



## **TAMER DAĞ**

Phone: +90 212 5336532 /1422

E-mail: tamer.dag@khas.edu.tr

---

### **Research Interests**

- Traffic management, congestion control and QoS for high speed communication networks
- Indoor Positioning Systems
- Opportunistic and Delay-Tolerant Networks, Wireless Sensor Networks
- Routing Protocols for Wireless, Mobile and Fixed Networks

### **Experience**

**Feb. 2008 – Present KADIR HAS UNIVERSITY, Istanbul, TURKEY.**  
*Assistant Professor*

**Sep. 2003 – Jan. 2008 ISIK UNIVERSITY, Istanbul, TURKEY.**  
*Assistant Professor*

**Sep. 1999 – Jun. 2003 LUCENT TECHNOLOGIES, Westford, MA, USA.**  
*Senior Software Engineer*

- Research and development of scalable routing protocols (MPLS, OSPF).
- Modeling and simulation of multi-area OSPF networks using Opnet.
- Test process development; writing performance and interoperability test plans for various routing protocols such as MPLS, MPLS-TE, OSPF, RSVP-TE, Diffserv.
- Modeling a switch fabric to analyze the impact of several parameters on the switch performance.

**1994 – 1999 NORTHEASTERN UNIVERSITY, COMMUNICATIONS AND DIGITAL SIGNAL PROCESSING CENTER, Boston, MA, USA.**

*Research and Teaching Assistant*

- Analyzed the impact of various network parameters on the effectiveness of feedback based flow control schemes.
- Developed a new feedback based flow control scheme which increases the QoS in high speed networks by reducing bandwidth mismatches.

### **Education**

**Sep. 1997 – Jun. 2000 NORTHEASTERN UNIVERSITY, Boston, MA, USA.**

*Ph.D. in Electrical Engineering, June 2000, GPA: 3.93/4.00*

- Major: Communications and Digital Signal Processing
- Minors: Mathematics and Computer Science
- Thesis: Proactive/Reactive Congestion Control Schemes for High Speed Networks
- Advisors: Prof. Ioannis Stavrakakis and Prof. Elias Manolakos

**Sep. 1994 - Jun. 1997 NORTHEASTERN UNIVERSITY, Boston, MA, USA.**

*M.S. in Electrical Engineering, June 1997, GPA: 3.87/4.00*

- Major: Communications and Digital Signal Processing
- Thesis: Study of the Impact of Network and Source Time Scales on Feedback Based Flow Control Schemes
- Advisor: Professor Ioannis Stavrakakis

**Sep. 1990 - June 1994 MIDDLE EAST TECHNICAL UNIVERSITY (METU), Ankara, Turkey.**

*B.S. in Electrical Engineering, June 1994, GPA: 3.92/4.00*

- Ranked 3<sup>rd</sup> among 2182 graduates of METU, 2<sup>nd</sup> among the Department
- Ranked 74<sup>th</sup> among 900,000 applicants in the nationwide university entrance examination

### Publications

- "Non-preemptive priority scheduler with multiple thresholds for network routers", T. Dağ, *Pamukkale Üniversitesi Mühendislik Bilimleri Dergisi*, pp. 246-254, volume 24, issue 2, 2018.
- "Received signal strength based least squares lateration algorithm for indoor localization", T. Dağ and T. Arsan, *Computers & Electrical Engineering Journal*, pp. 114-126, volume 66, February 2018.
- "Energy aware multi-hop routing protocol for WSNs", K. Cengiz and T. Dağ, *IEEE Access*, pp. 2622-2633, volume 6, 2018.
- "Performance improvement of threshold based audio steganography using parallel computation", M. Shoaib, Z. Khan, D. Shehzad, T. Dağ, A.I.Umar and N.U. Amin, *International Journal of Advanced Computer Science and Applications*, volume 7, issue 10, 2016.
- "Improving energy efficiency of WSNs through LEFCA", K. Cengiz and T. Dağ, *International Journal of Distributed Sensor Networks*, volume 12, issue 8, 2016.
- "A review on the recent energy-efficient approaches for the Internet protocol stack", K. Cengiz and T. Dağ, *EURASIP Journal on Wireless Communication and Networking*, volume 108, 2015.
- "Proactive congestion control for high speed networks," T. Dağ and I. Stavrakakis, *Journal of Computer Networks*, pp. 761-775, volume 43, issue 6, December 2003.
- "Evaluation of ABR traffic management under various system time scales," T. Dağ and I. Stavrakakis, *Journal of Computer Networks and ISDN Systems*, pp. 2103-2117, February 1998.

### Conferences

- "A novel image steganography technique based on similarity of bits pairs", D. Shehzad and T. Dağ, *Proceedings of 8th IEEE Control and System Graduate Research Colloquium (ICSGRC'17)*, Shah Alam, Malaysia, August 2017.
- "Multi-hop low energy fixed clustering algorithm (M-LEFCA) for WSNs", K. Cengiz and T. Dağ, *International Symposium on Telecommunication Technologies (ISTT'16) proceedings*, Kuala Lumpur, Malaysia, December 2016.
- "Extending the lifetime of WSNs with maximum energy selection algorithm (MESA)", K. Cengiz and T. Dağ, *4th International Black Sea Conference on Communications and Networking (BlackSeaCom'16) proceedings*, Varna, Bulgaria, June 2016.
- "Nearest fixed clustering algorithm (NFCA) for wireless sensor networks", K. Cengiz and T. Dağ, *XIXth International Symposium on Electrical Apparatus and Technologies (SIELA'16) Proceedings*, Burgas, Bulgaria, May 2016.
- "Dynamic multi threshold priority scheduling", T. Dağ and S. Uzungenç, *4th International Conference on Electronics Engineerings and Technology (ICEET'16) proceedings*, Denpasar, Indonesia, April 2016.

