Prof. Yuval Elovici   Date: March 2020

CURRICULUM VITAE AND LIST OF PUBLICATIONS

Personal Details

Name	Yuval Elovici
Date and Place of Birth	5/7/1966, ISRAEL
Marital Status	Married, four children
Military Service	'91-'98, Rank - Major
Work - Address and telephone	Telekom Innovation Laboratories at Ben-Gurion University of the Negev
	POB 653, Beer Sheva 84105, Israel
	+972 8 642 8120
	Email: elovici@bgu.ac.il
Home - Address and telephone	Hameyasdim 9 (Ranch 9), Arugot Village, Israel
	+972 8 8582641 (home)
	+972 54 6775544 (mobile)
	Email: elovici@bgu.ac.il

Education

B.Sc.   1989   Ben-Gurion University – Computer and Electrical Engineering

M.Sc.   1991   Ben-Gurion University – Computer and Electrical Engineering
Advisor: Dr. Helney Azaria
Title of Thesis: Multi-Target Tracking Implementation onto a Parallel Multiprocessor System based on Transputers.

Ph.D   2000   Tel-Aviv University – Faculty of Management,
Information Systems Program
Advisor: Prof. Niv Ahituv
Title of Dissertation: Information Technology Evaluation, Investment Decisions and Benefits to the Organization over Time.

Employment History

(a) <u>Ben-Gurion University of the Negev</u>

11/2012-Now
Title: Professor
Department of Information Systems Engineering, Ben-Gurion University of the Negev.

10/2010-10/2012
Title: Associate Professor
Department of Information Systems Engineering, Ben-Gurion University of the Negev.

10/2006-10/2010
Title: Senior Lecturer with tenure (from 2007)
Institution: Department of Information Systems Engineering, Ben-Gurion University of the Negev.

10/2000-10/2006
Title: Lecturer
Institution: Department of Information Systems Engineering, Ben-Gurion University of the Negev.

10/1998-10/2000
Title: Senior Teaching Assistant/Instructor
Institution: Department of Industrial Engineering and Management, Ben-Gurion University of the Negev.

(b) <u>Other Institutions</u>

10/1991-10/1998
Title: Programming Team Leader
Institution: Israeli Air Force (IAF)
During my work at the IAF, I was responsible for managing a team of seven computing scientists, who developed a Geographical Information System (GIS) infrastructure for mission-planning systems. The GIS infrastructure was installed on more than 400 workstations. This project was awarded "Best Project of the Year" (1994).

10/1989 - 10/1994
Title: External Lecturer
Institution: Sapir College

7/1990 - 10/1990
Title: Guest Researcher
Institution: École Polytechnique Fédérale de Lausanne, Switzerland.

Professional Activities

(a) <u>Positions in Academic Administration</u>

04/2014-Now
Title: Director of BGU Cyber Security Research Center.
Institution: Ben-Gurion University.

12/2005-Now
Director of Telekom Innovation Laboratories at Ben-Gurion University; Ben-Gurion University
The institute's focus is applied research and its activities include, among others: specifying, developing, and evaluating emerging Information and Communication Technologies (ICT). Members of the institute are engaged in applied research based on strategic plans outlined by Deutsche Telekom AG (DTAG). The institute's research areas currently include: Big Data Analytics, Cyber Security, Android Security. The research is conducted by BGU faculty members (about 10), together with graduate students and scientific programmers (approximately 80). The institute submits one patent per month as well as about 60 scientific publications that are accepted to leading conferences and journals per year.

10/2012-Now
Member of the Doctoral Committee, Ben-Gurion University, Department of Information Systems Engineering.

9/2008-Now
Member of the Curriculum Committee, Ben-Gurion University, Department of Information Systems Engineering.

12/2003-7/2006
Head of the Software Engineering Program, Ben-Gurion University, Faculty of Engineering Sciences.

The Software Engineering Program is a part of the Department of Information Systems Engineering and the Department of Computer Sciences. This unique Israeli program includes over 240 students, who study for four years toward a B.Sc. in Software Engineering.

6/2003-10/2005
Member of the Graduate Studies Committee, Ben-Gurion University, Department of Information Systems Engineering.

8/2001-Now
Member of the University Committee for Information Security, Ben-Gurion University.

