Prof. SEVİL ŞEN AKAGÜNDÜZ

Personal Information

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Education Information

Doctorate, University of York, Computer Science, Computer Science, United Kingdom 2006 - 2010
Postgraduate, Hacettepe University, Fen Bilimleri Enstitüsü, Bilgisayar Mühendisliği, Turkey 2002 - 2005

Foreign Languages

English, C1 Advanced

Research Areas

Computer Sciences, Information Security and Reliability, Software Security, Computer Networks, Communications and Network Protocols, Data Routing, Artificial Intelligence, Computer Learning and Pattern Recognition, Computer Learning, Evolutionary Computing, Engineering and Technology

Academic Titles / Tasks

Associate Professor, Hacettepe University, Mühendislik Fakültesi, Bilgisayar Bilimleri Mühendisliği Bölümü, 2015 - Continues
Assistant Professor, Hacettepe University, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 2013 - 2015
Research Assistant, Hacettepe University, Mühendislik Fakültesi, Bilgisayar Bilimleri Mühendisliği Bölümü, 2002 - 2013

Academic and Administrative Experience

Hacettepe Üniversitesi, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 2014 - 2014

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Deep reinforcement learning based flexible preamble allocation for RAN slicing in 5G networks**
Gedikli A. M., KÖSEOĞLU M., Sen S.
COMPUTER NETWORKS, vol.215, 2022 (SCI-Expanded)

II. **Lib2Desc: automatic generation of security-centric Android app descriptions using third-party libraries**
Cevik B., Altiparmak N., Aksu M., Sen S.
INTERNATIONAL JOURNAL OF INFORMATION SECURITY, vol.21, no.5, pp.1107-1125, 2022 (SCI-Expanded)

III. **Attention: there is an inconsistency between android permissions and application metadata!**
Alecakir H., Can B., Sen S.
INTERNATIONAL JOURNAL OF INFORMATION SECURITY, vol.20, no.6, pp.797-815, 2021 (SCI-Expanded)

IV. **Load balancing for RPL-based Internet of Things: A review**
Pancaroglu D., Sen S.
AD HOC NETWORKS, vol.116, 2021 (SCI-Expanded)

V. **A Transfer Learning Approach for Securing Resource-Constrained IoT Devices**
Yilmaz S., AYDOĞAN E., Sen S.
IEEE TRANSACTIONS ON INFORMATION FORENSICS AND SECURITY, vol.16, pp.4405-4418, 2021 (SCI-Expanded)

VI. **Electric fish optimization: a new heuristic algorithm inspired by electrolocation**
YILMAZ S., Sen S.
NEURAL COMPUTING & APPLICATIONS, vol.32, no.15, pp.11543-11578, 2020 (SCI-Expanded)

VII. **A novel multi-featured metric for adaptive routing in mobile ad hoc networks**
Hasdemir S., YILMAZ S., Sen S.
APPLIED INTELLIGENCE, vol.49, no.8, pp.2823-2841, 2019 (SCI-Expanded)

VIII. **Analysis of dynamic code updating in Android with security perspective**
Aysan A. I., Sakiz F., Sen S.
IET INFORMATION SECURITY, vol.13, no.3, pp.269-277, 2019 (SCI-Expanded)

IX. **Coevolution of Mobile Malware and Anti-Malware**
Sen S., AYDOĞAN E., Aysan A. I.
IEEE TRANSACTIONS ON INFORMATION FORENSICS AND SECURITY, vol.13, no.10, pp.2563-2574, 2018 (SCI-Expanded)

X. **A survey of attacks and detection mechanisms on intelligent transportation systems: VANETs and IoV**
Sakiz F., Sen S.
AD HOC NETWORKS, vol.61, pp.33-50, 2017 (SCI-Expanded)

XI. **Gen Trust: A genetic trust management model for peer-to-peer systems**
TAHTA U. E., Sen S., CAN A. B.
APPLIED SOFT COMPUTING, vol.34, pp.693-704, 2015 (SCI-Expanded)

XII. **Internet of Things security and privacy: Design methods and optimization**
Challal Y., Natalizio E., Sen S., Vegni A. M.
AD HOC NETWORKS, vol.32, pp.1-2, 2015 (SCI-Expanded)

