

# ÖZGÜR ERÇETİN

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<b>EDUCATION</b>	<b>University of Maryland College Park</b> <i>Currently candidate for PhD in Electrical Engineering</i> GPA: 3.6/4.0	College Park, MD December 2001
	<b>University of Maryland College Park</b> <i>Master of Science in Electrical Engineering</i> GPA:3.5/4.0	College Park, MD May 1998
	<b>Middle East Technical University</b> <i>Bachelor of Science in Electrical and Electronics Engineering</i> GPA:3.9/4.0	Ankara, Turkey June 1995
<b>EXPERIENCE</b>	<b>Department of Electrical and Computer Engineering, University of Maryland</b> <i>Research Assistant</i>	College Park, MD May 1999-present
	<ul style="list-style-type: none"><li>• Investigated the issues related to Internet content distribution.<ul style="list-style-type: none"><li>• Developed and analyzed an architecture for Content Distribution Networks.</li><li>• Developed price-incentive strategies for efficient content delivery.</li><li>• Investigated the effects of competitions and synergies among service providers, content providers and content distributors in the Internet.</li><li>• Developed pricing and game-theoretic strategies for different agents to maximize agents' benefits.</li></ul></li><li>• Proposed and analyzed a hybrid broadcast/uni-cast next generation Low- and Medium-Earth Orbit (LEO/MEO) and GEO satellite data dissemination system that efficiently delivers high bit-rate data applications to aircraft.</li></ul>	
	<b>Information Sciences Laboratory, HRL Laboratories</b> <i>Intern</i>	Malibu, CA June 1999-Sept 1999
	<ul style="list-style-type: none"><li>• Developed and simulated a predictive routing algorithm for LEO satellite networks. The algorithm exploits the deterministic nature of the LEO satellite topology to predict the future link congestions on the inter-satellite links and determines multiple routes effectively avoiding the possible bottlenecks on these links. Patent-pending for this work.</li></ul>	
	<b>Department of Electrical and Computer Engineering, University of Maryland</b> <i>Research Assistant</i>	College Park, MD Sept 1996 – May 1999
	<ul style="list-style-type: none"><li>• Investigated the use of Next Generation Satellite Systems for aeronautical safety and non-safety communications.</li><li>• Investigated the design of multi-stage broadcast information delivery systems for personal, low-cost and scalable asymmetric information delivery.<ul style="list-style-type: none"><li>• Developed the analytical framework and designed near-optimal low complexity algorithms for cache management and scheduling problems observed in such systems.</li></ul></li></ul>	
<b>PHD THESIS TITLE</b>	Efficient Resource Allocation and Content Distribution in Internet	
<b>MS THESIS TITLE</b>	Information Delivery in Two-Stage Satellite Terrestrial Wireless Networks	

## AWARDS

- Graduate School Fellowship, University of Maryland. September 1996-June 1998.
- Twice recipient of Dr. Bulent Kerim Altay award (1991 and 1994) for academic excellence.
- Ranked third in graduating from Electrical and Electronics Engineering Department, Middle East Technical University, Ankara, Turkey.

## SELECTED PUBLICATIONS

- [1] O.Ercetin, L.Tassiulas, "Information Delivery in Two-Stage Satellite Terrestrial Wireless Systems," *32<sup>nd</sup> Annual Conference on Information Sciences and Systems*, Princeton, NJ, March 18-20, 1998.
- [2] O.Ercetin, S.Krishnamurthy, S.K.Dao and L. Tassiulas, "A Predictive QoS Routing Protocol for Broadband LEO Satellite Networks," *Personal, Indoor, Mobile, Radio Communications Conference 2000*, London, UK, Sept 2000.
- [3] O.Ercetin, L.Tassiulas, "Push Based Information Delivery in Two Stage Satellite-Terrestrial Wireless Systems," *IEEE Transactions on Computers*, vol.50, no.5, May 2001.
- [4] O.Ercetin, S. Krishnamurthy, S. K. Dao and L. Tassiulas, "Provision of Guaranteed Services in Broadband LEO Satellite Networks," *accepted for publication in Computer Networks* special issue on Broadband Satellite Networks.
- [5] O. Ercetin, M. O. Ball and L. Tassiulas, "Next Generation Satellite Systems for Aeronautical Communications," *submitted for publication International Journal for Satellite Communications*.

## RELEVANT COURSES

- Multi-user Communications
- High Speed Networks
- Wireless Networks
- Digital Communications
- Digital Signal Processing
- Stochastic Processes
- Integer and Network Programming
- Optimization Theory and Optimal Control
- System Theory
- Detection and Estimation Theory
- Applied Stochastic Processes
- Information Theory
- Network Security

## SKILLS

- **Languages:** C, C++, PASCAL, FORTRAN
- **Software:** *ns* (Network Simulator), Matlab, FSQP, Yacsim/Netsim, LaTeX, Mathematica, OPNET, HTML.
- **Platforms:** UNIX, Linux, MS-Windows, Mac, and MS-DOS.

## EXTRACURRICULAR ACTIVITIES

- President of Friends of Turkey Association,** Sept 1998-Sept 1999.
- Organized the panel titled "Republic of Turkey's social and political situation in its 75<sup>th</sup> anniversary." Approximately 100 listeners attended the panel from the Washington, DC area. The speakers included professors from Georgetown, and American universities, and the Counselor of Embassy of the Republic of Turkey.
  - Organized the first public show of the documentary "Atatürk" in the USA. The ambassador of Turkey has attended and gave a speech. Approximately 300 people have attended from the metropolitan Washington, DC area.

**Member of IEEE and Assembly of Turkish Student Associations, Washington, DC.** 1997-present

**Member of Center for Satellite and Hybrid Communications Networks (CSHCN) and the National Center of Excellence for Aviation Operations Research (NEXTOR).** 1997-present

## REFERENCES

Prof. Leandros Tassiulas	leandros@isr.umd.edu	(301) 405-6620
Prof. Anthony Ephremides	tony@eng.umd.edu	(301) 405-3641
Prof. John Baras	baras@isr.umd.edu	(301) 405-6606
Prof. Michael O. Ball	mball@rhsmith.umd.edu	(301) 405-2227
Prof. Srikanth Krishnamurthy	krish@cs.ucr.edu	(909) 787-2348