

# **Palestras da ComSoc**

## ***(Distinguished Lecturer Tour)***

**Segunda-feira, 08 de Junho de 2009, 14h30**  
**Anfiteatro, Complexo Interdisciplinar, IST, Lisboa**

### ***Cooperation at the Network Level***

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#### **ABSTRACT**

The recent advances in cooperative relaying in wireless systems and the development of "distributed" MIMOs have established the benefits of cooperation at the physical layer. However, it is possible to extend the notion of cooperation at the network level, where simple protocol features can achieve substantial benefits on top of those that traditional cooperative techniques do. In this talk, we will introduce and explain network-level cooperative techniques and demonstrate their virtues. In addition, we will argue that the potential for additional benefits is amplified when bursty traffic and delay models are considered.

#### **BIO**

Anthony Ephremides holds the Cynthia Kim Professorship of Information Technology at the Electrical and Computer Engineering Department of the University of Maryland in College Park, where he holds a joint appointment at the Institute for Systems Research, of which he was among the founding members in 1986. He obtained his PhD in Electrical Engineering from Princeton University in 1971 and has been with the University of Maryland ever since. He has held various visiting positions at other Institutions (including MIT, UC Berkeley, ETH Zurich, INRIA, etc.) and co-founded and co-directed a NASA-funded Center on Satellite and Hybrid Communication Networks in 1991. He has been the President of Pontos, Inc, since 1980 and has served as President of the IEEE Information Theory Society in 1987 and as a member of the IEEE Board of Directors in 1989 and 1990. He has been the General Chair and/or the Technical Program Chair of several technical conferences (including the IEEE Information Theory Symposium in 1991 and 2000, the IEEE Conference on Decision and Control in 1986, the ACM Mobihoc in 2003, and the IEEE Infocom in 1999). He has served on the Editorial Board of numerous journals, and was the Founding Director of the Fairchild Scholars and Doctoral Fellows Program, a University-Industry Partnership from 1981 to 1985. He has received the IEEE Donald E. Fink Prize Paper Award in 1991, and the first ACM Achievement Award for Contributions to Wireless Networking in 1996, as well as the 2000 Fred W. Ellersick MILCOM Best Paper Award, the IEEE Third Millennium Medal, the 2000 Outstanding Systems Engineering Faculty Award from the Institute for Systems Research, and the Kirwan Faculty Research and Scholarship Prize from the University of Maryland in 2001, and a few other official recognitions of his work. He also received the 2006 Aaron Wyner Award for Exceptional Service and Leadership to the IEEE Information Theory Society. He is the author of several hundred papers, conference presentations, and patents, and his research interests lie in the areas of Communication Systems and Networks and all related disciplines, such as Information Theory, Control and Optimization, Satellite Systems, Queuing Models, Signal Processing, etc.. He is especially interested in Wireless Networks and Energy Efficient Systems.