineering from the University of Rhode Island in 1989. His current research is in the areas of telemedicine, Intelligent chronic disease management and applications of artificial intelligence to healthcare problems.

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