

Asst. Prof. PELİN ANGIN

Personal Information

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Education Information

Doctorate, Purdue University, College of Science, Computer Science, United States Of America 2007 - 2013

Under Graduate, İhsan Doğramacı Bilkent Üniversitesi, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, Turkey
2003 - 2007

Dissertations

Doctorate, Autonomous Agents-Based Mobile-Cloud Computing, Purdue University, 2013

Research Areas

Computer Sciences, Information Security and Reliability, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Computer Engineering,
2018 - Continues

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Computer Engineering,
2017 - 2018

Professional Experience

Uygulama ve Araştırma Merkezi Yönetim Kurulu Üyesi, Middle East Technical University, 2019 - Continues

Bölüm Tanıtım ve Mezunlarla İlişkiler Komisyonu Başkanı, Middle East Technical University, Faculty Of Engineering,
Department Of Computer Engineering, 2019 - 2020

Advising Theses

Angın P., A secure model for efficient live migration of containers, Post Graduate, Z.MAVUŞ(Student), 2019

Angın P., Zero-day attack detection with deep learning, Post Graduate, B.ÇAKIR(Student), 2019

Angın P., A deep reinforcement learning approach to network intrusion detection, Post Graduate, H.GÖRKEM(Student),
2019

Angın P., Baykal N., AN EFFICIENT AND NOVEL DETECTION TECHNIQUE FOR NEXT GENERATION WEB-BASED
EXPLOITATION KITS, Doctorate, E.SÜREN(Student), 2019

Angın P., Çiçekli F. N. , NFC feature box: An open, NFC enabler independent mobile payment and identification method,

Doctorate, İ.TÜRK(Student), 2019

Angin P., Doğanaksoy A., Password based secure user authentication protocols in wireless sensor networks, Post

Graduate, U.ŞEN(Student), 2019

Jury Memberships

Competition, Mobil Uygulama Geliştirme Maratonu, İhsan Doğramacı Bilkent Üniversitesi, February, 2019

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

- **Protedge: A few-shot ensemble learning approach to software-defined networking-assisted edge security**
Demirpolat A., Sarica A. K. , ANGIN P.
TRANSACTIONS ON EMERGING TELECOMMUNICATIONS TECHNOLOGIES, 2020 (Journal Indexed in SCI)
- **Big Data Analytics for Cyber Security**
ANGIN P., Bhargava B., Ranchal R.
SECURITY AND COMMUNICATION NETWORKS, vol.2019, 2019 (Journal Indexed in SCI)
- **EPICS: A Framework for Enforcing Security Policies in Composite Web Services**
Ranchal R., Bhargava B., ANGIN P., ben Othmane L.
IEEE TRANSACTIONS ON SERVICES COMPUTING, vol.12, pp.415-428, 2019 (Journal Indexed in SCI)
- **RONFC: A Novel Enabler-Independent NFC Protocol for Mobile Transactions**
Turk I., ANGIN P., Cosar A.
IEEE ACCESS, vol.7, pp.95327-95340, 2019 (Journal Indexed in SCI)
- **I see EK: A lightweight technique to reveal exploit kit family by overall URL patterns of infection chains**
Suren E., ANGIN P., BAYKAL N.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.27, pp.3713-3728, 2019 (Journal Indexed in SCI)
- **A self-protecting agents based model for high-performance mobile-cloud computing**
Angin P., BHARGAVA B., RANCHAL R.
COMPUTERS & SECURITY, vol.77, pp.380-396, 2018 (Journal Indexed in SCI)
- **A Computational Dynamic Trust Model for User Authorization**
ZHONG Y., Bhargava B., LU Y., Angin P.
IEEE TRANSACTIONS ON DEPENDABLE AND SECURE COMPUTING, vol.12, pp.1-15, 2015 (Journal Indexed in SCI)
- **Extending the Agile Development Process to Develop Acceptably Secure Software**
BEN OTHMANE L., Angin P., WEFERS H., BHARGAVA B.
IEEE TRANSACTIONS ON DEPENDABLE AND SECURE COMPUTING, vol.11, pp.497-509, 2014 (Journal Indexed in SCI)
- **A simulation study of ad hoc networking of UAVs with opportunistic resource utilization networks**
Lilien L. T. , BEN OTHMANE L., Angin P., DECARLO A., Salih R. M. , BHARGAVA B.
JOURNAL OF NETWORK AND COMPUTER APPLICATIONS, vol.38, pp.3-15, 2014 (Journal Indexed in SCI)
- **A Confidence Ranked Co-Occurrence Approach for Accurate Object Recognition in Highly Complex Scenes**
Angin P., Bhargava B.
JOURNAL OF INTERNET TECHNOLOGY, vol.14, pp.13-19, 2013 (Journal Indexed in SCI)

