

Assoc. Prof. KASIM SİNAN YILDIRIM

Personal Information

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Biography

Kasim Sinan Yildirim received the Ph.D. degree in computer engineering from Ege University, Izmir, Turkey in 2012. He was a visiting scholar at the Department of Information Engineering, University of Padova in 2013. Between 2015-2017, he was a post-doctoral researcher at Embedded Software Group, Delft University of Technology. Currently, he is an assistant professor at the Department of Computer Engineering, Ege University and a research affiliate with the Embedded Software Group at Delft University of Technology. His research interests are wireless embedded systems, embedded software and distributed algorithms.

Education Information

Doctorate, Ege Üniversitesi, Fen Bilimleri Enstitüsü, Bilgisayar Mühendisliği (Dr), Turkey 2006 - 2012

Post Graduate, Ege Üniversitesi, Fen Bilimleri Enstitüsü, Bilgisayar Mühendisliği (Y) (Tezli), Turkey 2003 - 2006

Under Graduate, Ege Üniversitesi, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, Turkey 1998 - 2003

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Kablosuz algılayıcı ağlarında saat eşzamanlaması, Ege Üniversitesi, Fen Bilimleri Enstitüsü, Bilgisayar Mühendisliği (Dr), 2012

Post Graduate, Gömülü sistemler için tasarım desenleri kullanılarak nesneye yönelik, gerçek zamanlı bir mikroçekirdek tasarımı, Ege Üniversitesi, Fen Bilimleri Enstitüsü, Bilgisayar Mühendisliği (Y) (Tezli), 2006

Research Areas

Information Systems, Communication and Control Engineering, Communication Engineering, Wireless Communication, Computer Sciences, algorithms, Distributed Systems, Computer Networks, Communications and Network Protocols, Equipment, Logic Design, Software, Operating Systems, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Ege Üniversitesi, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 2018 - Continues

Other, Technische Universiteit Delft, Faculty Of Electrical Engineering, Mathematics And Computer Science, Embedded Software Group, 2015 - 2017

Assistant Professor, Ege Üniversitesi, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 2013 - 2017

Other, Universita Degli Studi Di Padova, Department Of Information Engineering, Dei, 2013 - 2013

Professional Experience

Courses

Çok Etmenli Ağlar için Dağıtık Algoritmalar, Doctorate, 2014 - 2015, 2018 - 2019
Digital Computer Design, Under Graduate, 2013 - 2014, 2014 - 2015, 2017 - 2018, 2018 - 2019
Dağıtık Tahminleme ve Kontrol, Post Graduate, 2018 - 2019
Mantık Devreleri Tasarımı, Under Graduate, 2013 - 2014, 2014 - 2015, 2017 - 2018, 2018 - 2019
Gömülü Sistemler için Sinyaller ve Kablosuz İletişimin Temelleri, Post Graduate, 2018 - 2019
Kablosuz Gömülü Sistemler, Post Graduate, 2014 - 2015

Advising Theses

YILDIRIM K. S. , Model Driven Engineering of Intermittent systems, Doctorate, Ç.Durmaz(Student), Continues
Yıldırım K. S. , Pawelczak P., Dependable Dynamic Checkpoints for Batteryless Devices, Post Graduate,
V.Koortbek(Student), 2019