XIII. **Using instance-weighted naive Bayes for adapting concept drift in masquerade detection**
Sen S.
INTERNATIONAL JOURNAL OF INFORMATION SECURITY, vol.13, no.6, pp.583-590, 2014 (SCI-Expanded)

XIV. **EXPOSURE: A Passive DNS Analysis Service to Detect and Report Malicious Domains**
Bilge L., Sen S., Balzarotti D., Kirda E., Kruegel C.
ACM TRANSACTIONS ON INFORMATION AND SYSTEM SECURITY, vol.16, no.4, 2014 (SCI-Expanded)

XV. **Evolutionary computation techniques for intrusion detection in mobile ad hoc networks**
Sen S., Clark J. A.
COMPUTER NETWORKS, vol.55, no.15, pp.3441-3457, 2011 (SCI-Expanded)

Books & Book Chapters

I. **A Survey of Intrusion Detection Systems using Evolutionary Computation**
ŞEN AKAGÜNDÜZ S.
in: Bio Inspired Computation in Telecommunications, Yang Xin-She, Chien Su Fong, Ting T.O., Editor, Elseiver, pp.73-94, 2015

Refereed Congress / Symposium Publications in Proceedings

I. **Analysis of Routing Attacks in FANETs**
Ceviz O., Sadioglu P., Sen S.
13th EAI International Conference on Ad Hoc Networks (ADHOCNETS) / 16th EAI International Conference on Tools for Design, Implementation and Verification of Emerging Information Technologies (TRIDENTCOM), ELECTR NETWORK, 24 November - 07 December 2021, vol.428, pp.3-17

II. **Efficient Evolutionary Fuzzing for Android Application Installation Process**
Hataş V., ŞEN AKAGÜNDÜZ S.
2019 IEEE 19th International Conference on Software Quality, Reliability and Security, 22 - 26 July 2019

III. **Early Detection of Botnet Activities Using Grammatical Evolution**
YILMAZ S., ŞEN AKAGÜNDÜZ S.
International Conference on the Applications of Evolutionary Computation, Leipzig, Germany, 24 - 26 April 2019

IV. **Evolving Trust Formula to Evaluate Data Trustworthiness in VANETs Using Genetic Programming**
Aslan M., ŞEN AKAGÜNDÜZ S.
International Conference on the Applications of Evolutionary Computation, 24 - 26 April 2019

V. **A Central Intrusion Detection System for RPL-Based Industrial Internet of Things**
AYDOĞAN E., YILMAZ S., Sen S., Butun I., Forsstrom S., Gidlund M.
15th IEEE International Workshop on Factory Communication Systems (WFCS), Sundsvall, Sweden, 27 - 29 May 2019

VI. **An Analysis of the Current State of Security in the Internet of Things**
Pancaroğlu D., ŞEN AKAGÜNDÜZ S.
International Conference on Cyber Security and Computer Science, 18 - 20 October 2018

VII. **Android Malware Detection Based on Runtime Behaviour**
Aktas K., Sen S.
26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018

VIII. **SAFEDroid: Using Structural Features for Detecting Android Malwares**
Sen S., Aysan A. I., Clark J. A.
13th EAI International Conference on Security and Privacy in Communication Networks (SecureComm), Niagara Falls, Canada, 22 - 25 October 2017, vol.239, pp.255-270

IX. **UpDroid: Updated Android Malware and Its Familial Classification**
Aktas K., Sen S.
23rd Nordic Conference on Secure IT Systems (NordSec), Oslo, Norway, 28 - 30 November 2018, vol.11252, pp.352-368

X. **Attack Analysis in Vehicular Ad Hoc Networks**
MİNTEMUR Ö., ŞEN AKAGÜNDÜZ S.
Computer Science Information Technology (CS IT), 23 - 24 September 2017

XI. **API Call and Permission Based Mobile Malware Detection**
Ayşan A. İ., ŞEN AKAGÜNDÜZ S.
IEEE 23. Sinyal İşleme ve İletişim Uygulamaları Kurultayı, Turkey, 16 - 19 May 2015

