

ECE Seminar Announcement

**A MACRO-ECONOMIC ANALYSIS OF THE EFFECT OF OFFSHORING AND REHIRING ON THE US ECONOMY**

Speaker: Professor Janos Gertler (jgertler@gmu.edu)

Date: November 12

Time: 1:30-2:30pm

Room: Enterprise 178

Abstract: Offshore labor outsourcing (“offshoring”) is a process in which US companies set up overseas production facilities, employing local workers, simultaneously curtailing their production on US soil and laying off part of their US workforce. This is followed by (is intertwined with) rehiring a part of the laid-off workers, usually by other companies, to boost production for domestic consumption and/or export. We present a mathematical analysis of the effects of these processes, on such measures as the personal, corporate, government and foreign balances (income minus expenditures). We use an input-output model of the US economy, calibrated to data from government databases, as a reference, and investigate the effects of offshoring and rehiring by mathematical extrapolation. Various rehiring strategies are explored. The analysis is then extended to the effect of cheaper goods and services, arising from splitting the offshoring-generated savings between profit and price reduction. In the latter framework, equilibrium pricing is also investigated.

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Brief Bio: Janos Gertler was educated in Hungary. He received the Candidate of Science (Ph.D.) and Doctor of Science degrees, in Control Engineering, from The Hungarian Academy of Sciences. For 10 years, he served as Vice Director of a large research institute in Hungary. He came to the US in 1981, and held visiting appointments at Case Western Reserve University and the New York Polytechnic University. He joined GMU in 1985 as Professor of Electrical and Computer Engineering. Dr. Gertler’s research interests have concerned various aspects of computer control and monitoring of engineering processes, including high-level programming, systems identification and, in the past 25 years, fault detection and diagnosis. He is the author of more than 170 papers, and a monograph on engineering diagnostics, and was a plenary speaker at nine international conferences. He is a Fellow of IEEE and of IFAC (International Federation of Automatic Control), a Foreign Member of the Hungarian National Academy of Sciences, and the recipient of the 2004 Outstanding Research Faculty Award of the School of IT&E. Most recently, Dr. Gertler has been involved in “hobby research” concerning the effect of offshoring on the US economy.