

Analysis of national cyber situational awareness practices

Bahsi, Hayret Strategic cyber defense : a multidisciplinary perspective 2017 / p. 31-41 <https://doi.org/10.3233/978-1-61499-771-9-31>

Android malware concept drift using system calls : detection, characterization and challenges

Guerra Manzanares, Alejandro; Luckner, Marcin; **Bahsi, Hayret** Expert systems with applications 2022 / art. 117200, 19 p. : ill <https://doi.org/10.1016/j.eswa.2022.117200> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Capability detection and evaluation metrics for cyber security lab exercises

Caliskan, Emin; Tatar, Unal; **Bahsi, Hayret**; **Ottis, Rain**; **Vaarandi, Risto** Proceedings of the 12th International Conference on Cyber Warfare and Security, ICCWS 2017 2017 / p. 407-414 : ill <https://www.scopus.com/record/display.uri?eid=2-s2.0-85018944652&origin=inward&txGid=dad813d957372581ca0932bf6e4fb5d8>

A case study about the use and evaluation of cyber deceptive methods against highly targeted attacks

Farar, Alexandria Elaine; **Bahsi, Hayret**; Blumbergs, Bernhards 2017 International Conference On Cyber Incident Response, Coordination, Containment and Control, Cyber Incident 2017 : London, United Kingdom, 19 June 2017 through 20 June 2017 2017 / [7] p. : ill <https://doi.org/10.1109/CYBERINCIDENT.2017.8054640>

A comparative framework for cyber threat modelling : case of healthcare and industrial control systems

Balogun, Mobolarinwa; **Bahsi, Hayret**; Keskin, Omer F.; Tatar, Unal International Journal of Critical Infrastructures 2021 / 1 p <https://doi.org/10.1504/IJICIS.2024.10046187>

Concept drift and cross-device behavior : challenges and implications for effective android malware detection

Guerra Manzanares, Alejandro; Luckner, Marcin; **Bahsi, Hayret** Computers & Security 2022 / art. 102757, 20 p. : ill <https://doi.org/10.1016/j.cose.2022.102757> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A conceptual nationwide cyber situational awareness framework for critical infrastructures

Bahsi, Hayret; **Maennel, Olaf Manuel** Secure IT systems : 20th Nordic Conference, NordSec 2015, Stockholm, Sweden, October 19-21, 2015 : proceedings 2015 / p. 3-10 : ill https://doi.org/10.1007/978-3-319-26502-5_1

A cyber attack taxonomy for microgrid systems

Bahsi, Hayret; **Dola, Henry Ochieng**; **Khalil, Shaymaa Mamdouh**; **Korötko, Tarmo** 2022 17th Annual System of Systems Engineering Conference (SOSE) 2022 / p. 324-331 <https://doi.org/10.1109/SOSE55472.2022.9812642>

Cyber incident management in low-income countries

Hountomey, Jean-Robert; **Bahsi, Hayret**; Tatar, Unal; Hashem, Sherif; Dubois, Elisabeth 2022 <https://cybilportal.org/wp-content/uploads/2022/01/CSIRTs-In-Low-Income-Countries-Final-Report-part-1-v16.pdf> <https://thegfce.org/working-groups/working-group-b/>

Cyber incident management in low-income countries

Hountomey, Jean-Robert; **Bahsi, Hayret**; Tatar, Unal; Hashem, Sherif; Dubois, Elisabeth 2022 <https://cybilportal.org/wp-content/uploads/2022/01/CSIRTs-In-Low-Income-Countries-Final-Report-part-2-v16.pdf> <https://thegfce.org/working-groups/working-group-b/>

The cyber-insurance market in Norway

Bahsi, Hayret; Franke, Ulrik; Langfeldt Friberg, Even Information and computer security 2020 / p. 54-67 <https://doi.org/10.1108/ICS-01-2019-0012> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Cybersecurity knowledge requirements for strategic level decision makers

Garcia-Granados, F.; **Bahsi, Hayret** Proceedings of the 15th International Conference on Cyber Warfare and Security (ICCWS) : Old Dominion University (ODU), Norfolk, Virginia, USA, 12-13 March 2020 2020 / p. 559-568 <https://doi.org/>