XII. **Automatic Generation of Mobile Malwares Using Genetic Programming**
AYDOĞAN E., ŞEN AKAGÜNDÜZ S.
Evostar 2015, 8 - 10 April 2015, vol.9028, pp.745-756

XIII. **"Do you want to install an update of this application?" A rigorous analysis of updated Android applications**
Aysan A. I., Sen S.
2nd International Conference on Cyber Security and Cloud Computing (CS Cloud), New York, United States Of America, 3 - 05 November 2015, pp.181-186

XIV. **API Call and Permission Based Mobile Malware Detection (In English)**
Aysin A. I., Sen S.
23nd Signal Processing and Communications Applications Conference (SIU), Malatya, Turkey, 16 - 19 May 2015,

pp.2400-2403

XV. **A Lightweight Threshold Based Improvement on DSDV**
Abri R., ŞEN AKAGÜNDÜZ S.
AdhocNets 2013, 16 - 17 October 2013

XVI. **ANALYSIS OF MACHINE LEARNING METHODS ON MALWARE DETECTION**
AYDOĞAN E., Sen S.
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.2066-2069

XVII. **Evolving a Trust Model for Peer-to-Peer Networks Using Genetic Programming**
Tahta U. E., CAN A. B., Sen S.
17th European Conference on Applications of Evolutionary Computation (EvpApplications), Granada, Nicaragua, 23 - 25 April 2014, vol.8602, pp.3-14

XVIII. **A New Approach for Detection of Insider Threats**
ŞEN AKAGÜNDÜZ S.
IEEE 21 Sinyal İşleme ve İletişim Uygulamaları Kurultayı, Turkey, 23 April 2013

XIX. **A New Approach for Detection of Insider Attacks**
Sen S.
21st Signal Processing and Communications Applications Conference (SIU), CYPRUS, 24 - 26 April 2013

XX. **Feature Selection for Detection of Ad Hoc Flooding Attacks**
ŞEN AKAGÜNDÜZ S., DOĞMUŞ Z.
NeCom, 14 - 16 July 2012

XXI. **Evolving Intrusion Detection Rules on Mobile Ad Hoc Networks**
ŞEN AKAGÜNDÜZ S., Clark J. A.
PRICAI, 1 - 03 December 2009, pp.1053-1058

XXII. **Power Aware Intrusion Detection on Mobile Ad hoc Networks**
ŞEN AKAGÜNDÜZ S., Clark J. A., Tapiador J. E.
AdhocNets 2009, 1 - 03 October 2009, pp.224-239

XXIII. **A Grammatical Evolution Approach to Intrusion Detection on Mobile Ad Hoc Networks**
ŞEN AKAGÜNDÜZ S., Clark J. A.
ACM Conference on Wireless Network Security, 1 - 03 February 2008, pp.95-102

XXIV. **Threat Modeling for Mobile Ad Hoc and Sensor Networks**
Clark J. A., Murdoch J., McDermid J., ŞEN AKAGÜNDÜZ S., Chivers H. R., Worthington O., Rohatgi P.
Annual Conference of IT, 1 - 03 January 2007, pp.1-10

Supported Projects

ŞEN AKAGÜNDÜZ S., TUBITAK Project, Bu uygulamayı güncellemek ister misiniz Kendisini güncelleyen mobil zararlı yazılımların analizi ve tespiti, 2015 - Continues

ŞEN AKAGÜNDÜZ S., MİNTEMUR Ö., Project Supported by Higher Education Institutions, Araçsal Tasarsız Ağlarda Saldırı Analizi, 2017 - 2017

CAN BUĞLALILAR B., ŞEN AKAGÜNDÜZ S., Project Supported by Higher Education Institutions, Uluslararası Beyin ve Bilişsel Bilimler Sempozyumu, 2017 - 2017

ŞEN AKAGÜNDÜZ S., TUBITAK Project, Kötücül Yazılımların ve Anti Kötücül Yazılım Sistemlerinin Eş Evrimi, 2013 - 2016

Metrics

Publication: 40
Citation (WoS): 246
Citation (Scopus): 28

H-Index (WoS): 6
H-Index (Scopus): 1

Non Academic Experience

Z-Sistem