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- **On the Synchronization of Computational RFIDs**
YILDIRIM K. S. , AANTJES H., PAWELCZAK P., MAJİD A. Y.
IEEE TRANSACTIONS ON MOBILE COMPUTING, vol.18, pp.2147-2159, 2019 (Journal Indexed in SCI)
- **Safe Distributed Control of Wireless Power Transfer Networks**
YILDIRIM K. S. , CARLI R., SCHENATO L.
IEEE INTERNET OF THINGS JOURNAL, vol.6, pp.1267-1275, 2019 (Journal Indexed in SCI)
- **Adaptive Proportional-Integral Clock Synchronization in Wireless Sensor Networks**
YILDIRIM K. S. , CARLI R., SCHENATO L.
IEEE TRANSACTIONS ON CONTROL SYSTEMS TECHNOLOGY, vol.26, pp.610-623, 2018 (Journal Indexed in SCI)
- **Safe and Secure Wireless Power Transfer Networks: Challenges and Opportunities in RF-Based Systems**
LİU Q., Yıldırım K. S. , PAWELCZAK P., WARNİER M.
IEEE COMMUNICATIONS MAGAZINE, vol.54, pp.74-79, 2016 (Journal Indexed in SCI)
- **Gradient Descent Algorithm Inspired Adaptive Time Synchronization in Wireless Sensor Networks**
Yıldırım K. S.
IEEE SENSORS JOURNAL, vol.16, pp.5463-5470, 2016 (Journal Indexed in SCI)
- **Efficient and Discrete Gradient Synchronization**
Yıldırım K. S.
IEEE COMMUNICATIONS LETTERS, vol.18, pp.1903-1906, 2014 (Journal Indexed in SCI)
- **Efficient Time Synchronization in a Wireless Sensor Network by Adaptive Value Tracking**
YILDIRIM K. S. , GÜRCAN O.
IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS, vol.13, pp.3650-3664, 2014 (Journal Indexed in SCI)
- **External Gradient Time Synchronization in Wireless Sensor Networks**
YILDIRIM K. S. , KANTARCIA.
IEEE TRANSACTIONS ON PARALLEL AND DISTRIBUTED SYSTEMS, vol.25, pp.633-641, 2014 (Journal Indexed in SCI)
- **Time Synchronization Based on Slow-Flooding in Wireless Sensor Networks**
YILDIRIM K. S. , KANTARCIA.

IEEE TRANSACTIONS ON PARALLEL AND DISTRIBUTED SYSTEMS, vol.25, pp.244-253, 2014 (Journal Indexed in SCI)

- **Drift estimation using pairwise slope with minimum variance in wireless sensor networks**
YILDIRIM K. S. , KANTARCI A.
AD HOC NETWORKS, vol.11, pp.765-777, 2013 (Journal Indexed in SCI)
- **Design and implementation of a software presenting information in DVB subtitles in various forms**
YILDIRIM K. S. , UĞUR A., Kinaci A. C.
IEEE TRANSACTIONS ON CONSUMER ELECTRONICS, vol.53, pp.1656-1660, 2007 (Journal Indexed in SCI)

Articles Published in Other Journals

- **Kablosuz Algılayıcı Ağlarında Alıcı-Vericilerin Oransal-İntegral Denetleyiciler ile Görev Döngüsü**
YILDIRIM K. S.
Deu Muhendislik Fakultesi Fen ve Muhendislik, vol.20, pp.435-448, 2018 (Other Refereed National Journals)
- **Maximizing Coverage in a Connected and K Covered Wireless Sensor Network Using Genetic Algorithms**
KALAYCI T. E. , YILDIRIM K. S. , UĞUR A.
International Journal of Applied Mathematics and Informatics, vol.1, pp.123-130, 2007 (Refereed Journals of Other Institutions)