This committee is responsible for defining the university's strategy with regard to computer and network security, as well as ongoing supervision of the compliance of university authorities with the latest privacy laws.

10/2000-10/2005
Head of the Computing and Infrastructure Committee, Ben-Gurion University, Department of Information Systems Engineering.

When the Department of Information Systems Engineering was established, I was responsible for designing four new computer labs and supervised the purchase of the equipment for the labs. I consulted and assisted the technical team in maintaining the department's computer and communications infrastructure.

(b) **Professional Functions outside Universities/Institutions**

09/2014-Now
Title: SUTD Director, ST Electronics-SUTD Cyber Security Laboratory
Institution: Singapore University of Technology and Design (SUTD).

09/2014-03/2018
Title: iTrust Research Director
Institution: Singapore University of Technology and Design (SUTD).

01/2013-01/2015
Title: Member of a national committee that advises the Israeli government in the area of cyber security R&D.
Institution: State of Israel.

1/2012-12/2014
Title: Head of the Scientific and Technological Committee of the Cabarnit Consortium.
Institution: Cabarnit Consortium.
Cabarnit is a consortium of seven computer and network security hi-tech companies and 10 academic groups from various universities in Israel. The consortium's annual budget is around $7M and is financed by the Israeli Ministry of Trade and Commerce. I was nominated by the consortium to head a scientific and technological committee that is responsible for monitoring scientific and technological developments and identifying new potential members from the industry and academia.

09/2008-9/2010
Title: Member of a national committee that advises the Israeli government in the area of protection of critical infrastructures.
Institution: State of Israel, Prime Minister's Office.

11/2004-10/2006
Title: Member of a committee that advises the Israeli Parliament on new laws for

protecting personal information stored in digital repositories.
Institution: State of Israel, Ministry of Justice.
The Deputy Chief Prosecutor established a committee mandated to recommend modifications to Israeli privacy laws so these can better meet the new challenges of the Information Age. My role in the committee was to present new IT capabilities and their potential impact on matters of privacy.

(c) Significant Professional Consulting

07/2014-Now
Title: Consultant and Board member of Morphisec Ltd, BGU Spin-off.

2001-Now
Title: Consultant in the area of computer and network security, to various start-up companies, private investors, venture capital and governmental institutions.
Company: Com.Net.Sec.

4/2008-4/2010
Title: CTO
Company: Genieo, Ltd.
Genieo Innovation is the creator of a multi-platform generic personalization framework for PC, mobile devices, Internet, TV and others. From time to time I am asked to assist Genieo with topics related to information sciences.

9/2007-9/2008
Title: Director
Company: Lepricon, Ltd.
Lepricon develops innovative infrastructures that can be used for adding voice activation to any software with minimal efforts. I assisted Lepricon with business development and software engineering.

12/2005-12/2006
Title: Consultant for computer and network security
Company: Fraud Analyzer Ltd.

Fraud Analyzer was founded by BG Negev Technologies (a company wholly owned by the Ben-Gurion University) and others, in order to commercialize technologies developed by Prof. Yuval Shahar within the university, for electronic fraud detection. My role in the company was to consult in the area of computer and network security and to present the technology to strategic customers.

9/2003-4/2006
Title: Consultant for software development in medical devices
Company: Medigus Ltd.
Medigus Ltd. developed a new medical device (endoscope suite) that required much software-provided functionality. I advised Medigus on software integration in order to enhance the safety of its devices while complying with the FDA regulations.

7/2003-Now
Title: Technological Analyst – intermittently, I am asked to evaluate new hi-tech projects and start-up companies

2/2001-12/2004
Title: Director
Company: SLDS, Inc.

2/2000-2/2001
Title: CTO and Director – consulting on Internet security protocols
Company: SLDS, Inc.
SLDS Inc. is a startup company that developed a new electronic pen, intended to be used as a pointing device and computer security device. I was responsible for all the technological development in the company and for representing the company to the largest players in the market, such as Philips, LG and Logitech.

2/1999-7/2000
Title: Director and Consultant on WEB information extraction
Company: Intpal, Inc.
Intpal is a startup company that developed a unique software solution. The solution first learns the user's profile, then downloads information from the Web in order to custom-build a local site tailored to the user's preferences.