Deep learning-based detection of cyberattacks in software-defined networks

Mirsadeghi, Seyed Mohammad Hadi; **Bahsi, Hayret**; **Inbouli, Wissem** Digital forensics and cyber crime : 13th EAI international conference, ICDF2C 2022, Boston, MA, November 16-18, 2022 : proceedings 2023 / p. 341-354 https://doi.org/10.1007/978-3-031-36574-4_20

Differences in Android behavior between real device and emulator : a malware detection perspective

Guerra Manzanares, Alejandro; **Bahsi, Hayret**; **Nömm, Sven** 6th International Conference on Internet of Things: Systems, Management and Security (IOTSMS), Granada, Spain, October 22-25, 2019 2019 / art. 8939268, p. 399-404 <https://doi.org/10.1109/IOTSMS48152.2019.8939268>

Digital forensic analysis of mobile automotive maintenance applications

Sumaila, Faisal; **Bahsi, Hayret** Forensic Science International : Digital Investigation 2022 / art. 301440 <https://doi.org/10.1016/j.fsidi.2022.301440> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Dimensionality reduction for machine learning based IoT botnet detection

Bahsi, Hayret; **Nömm, Sven** 15th International Conference on Control, Automation, Robotics and Vision (ICARCV 2018) :

Singapore, November 18-21, 2018 2018 / p. 1857-1862 : ill <https://doi.org/10.1109/ICARCV.2018.8581205>

Elutähtsate teenuste ristsõltuvuse analüüs

Laud, Peeter; **Bahsi, Hayretldin; Lenin, Aleksandr**; Mändmaa, Kalev; **Priisalu, Jaan**; Tuuling, Reedik Sõjateadlane 2020 / lk. 207-237 https://www.ester.ee/record=b4555087*est

Expert knowledge elicitation for skill level categorization of attack paths

Mezešova, Terezia; **Bahsi, Hayretldin** 2019 International Conference on Cyber Security and Protection of Digital Services (Cyber Security) 2019 / 8 p. : tab <https://doi.org/10.1109/CyberSecPODS.2019.8885192>

Expert knowledge elicitation for skill level categorization of attack paths

Mezešova, Terezia; **Bahsi, Hayretldin** Cyber science 2018 : conference programme 2018 / p. 29 <https://www.c-mric.com/wp-content/uploads/2018/04/20180611-Cyber-Science-2018-Event-Brochure-DRAFT-v0.6.pdf>

Forensics analysis of an on-line game over Steam Platform

Tabuyo-Benito, Raquel; **Bahsi, Hayretldin**; Peris-Lopez, Pedro Digital Forensics and Cyber Crime : 10th International EAI Conference, ICDF2C 2018, New Orleans, LA, USA, September 10–12, 2018, Proceedings 2019 / p. 106-127 https://doi.org/10.1007/978-3-030-05487-8_6 Conference proceeding at Scopus Article at Scopus

Hybrid feature selection models for machine learning based botnet detection in IoT networks

Guerra Manzanares, Alejandro; Bahsi, Hayretldin; Nömm, Sven 2019 International Conference on Cyberworlds : CW 2019 : 2-4 October 2019, Kyoto, Japan : proceedings 2019 / p. 324-327 : ill <https://doi.org/10.1109/CW.2019.00059>

Impact assessment of cyber actions on missions or business processes : a systematic literature review

Bahsi, Hayretldin; Udokwu, Chibuzor; Tatar, Unal; **Norta, Alexander** Proceedings of the 13th International Conference on Cyber Warfare and Security, ICCWS 2018 : National Defence University, Washington DC, USA, 6-9 March 2018 2018 / p. 11-20 : ill <http://toc.proceedings.com/38822webtoc.pdf>

In-depth feature selection and ranking for automated detection of mobile malware

Guerra Manzanares, Alejandro; Nömm, Sven; Bahsi, Hayretldin Proceedings of the 5th International Conference on Information Systems Security and Privacy : ICISSP 2019 : February 23-25, 2019, Prague, Czech Republic. Vol. 1 2019 / p. 274-283 : ill <https://doi.org/10.5220/0007349602740283>