Refereed Congress / Symposium Publications in Proceedings

- **On the Accuracy of Network Synchronization Using Persistent Hourglass Clocks**
ÇÜRÜK E., YILDIRIM K. S. , Pawelczak P., Hester J. D.
Proceedings of the 7th International Workshop on Energy Harvesting Energy-Neutral Sensing Systems - ENSys'xx19, New York, NY, USA, 10 Kasım 2019
- **On Distributed Sensor Fusion in Batteryless Intermittent Networks**
YILDIRIM K. S. , Pawelczak P.
2019 15th International Conference on Distributed Computing in Sensor Systems (DCOSS), Santorini Island, Greece, 29 - 31 Mayıs 2019
- **Multi-hop Backscatter Tag-to-Tag Network**
Majid A. Y. , Jansen M., Delgado G. O. , YILDIRIM K. S. , Pawelczak P.
IEEE International Conference on Computer Communications (IEEE INFOCOM), 29 Nisan - 02 Mayıs 2019
- **PureMEM: A Structured Programming Model for Transiently Powered Computers**
durmaz ç., YILDIRIM K. S. , KARDAŞ G.
SAC '19 - ACM 2019 SYMPOSIUM ON APPLIED COMPUTING, 8 - 12 Nisan 2019
- **Multi-agent distributed optimization algorithms for partition-based linear programming (LP) problems**
CARLI R., YILDIRIM K. S. , SCHENATO L.
2018 European Control Conference (ECC), Limassol, Cyprus, 12 - 15 Haziran 2018
- **InK: Reactive Kernel for Tiny Batteryless Sensors**
YILDIRIM K. S. , MAJID A., Patoukas D., Schaper K., PAWELCZAK P., Hester J.
Proceedings of the 16th ACM Conference on Embedded Networked Sensor Systems - SenSys 'xx18, Shenzhen, China, 4 - 07 Kasım 2018
- **Feasibility of Multi-Tenancy on Intermittent Power**
Patoukas D., YILDIRIM K. S. , MAJID A., Hester J., PAWELCZAK P.
6th International Workshop on Energy Harvesting Energy-Neutral Sensing Systems (EnsSys 2018), 03 Kasım 2018
- **Backing Out of Backscatter for Intermittent Wireless Networks**
Donne C. D. , YILDIRIM K. S. , MAJID A. Y. , Hester J., PAWELCZAK P.
6th International Workshop on Energy Harvesting Energy-Neutral Sensing Systems (EnsSys 2018), 03 Kasım 2018
- **A distributed dual-ascent approach for power control of wireless power transfer networks**
Yildirim K. S. , CARLI R., SCHENATO L., Todescato M.
56th IEEE Annual Conference on Decision and Control, CDC 2017, Melbourne, Australia, 12 - 15 Aralık 2017,

pp.3507-3512

- **Distributed Control of Wireless Power Transfer Subject to Safety Constraints**
Yildirim K. S. , CARLI R., SCHENATO L.
20th World Congress of the International-Federation-of-Automatic-Control (IFAC), Toulouse, France, 9 - 14 Temmuz 2017, vol.50, pp.13210-13215
- **Self Adaptive Safe Provisioning of Wireless Power using DCOPs**
van Leeuwen C. J. , Yildirim K. S. , PAWELCZAK P.
11th IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO), Arizona, United States Of America, 18 - 22 Eylül 2017, pp.71-80
- **On the Synchronization of Intermittently Powered Wireless Embedded Systems**
YILDIRIM K. S. , AANTJES H., Majid A. Y. , PAWELCZAK P.
Hilariously Low Power Computing (HLPC) Workshop Under ASPLOS 2016, 02 Nisan 2016
- **Robust and Efficient Self-Adaptive Position Tracking in Wireless Embedded Systems**
AGLIAMZANOV R., BELBACHIR A., YILDIRIM K. S.
2015 8th IFIP Wireless and Mobile Networking Conference (WMNC 2015), Munich, Germany, 5 - 07 Ekim 2015, pp.152-159
- **Adaptive Control-Based Clock Synchronization in Wireless Sensor Networks**
YILDIRIM K. S. , Carli R., Schenato L.
European Control Conference (ECC), Linz, Austria, 15 - 17 Temmuz 2015, pp.2806-2811
- **Adaptive Synchronization of Robotic Sensor Networks**
YILDIRIM K. S. , GÜRCAN Ö.
First International Workshop on Robotic Sensor Networks part of Cyber-Physical Systems Week, Berlin, Germany, 14 Nisan 2014
- **Self-Organizing Time Synchronization of Wireless Sensor Networks with Adaptive Value Trackers**
Guercan O., Yildirim K. S.
IEEE 7th International Conference on Self-Adaptive and Self-Organizing Systems (SASO), Pennsylvania, United States Of America, 9 - 13 Eylül 2013, pp.91-100
- **Yaman Çelişki Sosyal Anlamsal Web de Önerme**
BEĞENİLMİŞ E., EKİNCİ E. E. , YILDIRIM K. S.
XVI. Türkiye'xxde İnternet Konferansı, İzmir, Turkey, 27 - 29 Kasım 2011
- **A lightweight method for time synchronization in wireless sensor networks**
YILDIRIM K. S. , KANTARCI A.
2011 IEEE 19th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, Turkey, 20 - 22 Nisan 2011
- **Kablosuz Algılayıcı Ağları ile Yangın Tespit Sistemi**
DÖNER Ç., ŞİMŞEK G., YILDIRIM K. S. , KANTARCI A.
Gömülü Sistemler ve Uygulamaları Sempozyumu Gömsis 2010, İstanbul, Turkey, 4 - 05 Kasım 2010
- **Clock Synchronization in Distributed Systems**
YILDIRIM K. S. , KANTARCI A.
The Fourth International Student Conference on Advanced Science and Technology ICAST 2010, 25 - 26 Mayıs 2010
- **Forest Fire Detection with Wireless Sensor Networks**
DÖNER Ç., ŞİMŞEK G., YILDIRIM K. S. , KANTARCI A.
The Fourth International Student Conference on Advanced Science and Technology ICAST 2010, 25 Mayıs - 26 Kasım 2010
- **Kablosuz Algılayıcı Ağları İçin TinyOS İle Uygulama Geliştirme**
YILDIRIM K. S. , KANTARCI A.
Akademik Bilişim 2010, Turkey, 10 - 12 Şubat 2010
- **Kablosuz Duyarga Ağlarında İki Temel Araştırma Alanı Saat Eşzamanlaması ve Topoloji Kontrolü**
YILDIRIM K. S. , BAYRAKDAR Y., KANTARCI A.
Akademik Bilişim 2009, Şanlıurfa, Turkey, 11 - 13 Şubat 2009
- **Optimizing coverage in a k covered and connected sensor network using genetic algorithms**
YILDIRIM K. S. , KALAYCI T. E. , UĞUR A.