5/1998-2/1999
Title: Consulting in the area of personal computer security
Company: Fortknox, Ltd.
Fortknox Inc. is a startup company that developed a security suite enabling large-scale enterprises to secure their computers and information from intra-enterprise attacks.

(d) Editor/Member of Editorial Board of scientific journal

Conferences:

Program Committee Member: 8th International Symposium on Systems and Information Security (SSI 2006), Sao Jose dos Campos, Sao Paulo, Brazil, November 8-10, 2006.

Program Committee Member: IEEE International Conference on Intelligence and Security Informatics (IEEE ISI-2007), Rutgers University, New Jersey, USA, May 23-24, 2007.

Program Committee Member: IEEE International Conference on Intelligence and Security Informatics (IEEE ISI-2008), Taipei, Taiwan, June 17-20, 2008.

Program Committee Member: 23rd Annual IFIP WG 11.3 Working Conference on Data and Applications Security (DBSec 2009), Concordia University, Montreal, Canada, July 12-15, 2009.

Program Committee Member: IEEE International Conference on Intelligence and Security Informatics (IEEE ISI-2010), Vancouver, British Columbia, Canada, May 23-26, 2010.

Program Committee Member: Swarm, Amorphous, Spatial, and Complex Systems Track of the 12th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS 2010), New York City, USA, September 20-22, 2010.

Program Committee Member: The 2011 International Conference on Advances in Social Network Analysis and Mining, Kaohsiung, Taiwan, July 25-27, 2011.

Program Committee Member: IEEE International Conference on Intelligence and Security Informatics (IEEE ISI-2012), Washington, DC, USA, June 11-14, 2012.

Program Committee Member: IEEE International Conference on Intelligence and Security Informatics (IEEE ISI-2013), Seattle Washington, USA, June 4-7, 2013.

Program Committee Member: International Conference on Social Computing, Behavioral-Cultural Modeling, and Prediction (SBP-2013), Washington, D.C., USA, April 2-5, 2013.

Program Committee Member: The 2013 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM 2013), Ontario, Canada 25-28 August 2013.

Program Committee Member: International Conference on Social Computing, Behavioral-Cultural Modeling, and Prediction (SBP-2014), Washington, D.C., USA, April 2-5, 2013.

Program Committee Member: IEEE Joint Intelligence and Security Informatics Conference (JISIC), Hague, Netherlands, September 24-26, 2014

Workshops:

Session Chair: NATO Advanced Research Workshop, Security Informatics and Terrorism-Patrolling the Web, Machine Learning Applied to Web-Patrolling Session (2007), Israel, June 4-5, 2007.

Program Committee Member: Interdisciplinary Studies in Information Privacy and Security (ISIPS 2008), New Brunswick, New Jersey, May 12, 2008.

Program Committee Member: ACM SIGKDD Workshop on Cyber Security and Intelligence Informatics (CSI-KDD 2009), Paris, France, June 28, 2009.

Co-Chair: Workshop on Leveraging Social Patterns for Security, Privacy and Network Architectures, Vancouver, Canada, August 29-31, 2009.

Program Committee Member: ACM SIGKDD Workshop on Cyber Security and Intelligence Informatics (CSI-KDD 2010), Washington, D.C. on July 25, 2010.

Co-Chair: Workshop on Collaborative Methods for Security and Privacy, Washington, USA, August 10, 2010.

Co-Chair: First International Workshop on Security and Privacy in Social Networks 2011 (SPSN-2011) in conjunction with IEEE SocialCom 2011, Cambridge, USA, October 9-10, 2012.

Program Committee Member: ACM SIGKDD Workshop on Intelligence and Security Informatics (ISI-KDD 2012), Beijing, China, August 12, 2012.

Co-Chair: Second International Workshop on Security and Privacy in Social Networks 2012 (SPSN-2012) in conjunction with IEEE SocialCom 2012, Amsterdam, Netherlands, September 3-6, 2012.

Co-Chair: Data Mining for Cyber Security, A workshop organized in association with ICDM'2016, Barcelona, December 12, 2016.