Articles Published in Other Journals

ARTICLES PUBLISHED IN OTHER JOURNALS

- **A secure model for efficient live migration of containers**
Mavus Z., ANGIN P.
Journal of Wireless Mobile Networks, Ubiquitous Computing, and Dependable Applications, vol.10, pp.21-44, 2019
(Refereed Journals of Other Institutions)
- **Know your EK: A content and workflow analysis approach for exploit kits**
Suren E., ANGIN P.
Journal of Internet Services and Information Security, vol.9, pp.24-47, 2019 (Refereed Journals of Other Institutions)
- **A systematic approach for attack analysis and mitigation in V2V networks**
Bhargava B., Johnson A., Munyengabe G., Angin P.
Journal of Wireless Mobile Networks, Ubiquitous Computing, and Dependable Applications, vol.7, pp.79-96, 2016
(Refereed Journals of Other Institutions)
- **An agent-based optimization framework for mobile-cloud computing**
Angin P., Bhargava B.
Journal of Wireless Mobile Networks, Ubiquitous Computing, and Dependable Applications, vol.4, pp.1-17, 2013
(Refereed Journals of Other Institutions)
- **A time-evolution model for the privacy degree of information disseminated in online social networks**
Othmane L. B. , Weffers H., Angin P., Bhargava B.
International Journal of Communication Networks and Distributed Systems, vol.11, pp.412-430, 2013 (Journal Indexed in ESCI)
- **A Trust-based Approach for Secure Data Dissemination in a Mobile Peer-to-Peer Network of AVs**
Bhargava B. K. , ANGIN P., Ranchal R., Sivakumar R., Linderman M., Sinclair A.
INTERNATIONAL JOURNAL OF NEXT-GENERATION COMPUTING, vol.3, pp.1-12, 2012 (Journal Indexed in ESCI)
- **Real-time Mobile-Cloud Computing for ontext-Aware Blind Navigation**
ANGIN P., Bhargava B. K.
INTERNATIONAL JOURNAL OF NEXT-GENERATION COMPUTING, vol.2, pp.89-101, 2011 (Journal Indexed in ESCI)

Books & Book Chapters

- **Blockchain for Ensuring Security , Privacy , and Trust in IoT Environments: The State of the Art**
Erdem A., Özkan Yıldırım S., Angin P.
in: Security, Privacy and Trust in the IoT Environment, Zaigham Mahmood, Editor, Springer, London/Berlin , Derby, pp.97-122, 2019

Refereed Congress / Symposium Publications in Proceedings

- **A Digital Twins Approach to Smart Grid Security Testing and Standardization**
Atalay M., ANGIN P.
2020 IEEE International Workshop on Metrology for Industry 4.0 and IoT, MetroInd 4.0 and IoT 2020, Roma, Italy, 3 - 05 June 2020, pp.435-440
- **DroPPPP: A P4 Approach to Mitigating DoS Attacks in SDN**
Simsek G., BOSTAN H., Sarica A. K. , Sarikaya E., KELEŞ A., ANGIN P., ALEMDAR H., ONUR E.
20th World Conference on Information Security Applications, WISA 2019, Jeju Island, South Korea, 21 - 24 August 2019, pp.55-66
- **ARTEMIS: An intrusion detection system for mqtt attacks in internet of things**
Ciklabakkal E., DÖNMEZ A., Erdemir M., Suren E., YILMAZ M. T. , ANGIN P.
38th IEEE International Symposium on Reliable Distributed Systems, SRDS 2019, Lyon, France, 1 - 04 October 2019, pp.369-371
- **WIP - SKOD: A Framework for Situational Knowledge on Demand**

Palacios S., Solaiman K., ANGIN P., Nesen A., Bhargava B., Collins Z., Sipser A., Stonebraker M., Macdonald J. International Workshops on Polystores and other Systems for Heterogeneous Data, Poly 2018, and Data Management and Analytics for Medicine and Healthcare, DMAH 2018 held in conjunction with the 44th International Conference on Very Large Data Bases, VLDB 2018, California, United States Of America, 30 August 2019, pp.154-166

● **Machine Learning Models to Enhance the Science of Cognitive Autonomy**

MANÍ G., BHARGAVA B., ANGIN P., VÍLLARREAL VASQUEZ M., ULYBYSHEV D., KOBES J.