In-depth feature selection for the statistical machine learning-based botnet detection in IoT networks

Kalakoti, Rajesh; Nömm, Sven; Bahsi, Hayretldin IEEE Access 2022 / p. 94518-94535 <https://doi.org/10.1109/ACCESS.2022.3204001> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

KronoDroid : time-based hybrid-featured dataset for effective android malware detection and characterization

Guerra Manzanares, Alejandro; Bahsi, Hayretldin; Nömm, Sven Computers & Security 2021 / art. 102399, 32 p <https://doi.org/10.1016/j.cose.2021.102399> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Leveraging the first line of defense : a study on the evolution and usage of android security permissions for enhanced android malware detection

Guerra Manzanares, Alejandro; Luckner, Marcin; **Bahsi, Hayretldin** Journal of Computer Virology and Hacking Techniques 2022 / 32 p. : ill <https://doi.org/10.1007/s11416-022-00432-3>

Machine learning-based detection and characterization of evolving threats in mobile and IoT Systems = Masinõppepõhine arenevate ohtude tuvastamine ning kirjeldamine mobiilseadmete ja värvõrkude jaoks

Guerra Manzanares, Alejandro 2022 <https://doi.org/10.23658/taltech.54/2022> <https://digikogu.taltech.ee/et/Item/f56ae778-e5a5-4147-a8e4-4833e08fa789> https://www.ester.ee/record=b5511898*est

A machine learning-based forensic tool for image classification - a design science approach

Del Mar-Raave, Joanna Rose; Bahsi, Hayretldin; Mrsic, Leo; Hausknecht, Kresimir Forensic Science International : Digital Investigation 2021 / art. 301265, 13 p <https://doi.org/10.1016/j.fsidi.2021.301265> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Mapping the information flows for the architecture of a nationwide situation awareness system : (Poster)

Bahsi, Hayretldin; Dieves, Veiko; **Kangilaski, Taivo**; Laud, Peeter; **Mõtus, Leo**; Murumets, Jaan; Ploom, Illimar; **Priisalu, Jaan**; Seeba, Mari; **Täks, Ermo**; Tammel, Kaide; **Tammpuu, Piia**; **Taveter, Kuldar**; Trumm, Avo; Truusa, Tiia-Triin; Vihailemm, Triin Proceedings 2019 IEEE International Conference on Cognitive and Computational Aspects of Situation Management (CogSIMA) : Las Vegas, NV, USA, 8-11 April 2019 2019 / p. 152–157 <https://doi.org/10.1109/COGSIMA.2019.8724167>

Maritime cyber-insurance : The Norwegian case : [abstract]

Franke, Ulrik; Langfeldt Friberg, Even; Bahsi, Hayretldin International Journal of Critical Infrastructures 2022 / 1 p <https://doi.org/10.1504/IJCIS.2022.10046729> <https://doi.org/10.1504/IJCIS.2022.10046164>

MedBloT : generation of an IoT Botnet Dataset in a medium-sized IoT network

Guerra Manzanares, Alejandro; Medina-Galindo, Jorge; Bahsi, Hayrettdin; Nömm, Sven Proceedings of the 6th International Conference on Information Systems Security and Privacy, ICISSP : February 25-27, 2020, La Valletta, Malta. Vol. 1 2020 / p. 207-218 : ill <https://doi.org/10.5220/0009187802070218>

Model-based analysis of secure and patient-dependent pacemaker monitoring system

Tsiopoulos, Leonidas; Kuusik, Alar; Vain, Jüri; Bahsi, Hayrettdin Body Area Networks. Smart IoT and Big Data for Intelligent Health : 15th EAI International Conference, BODYNETS 2020, Tallinn, Estonia, October 21, 2020 : proceedings 2020 / p. 77-91 https://doi.org/10.1007/978-3-030-64991-3_6 [Journal metrics at scopus](#) [Article at Scopus](#)

On the application of active learning for efficient and effective IoT botnet detection

Guerra Manzanares, Alejandro; Bahsi, Hayrettdin Future Generation Computer Systems 2023 / p. 40-53 : ill <https://doi.org/10.1016/j.future.2022.10.024>