(e) Membership in Scientific societies

Association of Computer Machinery (ACM)
IEEE Computer Society

Educational Activities

(a) Courses Taught

File Organization and Processing	Third year	Ben-Gurion University
Data Security	Third year	Ben-Gurion University
Distributed DB and Client Server Sys	Fourth year	Ben-Gurion University
Computer and Network Security	Third year	Ben-Gurion University
Project Seminar	Fourth year	Ben-Gurion University
Applied Cryptography	Graduate	Ben-Gurion University
Information in Decision Making	Graduate	Ben-Gurion University
Privacy in the Electronic Society	Graduate	Ben-Gurion University
Advanced Malware	Graduate	Ben-Gurion University

(b) Research Students – Graduated Ph.D Students

1. Rami Puzis (Ph.D., BGU). Research topic: *Optimization of DNIDS Deployment Strategy*. Graduated 2010. Joint supervisor: Prof. Shlomi Dolev. Did his Post.Doc in the University of Maryland, now faculty member in the Department of Information Systems Engineering, Ben-Gurion University.

2. Asaf Shabtai (Ph.D., BGU). Research topic: *Optimal Distributed Computation for the Derivation of a Knowledge Based Temporal-Abstraction*. Graduated 2011. Joint supervisor: Prof. Yuval Shahar. Now faculty member in the Department of Information Systems Engineering, Ben-Gurion University.

3. Erez Shmueli (Ph.D., BGU). Research topic: *Novel Obfuscation Techniques for Enhancing Database Security and Privacy*. Graduated 2013. Did his Post.Doc in MIT Media lab and now faculty member in the Department of Industrial Engineering, Tel-Aviv University.

4. Eitan Menachem (Ph.D., BGU). Research topic: – *Machine Learning for Information Security.* Graduated 2013, Joint supervisor: Prof. Lior Rokach.

5. Micky Fire (Ph.D., Information Systems Engineering, BGU). Research topic: *Social Network Data Analytics using Machine Learning and Graph Theory Algorithms*. Graduated 2014. Did his Post.Doc in the University of Seattle and now faculty member in the Department of Information Systems Engineering, Ben-Gurion University.

6. Ofer Hermoni (Ph.D., BGU). Research topic: *Anonymous Communication Networks.* Graduated 2015, Joint supervisor: Prof. Shlomi Dolev.

7. Dov Shirtz (Ph.D., BGU). Research topic: *Modeling Investment Decisions in Computer and Network Security.* Graduated 2015.

8. Polina Zilberman (Ph.D., Computer Sciences, BGU). Research topic: *Securing an Organization from External and Internal Electronic Attacks*. Joint supervisor: Prof. Shlomi Dolev. Graduated 2015.

9. Gilad Katz (Ph.D, Information Systems Engineering, BGU). Research topic: *Preventing Leaks of Organizational Information using Information-Profiling Techniques.* Did his Post.Doc at Berkley. Joint supervisor: Prof. Bracha Shapira. Graduated 2015.

10. Ofrit Lesser (Ph.D, Information Systems Engineering, BGU). Research topic: *Analysis of Online Social Networks Groups*. Graduated 2016.

11. Nir Nissim (Ph.D, Information Systems Engineering, BGU). Research topic: *Malicious Code Acquisition Using Active Learning*. Graduated 2017. Did his

Post.Doc in Stanford, now faculty member in the Department of Industrial Engineering, Ben-Gurion University.

12. Mordechai Guri (Ph.D., Information Systems Engineering, BGU). Research topic: *Bridging the Air-Gap: Data Exfiltration from Air-Gapped Networks*. Graduated 2017.

13. Yisrael Mirsky (Ph.D., Information Systems Engineering, BGU). Research topic: *Context-based Smartphone Security*. Joint supervisor: Prof. Bracha Shapira. Graduated 2018.

14. Sofia Belikovetsy (Ph.D., Information Systems Engineering, BGU). Research topic: *Challenges and Opportunities in Additive Manufacturing*. Graduated 2019.

15. Ran Yahalom (Ph.D., Information Systems Engineering, BGU). Research topic: *Biologically Inspired Cyber Systems*. Joint supervisor: Prof. Angel Porgador. Graduated 2019.

16. Shachar Siboni (Ph.D., Information Systems Engineering, BGU). Research topic: *IoT Security*. Joint supervisor: Dr. Asaf Shabtai. Graduated 2019.

17. Daniel Dor (Ph.D., Information Systems Engineering, BGU). Research topic: *A model of the Information Security Investment Decision-Making Process*. Graduated 2019.