First IEEE International Conference on Artificial Intelligence and Knowledge Engineering, 26 - 28 September 2018, pp.46-53

● **A Big Data Analytical Approach to Cloud Intrusion Detection**

Gulmez H. G., Tuncel E., ANGIN P.

11th International Conference on Cloud Computing, Seattle, United States Of America, 25 - 30 June 2018, pp.377-388

● **A Blockchain-Based Decentralized Security Architecture for IoT**

Angin P., Mert M. B., Mete O., Ramazanli A., Sarica K., Gungoren B.

Third International Conference on Internet of Things, Held as Part of the Services Conference Federation, Washington, United States Of America, 25 - 30 June 2018, pp.3-18

● **RaaS and Hierarchical Aggregation Revisited**

RANCHAL R., SINGH S. P., ANGIN P., MOHINDRA A., LEI H., BHARGAVA B.

IEEE International Conference on Web Services, Honolulu, HI, United States Of America, 25 - 30 June 2017

● **A Monitoring Approach for Policy Enforcement in Cloud Services**

FERNANDO R., RANCHAL R., BHARGAVA B., ANGIN P.

IEEE 10th International Conference on Cloud Computing, Honolulu, HI, United States Of America, 25 - 30 June 2017

● **An MTD-Based Self-Adaptive Resilience Approach for Cloud Systems**

VÍLLARREAL VASQUEZ M., BHARGAVA B., ANGIN P., AHMED N., GOODWIN D., BRIN K., KOBES J.

IEEE 10th International Conference on Cloud Computing, Honolulu, HI, United States Of America, 25 - 30 June 2017

● **Adaptable Safety and Security in V2X Systems**

VÍLLARREAL VASQUEZ M., BHARGAVA B., ANGIN P.

IEEE International Congress on Internet of Things, Honolulu, HI, United States Of America, 25 - 30 June 2017

● **Tamper-Resistant Autonomous Agents-Based Mobile-Cloud Computing**

ANGIN P., Bhargava B., Ranchal R.

IEEE/IFIP Network Operations and Management Symposium (NOMS), Istanbul, Turkey, 25 - 29 April 2016, pp.843-847

● **A Self-Cloning Agents Based Model for High-Performance Mobile-Cloud Computing**

ANGIN P., Bhargava B., Jin Z.

2015 IEEE 8TH INTERNATIONAL CONFERENCE ON CLOUD COMPUTING, New York, United States Of America, 27 June - 02 July 2015, pp.301-308

● **Impact of Initial Target Position on Performance of UAV Surveillance Using Opportunistic Resource Utilization Networks**

Lilien L. T., ben Othmane L., ANGIN P., Bhargava B., Salih R. M., DeCarlo A.

SRDS 2015 34th Symposium on Reliable Distributed Systems, Montreal, Canada, 28 September - 01 October 2015, pp.57-61

● **A Distributed Monitoring and Reconfiguration Approach for Adaptive Network Computing**

Bhargava B., ANGIN P., Ranchal R., Lingayat S.

SRDS 2015 34th Symposium on Reliable Distributed Systems, Montreal, Canada, 28 September - 01 October 2015, pp.31-35

● **Using Assurance Cases to Develop Iteratively Security Features Using Scrum**

BEN OTHMANE L., Angin P., BHARGAVA B.

9th International Conference on Availability, Reliability and Security (ARES), Fribourg, Switzerland, 8 - 12 September 2014, pp.490-497

● **A Case for Societal Digital Security Culture**

BEN OTHMANE L., WEFERS H., RANCHAL R., ANGIN P., BHARGAVA B., MOHAMAD M. M.
SECURITY AND PRIVACY PROTECTION IN INFORMATION PROCESSING SYSTEMS, Auckland, New Zealand, 8 - 10
July 2013, vol.405, pp.391-404

● **An End-to-End Security Auditing Approach for Service Oriented Architectures**

AZARMÍ M., BHARGAVA B., Angin P., RANCHAL R., AHMED N., SİNCLAİR A., LİNDERMAN M., BEN OTHMANE L.
31st IEEE International Symposium on Reliable Distributed Systems (SRDS), Irvine, Scotland, 8 - 11 October 2012,
pp.279-284

● **An Entity-centric Approach for Privacy and Identity Management in Cloud Computing**

Angin P., Bhargava B., Ranchal R., Singh N., LİNDERMAN M., Ben Othmane L., Lilien L.
29th IEEE International Symposium on Reliable Distributed Systems, New Delhi, India, 31 October - 03 November
2010, pp.177-183

● **A Mobile-Cloud Collaborative Traffic Lights Detector for Blind Navigation**

Angin P., Bhargava B., Helal S.