- "Low energy fixed clustering algorithm (LEFCA) for wireless sensor networks", K. Cengiz, T. Dağ, *CoCoNet'15 proceedings*, Trivandrum, India, December 2015.
- "Towards energy efficient MAC protocols", T.Dağ, K. Cengiz, *WMSCI'14 proceedings*, Orlando, FL, July 2014.
- "Implementation of a SDN (Software Defined Network)", M.S. Ergen, S. Kutlan, T. Dağ, H.Dağ, *WMSCI'14 proceedings*, Orlando, FL, July 2014.
- "Max-Pivot routing for opportunistic networks," T.Dag, *WMSCI'13 proceedings*, Orlando, FL, July 2013.
- "Kablosuz hasta takip," B. Özkan ve T. Dag, *Proceedings of ELECO 2012*, Bursa, November 2012.
- "Fırsatçı ağlarda taşıırma ve kısmi taşıırma yöntemleriyle yönlendirme performans analizi," M. Erdoğan, K. Günel, T. Koç, H.Ü. Sökün ve T.Dag, *Proceedings of SIU 2012*, Fethiye, April 2012.
- "An energy efficient routing algorithm (X-Centric routing) for sensor networks", G.Atac and T.Dag, *WMSCI'11 proceedings*, Orlando , FL, July 2011.
- "Dynamic priority packet scheduler with deadline considerations (DPD)", T.Dag, *WMSCI'10 proceedings*, Orlando, FL, July 2010.
- "The Modified Proactive Feedback Based Flow Control Scheme for Best-effort Applications", T.Dag, *WMSCI'07 proceedings*, Orlando, FL, July 2007.
- "SPD (Static priority with deadline considerations) packet scheduling algorithm for achieving better QoS," T.Dag, *ICNS'07 proceedings*, Athens, Greece, June 2007.
- "Design of real-time VBR traffic shaping schemes by considering the impact of both buffer overflows and deadline violations," T.Dag and I.Stavarakakis, *WMSCI'05 proceedings*, Orlando, FL, July 2005.
- "QoS based ABR service under the PF based flow control scheme," T.Dag and I.Stavarakakis, *Proceedings of ICC'99*, Vancouver, Canada, June 1999.
- "A proactive feedback based flow control scheme for ABR services," T.Dag and I.Stavarakakis, *Proceedings of APCC'97*, Sydney, Australia, December 1997.
- "On the impact of time scales on feedback based rate control," T.Dag and I.Stavarakakis, *Proceedings of GLOBECOM'97*, Phoenix, AZ, November 1997.
- "Toward a time-scale based framework for ABR traffic management," T.Dag and I.Stavarakakis, *Proceedings of EXPERT'97*, Mykonos, Greece, September 1997.
- "Study of the impact of network and source time scales on feedback based congestion control," T.Dag and I.Stavarakakis, *Proceedings of SPIE'96*, Boston, MA, November 1996.

### **Professional Services**

- BlackSeaCOM'17 Organizing Committee Member
- BlackSeaCOM'16 Organizing Committee Member
- HONET'12 Committee Member (Visa and Venue Committee Co-chair)
- PIMRC'10 Executive Committee Member (Web Site and Publications Chair)
- ICC'06 Executive Committee Member (Web Site Chair and Conference Secretary)
- Reviewer for various SCI, SCI-EXP journals and conferences

### **Honors**

- Research Assistantship awarded by Northeastern University, Electrical and Computer Engineering Department, funded by Air Force Office of Scientific Research and National Science Foundation
- Outstanding Academic Performance scholarship from Northern Telecom (NETAS), Turkey
- Scholarship from Mehmet Nazif Gunal (MNG), Turkey
- Bulent Kerim Altay Best Student Award from METU EE Department (3 times)

### **Current Graduate Students**

- Danish Shehzad (Ph.D.)
- Handan Kulan (Ph.D.)
- Burak Özkan (M.S.)

### **Past Graduate Students**

- Korhan Cengiz (Ph.D.), "Low energy fixed clustering algorithm for wireless sensor networks", 2016.
- Eylem Erdoğan (Ph.D.), "Performance analysis of low complexity maximal ratio transmission approaches in multi-relay networks", 2014.
- Mohammed Khudhuragha (M.S.), "Indoor location estimation through redundant lateration for indoor positioning system", 2017.
- Derya Demirkol (M.S.), "Comparison and analysis of various indoor positioning systems techniques", 2016.
- Çağdaş Egemen Öztürk (M.S.), "Design and implementation of a mobile prescription system with patient-healthcare professional interaction", 2015.
- Sezer Uzungenç (M.S.), "Dynamic multi threshold priority packet scheduling algorithms for wireless sensor networks", 2015.
- Ebru Alp (M.S.), "Indoor positioning system development / triangulation algorithm with least square method", 2015.
- Göktuğ Ataç (M.S.), "An energy efficient routing algorithm (X-centric routing) for sensor networks", 2009.
- Oral Gökgöl (M.S.), "A new priority based packet scheduler with deadline considerations", 2006.