18. Aviad Cohen (Ph.D., Information Systems Engineering, BGU). Research topic: *Detection of Malicious Email by Machine Learning Techniques*. Joint supervisor: Dr. Nir Nissim. Graduated 2019.

(c) Research Students – Graduated M.Sc. Students

1. Franchi Yanai (M.Sc., Information Systems Engineering, BGU). Research topic: *A New Protocol for Anonymous Routing,* graduated 2001.

2. Gad Alon (M.Sc., Information Systems Engineering, BGU). Research topic: *Evasive Routing: Achieving Anonymity Using Multiple ISPs,* graduated 2003.

3. Asaf Shabtai (M.Sc., Information Systems Engineering, BGU). Research topic: *Local Adaptive Packet Pricing (LAPP) Scheme for IP-Networks,* graduated 2004.Adlai Meschiach (M.Sc., Information Systems Engineering, BGU). Research topic: *PRAW – A new Model for PrivAte Web Navigation,* graduated 2004.

4. Ronen Wisenberg (M.Sc., Information Systems Engineering, BGU). Research topic: *A New Scheme for Data Base Encryption,* graduated 2005.

5. Gil Ben Uziyahu (M.Sc., Information Systems Engineering, BGU). Research topic: *Illusive Routing: Achieving Privacy on the Web using P2P network,* graduated 2005. Joint supervisor: Dr. Bracha Shapira.

6. Dana Yagil (M.Sc., Information Systems Engineering, BGU). Research topic: *Collaborative Attack on WWW Users' Anonymity,* graduated 2005.

7. Erez Shmueli (M.Sc., Information Systems Engineering, BGU). Research topic: *A New Indexing Scheme for Data Base Encryption*, graduated 2005.

8. Dan Melamed (M.Sc., Information Systems Engineering, BGU). Research topic: *New Economic Model for Collaborative Filtering*, graduated 2007, joint supervisor: Dr. Bracha Shapira.

9. Rami Puzis (M.Sc., Information Systems Engineering, BGU). Research topic: *Optimization of DNIDS Deployment Strategy,* graduated 2007, joint supervisor: Prof. Shlomi Dolev.

10. Meytal Tubi (M.Sc., Information Systems Engineering, BGU). Research topic: *Detection and Prevention of eThreat Spread in Social Networks,* Graduated 2007.

11. Dima Stoppel (M.Sc., Information Systems Engineering, BGU). Research topic: *Application of Artificial Neural Networks Techniques to Electronic Threat Detection,* graduated 2007, joint supervisor: Prof. Yuval Shahar.

12. Slava Kisilevich (M.Sc., Information Systems Engineering, BGU). Research topic: *Privacy Preserving Data Mining with K-Anonymity*, graduated 2008, joint supervisors: Dr. Bracha Shapira, Prof. Lior Rokach.

13. Eitan Menachem (M.Sc., Information Systems Engineering, BGU). Research topic: *Troika – An Improved Stacking Schema for Risk Weighting,* graduated 2008, joint supervisor: Prof. Lior Rokach.

14. Clint Feher (M.Sc., Information Systems Engineering, BGU). Research topic: *Action Based User Mouse Verification*, graduated 2009.

15. Polina Zilberman (M.Sc., Computer Sciences, BGU). Research topic: *Securing an Organization from External and Internal Electronic Attacks*, graduated 2009, joint supervisor: Prof. Shlomi Dolev.

16. Yuval Fledel (M.Sc., Information Systems Engineering, BGU). Research topic: *Securing Android-Powered Mobile Devices,* graduated 2010.

17. Avi Elisha (M.Sc., Information Systems Engineering, BGU). Research topic: *Cross Site Scripting Detection and Mitigation System - XSS DMS*, graduated 2010, joint supervisor: Dr. Eyal Felstaine.

18. Nir Nissim (M.Sc., Information Systems Engineering, BGU). Research topic: *Malicious Code Acquisition Using Active Learning,* graduated 2010.

19. Gilad Katz (M.Sc., Information Systems Engineering, BGU). Research topic: *Preventing Leaks of Organizational Information using Information-Profiling Technique,* graduated 2010, joint supervisor: Dr. Bracha Shapira.