Eleventh International Conference on Mobile Data Management, Missouri, United States Of America, 23 - 26 May
2010, pp.396-401

● **A Shrinkage Approach for Modeling Non-Stationary Relational Autocorrelation**

Angin P., NEVİLLE J.

8th IEEE International Conference on Data Mining, Pisa, Italy, 15 - 19 December 2008, pp.707-708

Supported Projects

ANGIN P., SÜREN E., Project Supported by Higher Education Institutions, Nesnelerin İnterneti'nde Yazılım Tanımlı Ağ
Güvenliği, 2020 - Continues

Şahin E., Koku A. B. , Turgut A. E. , Saranlı U., Kalkan S., Keysan O., Cinbiş R. G. , Akbaş E., Ankaralı M. M. , Saranlı A., et al.,
CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, ROBOTİK TEKNOLOJİLERİ ARAŞTIRMA, GELİŞTİRME ve
EĞİTİM MERKEZİ (ROMER), 2019 - 2022

Angin P., Newton Programme Project, An Internet of Things Approach to Smart Agriculture, 2019 - 2021

ANGIN P., GÜLMEZ H. G. , TUNÇEL E., Project Supported by Higher Education Institutions, BULUT SİSTEMLERİNDE
PEKİŞTİRMELİ ÖĞRENİM VE BÜYÜK VERİ ANALİZİYLE GÜVENLİK, 2018 - 2019

Activities in Scientific Journals

International Journal Of Web Services Research, Evaluation Committee Member, 2019 - Continues

Journal of Wireless Mobile Networks, Ubiquitous Computing, and Dependable Applications, Committee Member, 2017 -
Continues

Turkish Journal Of Electrical Engineering And Computer Sciences, Committee Member, 2018 - 2020

Scientific Refereeing

IEEE TRANSACTIONS ON DEPENDABLE AND SECURE COMPUTING, Journal Indexed in SCI-E, December 2019

INTERNATIONAL JOURNAL OF WEB SERVICES RESEARCH, Journal Indexed in SCI-E, November 2019

JOURNAL OF NETWORK AND COMPUTER APPLICATIONS, Journal Indexed in SCI-E, October 2019

IEEE INTERNET COMPUTING, Journal Indexed in SCI-E, October 2019

SOFTWARE-PRACTICE & EXPERIENCE, Journal Indexed in SCI-E, August 2019

IEEE TRANSACTIONS ON INDUSTRIAL INFORMATICS, Journal Indexed in SCI-E, July 2019

JOURNAL OF AMBIENT INTELLIGENCE AND HUMANIZED COMPUTING, Journal Indexed in SCI-E, July 2019

JOURNAL OF NETWORK AND COMPUTER APPLICATIONS, Journal Indexed in SCI-E, June 2019

ACM TRANSACTIONS ON INTERNET TECHNOLOGY, Journal Indexed in SCI-E, May 2019

VLDB, Conference Paper (Full Text), April 2019

JOURNAL OF NETWORK AND COMPUTER APPLICATIONS, Journal Indexed in SCI-E, January 2019

Tasks In Event Organizations

Angin P., 38th International Symposium on Reliable Distributed Systems, Scientific Congress, Lyon, France, Ekim 2019

Angin P., IEEE Vehicular Technology Conference, Scientific Congress, Hawaii, United States Of America, Eylül 2019

Angin P., WORKSHOP ON MACHINE LEARNING FOR SECURITY AND CRYPTOGRAPHY, Workshop Organization, Turkey, Eylül 2019

Angin P., 20th WORLD CONFERENCE ON INFORMATION SECURITY APPLICATIONS, Scientific Congress, Jeju-Si, South Korea, Ağustos 2019

Invited Congress and Symposium Activities

Int. Workshop on Internet of Mobile Things, Invited Speaker, İstanbul, Turkey, 2019

20th World Conference on Information Security Applications, Panelists, Jeju-Si, South Korea, 2019

Citations

Total Citations (WOS):151

h-index (WOS):7