Proceedings of the 9th WSEAS International Conference on Evolutionary Computing (ADVANCED TOPICS ON EVOLUTIONARY COMPUTING), 02 Mayıs 2008 - 04 Haziran 2007, pp.21-26

- **A new operating system for embedded systems: eGIS**

YILDIRIM K. S. , KANTARCI A.

IEEE 15th Signal Processing and Communications Applications Conference, Eskişehir, Turkey, 11 - 13 Haziran 2007, pp.688-691

- **eGIS Gömülü Sistemler için Tasarım Desenleri Tabanlı Nesneye Yönelik ve Gerçek Zamanlı bir Microçekerdek**

YILDIRIM K. S. , KANTARCI A.

Ulusal Yazılım Mimarisi Konferansı (UYMK 2006), İstanbul, Turkey, 20 - 22 Kasım 2006

Supported Projects

Ötleş S., Yeşilay R. B. , Sayer S., Ertekin F., Alver N., Atalay S., Dirim S. N. , Yıldırım K. S. , EU Supported Other Project, Raising Awareness on Product Lifecycle Management via Education and Industrial Strategic Collaboration within Europe, 2015 - 2018

Yıldırım K. S. , Pawelczak P., Other Supported Projects, IDEA LEAGUE Doctoral School on Transiently-Powered Systems, 2017 - 2017

YILDIRIM K. S. , Other Supported Projects, Wirelessly Powered Autonomous Systems, Netherlands Institute for Research on ICT (NIRICT), Hollanda, 2015 - 2017

Yıldırım K. S. , Pawelczak P., Project Supported by Public Organizations in Other Countries, Quality of Service-driven Channel Selection for Cognitive Radio Networks, Technology Foundation STW Hollanda, 2013 - 2016

Yıldırım K. S. , Kantarcı A., Bayrakdar Y., Alaybeyoğlu A., Project Supported by Higher Education Institutions, Duyurga Düşümlerinin Yazılım Ve Donanımlarının İncelenmesi Ve Bu Konuda Uygulama Geliştirilmesi, 2008 - 2011

Patent

Yıldırım K. S. , A method for forming a user interface, Patent, CHAPTER H Electricity, Registration in Multiple Countries, 2007

Scientific Refereeing

MDPI Sensors, SCI Journal, January 2018

IEEE RFID Journal, SCI Journal, January 2018

TUBİTAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Ege University, Turkey, December 2017