20. Yael Weise (M.Sc., Information Systems Engineering, BGU). Research topic: *The CASH and ProCASH Algorithms-Cost-Sensitive Attribute Selection Algorithm,* graduated 2010, joint supervisor: Prof. Lior Rokach.

21. Tomer Shimshoni (M.Sc., Information Systems Engineering, BGU). Research topic: *Continuous Verification Using Keystrokes Dynamics,* graduated 2010, joint supervisor: Prof. Lior Rokach.

22. Adi Abramson (M.Sc., Information Systems Engineering, BGU). Research topic: *User Verification Based,* graduated 2010, joint supervisor: Prof. Lior Rokach.

23. Ma'ayan Gafny (M.Sc. Information Systems Engineering, BGU) Research topic: *Supervised Many-to-Many Record Linkage Proposal*, graduated 2011, joint supervisor: Prof. Lior Rokach.

24. Maya Ilani (M.Sc. Information Systems Engineering, BGU) Research topic: *Data Honey Pot for Leakage Detection,* graduated 2011, joint supervisor: Prof. Lior Rokach.

25. Amir Harel (M.Sc. Information Systems Engineering, BGU) Research topic: *Misusability for Preventing Data Leakage,* graduated 2011, joint supervisor: Prof. Lior Rokach.

26. Olga Peled (M.Sc. Information Systems Engineering, BGU) Research topic: *Data Privacy Preserving in Social Networks,* graduated 2013, joint supervisor: Prof. Lior Rokach, graduated.

27. Einat Suissa (M.Sc. Information Systems Engineering, BGU) Research topic: *Protecting mobile network operator infrastructure from attacks launched via mobile apps*. Graduated 2013.

28. Alla Segal *(*M.Sc. Information Systems Engineering, BGU) Research topic: *Robustness of Networks via Trees*.

29. Assaf Kachlon (M.Sc., Information Systems Engineering, BGU). Research topic: Malicious Data Exfiltration over Air Gap. Graduated 2015.

30. Aviad Elishar (M.Sc., Information Systems Engineering, BGU). Research topic: *The Security of Organizations and Individuals in Online Social Networks*. Graduated 2016.

31. Michael Bodhana (M.Sc., Information Systems Engineering, BGU). Research topic: *Detecting Compromised IoT using Network Traffic Analysis*. Graduated 2018.

32. Asaf Hecht (M.Sc., Information Systems Engineering, BGU). Research topic: Detecting attacks on printers. Graduated 2018.

33. Yuval Lapidot (M.Sc., Information Systems Engineering, BGU). Research topic: Graduated 2018.

34. Or Ami (M.Sc., Information Systems Engineering, BGU). Research topic: Ransomware prevention. Joint supervisor: Prof, Danny Hendler. Graduated 2018.

35. Tomer Golomb (M.Sc., Information System Engineering BGU) Research topic: IoT Attestation. Joint supervisor: Dr. Yisroel Mirsky. Graduated 2018.

36. Yael Mahtov (M.Sc., Information System Engineering BGU) Research topic: *Enterprise Security Assessment in the IoT Era*. Joint supervisor: prof. Yuval Elovici. Graduated 2018.

37. Ori Or Meir (M.Sc., Information System Engineering BGU) Research topic: Using Attention Mechanism to Enhance Malware Detection and Classification Based on Sequential System Call Analysis. Joint supervisor: prof. Yuval Elovici. Graduated 2019.

38. Ofri Masad (M.Sc., Information System Engineering BGU) Research topic: *Decision manipulation using adversarial learning*. Joint supervisor: prof. Yuval Elovici. Graduated 2019.

39. Matan Edri (M.Sc., Information Systems Engineering, BGU). Research topic: *Zero-Day Exploits Detection using Reputation-based Call Stack Analysis*. Joint supervisor: prof. Yuval Elovici. Graduated 2019.

40. Lidor Azulay (M.Sc., Information System Engineering BGU) Research topic: *Adversarial Machine Learning - Attacking Human Neural Networks*. Joint supervisor: prof. Yuval Elovici. Graduated 2019.

41. Sagi Nakash (M.Sc., Information System Engineering BGU) Research topic: *Adversarial machine learning.* Joint supervisor: prof. Yuval Elovici. Graduated 2019.