On the application of active learning to handle data evolution in Android malware detection

Guerra Manzanares, Alejandro; Bahsi, Hayrettdin Digital forensics and cyber crime : 13th EAI international conference, ICDF2C 2022, Boston, MA, November 16-18, 2022 : proceedings 2023 / p. 256-273 https://doi.org/10.1007/978-3-031-36574-4_15

On the relativity of time : implications and challenges of data drift on long-term effective android malware detection

Guerra Manzanares, Alejandro; Bahsi, Hayrettdin Computers & Security 2022 / art. 102835, 15 p. : ill <https://doi.org/10.1016/j.cose.2022.102835> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

An ontology engineering case study for advanced digital forensic analysis

Chikul, Pavel; Bahsi, Hayrettdin; Maennel, Olaf Manuel Model and Data Engineering : 10th International Conference, MEDI 2021, Tallinn, Estonia, June 21–23, 2021 : proceedings 2021 / p. 67–74 https://doi.org/10.1007/978-3-030-78428-7_6 [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Preliminary analysis of cyberterrorism threats to internet of things (IoT) applications

Balogun, Mobolarinwa; **Bahsi, Hayrettdin**; Karabacak, Bilge Terrorists' use of the Internet 2017 / p. 49-58 <http://doi.org/10.3233/978-1-61499-765-8-49>

Preliminary analysis of cyberterrorism threats to internet of things (IoT) applications [Online resource]

Bahsi, Hayrettdin Advanced Research Workshop supported by the NATO Science for Peace and Security Programme, Terrorists' Use of the Internet : assessment and response 2016 / p. 8 <http://www.cyberterrorism-project.org/wp-content/uploads/2016/11/Terrorists%E2%80%99-Use-of-the-Internet-Assessment-and-Response.pdf>

The invisible front : a cyber resilience perspective

Bahsi, Hayrettdin The geopolitics of power grids : political and security aspects of Baltic electricity synchronization : March 2018 2018 / p. 53–68 : ill https://www.ester.ee/record=b5053315*est

Threat modeling of cyber-physical systems - a case study of a microgrid system

Khalil, Shaymaa Mamdouh; Bahsi, Hayrettdin; Dola, Henry Ochieng; Korötko, Tarmo; McLaughlin, Kieran; Kotkas, Vahur Computers & Security 2023 / art. 102950, 16 p. : ill <https://doi.org/10.1016/j.cose.2022.102950>

Time-frame analysis of system calls behavior in machine learning-based mobile malware detection

Guerra Manzanares, Alejandro; Nömm, Sven; Bahsi, Hayrettdin 2019 International Conference on Cyber Security for Emerging Technologies : CSET 2019, Doha, Qatar, 27 October 2019 through 29 October 2019 2019 / art. 89049088 ; 8 p. : ill <https://doi.org/10.1109/CSET.2019.8904908>

Towards the integration of a post-hoc interpretation step into the machine learning workflow for IoT botnet detection

Guerra Manzanares, Alejandro; Nömm, Sven; Bahsi, Hayrettdin 18th IEEE International Conference on Machine Learning and Applications : ICMLA 2019, 16–19 December 2019, Boca Raton, Florida, USA : proceedings 2019 / p. 1162-1169 : ill <https://doi.org/10.1109/ICMLA.2019.00193>

Unsupervised anomaly based botnet detection in IoT networks

Nömm, Sven; Bahsi, Hayrettdin 17th IEEE International Conference on Machine Learning and Applications : ICMLA 2018, 17–20 December 2018, Orlando, Florida, USA : proceedings 2018 / p. 1048-1053 <https://doi.org/10.1109/ICMLA.2018.00171>

Using MedBloT dataset to build effective machine learning-based IoT botnet detection systems

Guerra Manzanares, Alejandro; Medina-Galindo, Jorge; Bahsi, Hayrettdin; Nömm, Sven Information Systems Security and Privacy : 6th International Conference, ICISSP 2020, Valletta, Malta, February 25–27, 2020 : revised selected papers 2022 / p. 222–243 https://doi.org/10.1007/978-3-030-94900-6_11 [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)