Fouad Tobagi
Professor of Electrical Engineering

Bio

BIO
Tobagi works on network control mechanisms for handling multimedia traffic (voice, video and TCP-based applications) and on the performance assessment of networked multimedia applications using user-perceived quality measures. He also investigates the design of wireless networks, including QoS-based media access control and network resource management, as well as network architectures and infrastructures for the support of mobile users, all meeting the requirements of multimedia traffic. He also investigates the design of metropolitan and wide area networks combining optical and electronic networking technologies, including topological design, capacity provisioning, and adaptive routing.

ACADEMIC APPOINTMENTS
• Professor, Electrical Engineering

PROFESSIONAL EDUCATION
• PhD, UCLA (1974)

Teaching

COURSES
2021-22
• From the Internet for People to the Internet of Things: EE 84N (Win)
• Introduction to Computer Networks: EE 284 (Aut)
• Introduction to Internet of Things: EE 284A (Spr)

2020-21
• Internet Routing Protocols and Standards: EE 384A (Win)
• Introduction to Computer Networks: EE 284 (Aut)
• Introduction to Internet of Things: EE 284A (Spr)

2019-20
• Internet Routing Protocols and Standards: EE 384A (Win)
• Introduction to Computer Networks: EE 284 (Aut)
• Introduction to Internet of Things: EE 284A (Spr)

2018-19
• Internet Routing Protocols and Standards: EE 384A (Win)
• Introduction to Computer Networks: EE 284 (Aut)
• Introduction to Internet of Things: EE 284A (Spr)

STANFORD ADVISEES

Master’s Program Advisor
Alex Evelson

Doctoral (Program)
Nandita Bhaskhar

Publications

PUBLICATIONS

• Cross-tier Interference Mitigation for Two-tier OFDMA Femtocell Networks with Limited Macrocell Information  *IEEE Global Telecommunications Conference (GLOBECOM 2010)*
  Kim, M., Je, H. W., Tobagi, F. A.
  IEEE.2010

• Optical network design to minimize switching and transceiver equipment costs  *8th International Workshop on Optical Networking Technologies*
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• Band-distributed Channel-aware Fractional Frequency Reuse in OFDMA Systems  *70th IEEE Vehicular Technology Conference*
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• On Improving Throughput and Fairness in Wireless Mesh Networks: A Listen-and-Learn Approach  *in Wireless Mesh Networking – With 802.16, 802.11, and Zigbee*
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• Multimedia data transmission over wireless network with interference  *IEICE TRANSACTIONS ON COMMUNICATIONS*
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- Adaptive throughput optimization for MIMO systems in Rayleigh fading channels. *IEEE International Conference on Communications (ICC 2007)*
  Cho, Y., Kim, M., Tobagi, F. A.
  IEEE.2007: 2574–2579

- Throughput analysis of a path in an IEEE 802.11 Multihop Wireless Network. *IEEE Wireless Communications and Networking Conference*
  Hira, M. M., Tobagi, F. A., Medepalli, K.
  IEEE.2007: 441–446

- Network topology design to optimize link and switching costs. *IEEE International Conference on Communications (ICC 2007)*
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  Vyas, A. K., Tobagi, F. A.
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- Interactions Between the Physical Layer and Upper Layers in Wireless Networks, and their Impact on Applications
  Tobagi, Fouad A., Vyas, Amit K., Ha, S., Awoniyi, O.
  2006

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  Liu, H., Chen, B. K., Tobagi, F. A.
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  Liu, H., Tobagi, Fouad, A.
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  Awoniyi, O., Oteri, O., Tobagi, F., A.
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