42. Nimrod Harris (M.Sc., Information System Engineering BGU) Research topic: *Motion Detection Side - Channel Attacks on Encrypted IP Camera Streams.* Joint supervisor: Dr. Niv Gilboa. Graduated 2019.

(d) Research Students – Post Doctorate

1. Polina Zilberman (Post Doc, BGU).
2. Zadov Boris (Post Doc, BGU).
3. Belikovetsky Sofia (Post Doc, BGU).
4. Mirsky Israel (Post Doc, BGU).

(e) Research Students - Current Ph.D Students

1. Adi Sagi (Ph.D, Information Systems Engineering, BGU). Research topic: *The Problem of Attrition.*
   Status: Thesis proposal approved

2. Ben Nassi (Ph.D, Information Systems Engineering, BGU). Research topic: *Security in the era of IoT.*
   Status: Thesis proposal approved

3. Ziv Katzir (Ph.D, Information Systems Engineering, BGU) Research topic: *Adversarial Learning.*
   Status: Thesis proposal approved

4. Mathov Yael (Ph.D, Information Systems Engineering, BGU) Research Topic: *Real World Applications for Adversarial Learning.*
   Status: Thesis Proposal approved

5. Eitam Shitrit (Ph.D, Information Systems Engineering, BGU) Research Topic: *A Multivariate Time-Oriented Data Analysis Framework for Classification and Prediction.*
   Status: Thesis Proposal approved

6. Tom Mahler (Ph.D, Information Systems Engineering, BGU) Research Topic*: A Generalized Detection and Prevention of Anomalous Commands Sent to Medical Devices Controlled by an Untrusted Controller.*

Status: Thesis Proposal approved

7. Ishai Rozenberg (Ph.D, Information Systems Engineering, BGU) Research Topic: *Advertisal Learning in Recurrent Neural Networks*.
Status: Thesis Proposal approved

8. Tomer Golumb (Ph.D, Information Systems Engineering, BGU) Research Topic: *Federated Learning*.
Status: Thesis Proposal approved

9. Efrat Levy (Ph.D, Information Systems Engineering, BGU) Research Topic: *Detecting and preventing attacks on serial buses of transportation systems*.
Status: Thesis Proposal approved

(f) Research Students - Current M.Sc. Students

1. Matan Sar-Israel (M.Sc., Information System Engineering BGU) Research topic: *Anomly Detection in Ros*. Joint supervisor: prof. Ronen Brafman

2. Tal Ben Senior (M.Sc., Information System Engineering BGU) Research topic: *Adversarial Deep Learning - Perturb Chatbot Via Audio in a Physical Settings*. Joint supervisor: prof. Yuval Elovici

3. Elior Nehemya (M.Sc., Information System Engineering BGU) Research topic: *Adversarial attacks on AI based algorithmic trading systems*. Joint supervisor: prof. Yuval Elovici

4. Eden Levy (M.Sc., Information System Engineering BGU) Research topic: *Advertisal Learning*. Joint supervisor: prof. Yuval Elovici

5. Noy Hadar (M.Sc., Information System Engineering BGU) Research topic: Joint supervisor: prof. Yuval Elovici

6. Daniel Nachmias (M.Sc., Information System Engineering BGU) Research topic: *TrustSign: Trusted Malware Signature Generation in Private Clouds Using Deep Feature Transfer Learning*. Joint supervisor: prof. Yuval Elovici

7. Zvika Shapira (M.Sc., Information System Engineering BGU) Research topic: *Real world adversarial attacks on NIDS systems*. Joint supervisor: prof. Yuval Elovici.

8. Barak Davidovich (M.Sc., Information System Engineering BGU) Research topic: *Identifying GPS Spoofing Attacks by Video Stream*. Joint supervisor: prof. Yuval Elovici.

9. Guy Amit (M.Sc., Information System Engineering BGU) Research topic: Joint supervisor: prof. Yuval Elovici.

10. Ido Sakazi (M.Sc., Information System Engineering BGU) Research topic: *Domain abuse detection using machine learning approach*. Joint supervisor: prof. Yuval Elovici.

11. Shay Sakazi (M.Sc., Information System Engineering BGU) Research topic: *Misuse Privileges Detection*. Joint supervisor: prof. Yuval Elovici.

12. Nitzan Guetta (M.Sc., Information System Engineering BGU) Research topic: *Thesis in the Adversarial domain, makeup attack*. Joint supervisor: prof. Yuval Elovici.