IEEE Sensors Journal, SCI Journal, January 2017

IFAC Journal Automatica, SCI Journal, January 2017

IEEE Transactions on Cognitive Communications and Networking, SCI Journal, January 2017

IEEE Transactions on Computers, SCI Journal, January 2017

Turkish Journal of Electrical Engineering & Computer Sciences, SCI Journal, January 2017

TUBİTAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Ege University, Turkey, January 2017

IEEE Transactions on Communications, SCI Journal, January 2016

IEEE Transactions on Vehicular Technology, SCI Journal, January 2016

IEEE Transactions on Control of Network Systems, SCI Journal, January 2016

Springer Wireless Networks, SCI Journal, January 2016

IEEE Wireless Communications Letters, SCI Journal, January 2016

IEEE Transactions on Network and Service Management, SCI Journal, January 2016

EURASIP Journal on Wireless Communications and Networking, SCI Journal, January 2016

IEEE Transactions on Parallel and Distributed Systems, SCI Journal, January 2016

IEEE Communications Letters, SCI Journal, January 2015

ACM Transactions on Sensor Networks, SCI Journal, January 2015

IEEE Transactions on Wireless Communications, SCI Journal, January 2015

Tasks In Event Organizations

Yıldırım K. S. , The IDEA League Doctoral School on Transiently Powered Computing, Science / Art Camp or Summer School Organization, Netherlands, Kasım 2017

Scientific Research / Working Group Memberships

Embedded Software Group, Technische Universiteit Delft, Netherlands, <https://www.tudelft.nl/ewi/over-de-faculteit/afdelingen/software-technology/embedded-software/>, 2015 - 2019

Mobility Activity

Post Doc, Post Doc, Technische Universiteit Delft, Netherlands, 2015 - 2017

Citations

Total Citations (WOS):189

h-index (WOS):7

Invited Talks

IPA Fall Days on Communication, Safety & Privacy in the IoT, Seminar, Diğer Kurumlar, Netherlands, November 2017

Transiently Powered Wireless Embedded Systems, Seminar, 4TU Embedded Systems Student Event, Netherlands, December 2016

Scholarships

Doktora, TÜBİTAK, 2006 - 2011

Yüksek Lisans, TÜBİTAK, 2003 - 2006

Awards

Yıldırım K. S. , Yayın Teşvik, Tübitak, September 2019

Yıldırım K. S. , Carli R., Schenato L., Safe Distributed Control of Wireless Power Transfer Networks, Tübitak, May 2019

Yıldırım K. S. , Carli R., Schenato L., Adaptive Proportional-Integral Clock Synchronization in Wireless Sensor Networks, Tübitak, July 2018

Van Leeuwen C. J. , Yıldırım K. S. , Pawelczak P., Best Paper Award, 2017 IEEE 11th International Conference On Self-Adaptive And Self-Organizing Systems (Saso), September 2017

Yıldırım K. S. , Gradient Descent Algorithm Inspired Adaptive Time Synchronization in Wireless Sensor Networks, Tübitak, July 2016

Yıldırım K. S. , Efficient and Discrete Gradient Synchronization, Tübitak, December 2014

Yıldırım K. S. , Gürçan Ö., Efficient Time Synchronization in a Wireless Sensor Network by Adaptive Value Tracking, Tübitak, August 2014

Yıldırım K. S. , TÜBİTAK-BİDEB 2242 Yazılım Projeleri Yarışması Danışman Ödülü (3.lük), Tübitak, June 2014

Yıldırım K. S. , Kantarcı A., External Gradient Time Synchronization in Wireless Sensor Networks, Tübitak, May 2014
Yıldırım K. S. , Kantarcı A., Time Synchronization Based on Slow-Flooding in Wireless Sensor Networks, Tübitak, January 2014
Yıldırım K. S. , Kantarcı A., Drift estimation using pairwise slope with minimum variance in wireless sensor networks, Tübitak, June 2013
Yıldırım K. S. , Kınacı A. C. , Uğur A., Design and Implementation of a Software Presenting Information in DVB Subtitles in Various Forms, Tübitak, January 2008