13. Amit Hacmon Giloni (M.Sc., Information System Engineering BGU) Research topic: *Bias estimation in machine learning models*. Joint supervisor: prof. Yuval Elovici.

14. Ivgeniy Vaisburg (M.Sc., Information System Engineering BGU) Research topic: *Mitigating data hijacking in a (public) cloud environment using timestamp fingerprinting.*

15. Jaidip Kotak (M.Sc., Information System Engineering BGU) Research topic: *Applying Machine Learning and Deep Learning for detecting Cyber Attacks*. Joint supervisor: prof. Yuval Elovici

Awards, Citations, Honors, Fellowships

1989   Ben-Gurion University   Dean's Award for Best Final Project

2005   Ben-Gurion University   Dean's Award for Best Lecturer

2006   Emerald Literati Network Highly Commended Award (**Yuval Elovici**, Chanan Glezer, Bracha Shapira, for "Enhancing consumer privacy while searching for products and services on the World Wide Web", Internet Research, Volume 5, Issue 4, 2005).

2006-2008
    Incumbent of the Career Development Chair in Engineering Sciences, established
    by Dr. Gabi and Eng. Max Lichtenberg from Israel and Florida.
    Institute: Ben-Gurion University of the Negev.

2007   Best Paper Award (Meytal Tubi, Rami Puzis, **Yuval Elovici,** "Deployment of
    DNIDS in Social Networks", IEEE International Conference on Intelligence and
    Security Informatics (IEEE ISI-2007), Rutgers University, New Jersey, USA,
    May 23-24, 2007).

2008   Best Paper Honorable Mention (Moskovitch, R., Stopel, D., Feher, C., Nissim, N.,
    Elovici, Y., "Unknown Malcode Detection via Text Categorization and the
    Imbalance Problem", IEEE International Conference on Intelligence and Security
    Informatics (IEEE ISI-2008), Taipei, Taiwan, June 17-20, 2008).

2009   Outstanding Leadership Award presented to **Yuval Elovici**, Deutsche Telekom
    Laboratories at Ben-Gurion University, Israel as Workshop Chair of the 2009
    Workshop on leveraging Social Patterns for Privacy, Security and Network
    Architecture (SP4SPNA-09), August 30, 2009, in Vancouver, Canada.

2011   Ben-Gurion University   Award for Best Lecturer

2015   Best Student Paper Award (Nissim, N., Rokach, R., Moskovich, R., **Elovici, Y.**,
    Barad, O., "ALDROID: Efficient Update of Android Anti-Virus Software Using
    Designated Active Learning Methods", The 15th Conference on Artificial
    Intelligence in Medicine (AIME 2015), Pavia, Italy, June 17-20, 2015).

2017   Best poster paper award-Finalist internet of thing track (Meidan Y., Bohadana M.,
    Shabtai A., Guarnizo JD, Ochoa M., Tippenhauer N., **Elovici Y**.,) " ProfilIoT: A
    machine learning approach for IoTdevice identification based on network traffic
    analysis. (ACM symposium on applied computing (SAC 2017) Marrakesh
    Morocco April 4-6, 2017).

2017   Best paper award (Guarnizo J., Tambe A., Bhunia S., Ochoa M., Tippenhauer N.,
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(b) Edited Books

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92. Kedma, G., Guri, M., Sela, T., Elovici, Y., "Analyzing Users' Web Surfing Patterns to Trace Terrorists and Criminals", IEEE International Conference on Intelligence and Security Informatics (ISI 2013), Seattle Washington, USA, June 4-7, 2013, 143-145.

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102. Menahem, E., Nakibly, G., Amar, N., **Elovici, Y.**, "An Active Strategy For Detecting and Localizing Network Attacks", ACM Workshop on Artificial Intelligence and Security (AISEC 2013), Berlin, Germany, November 4, 2013.

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106. Guri, M., Kedma, G., Carmeli, B., **Elovici, Y.**, "Limiting access to unintentionally leaked sensitive documents using malware signatures". The ACM Symposium on Access Control Models and Technologies (SACMAT 2014), London, Ontario, Canada, June 25-27, 2014.

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109. Guri M., Krasner A., **Elovici Y.**, "Peers-Based Location of Mobile Devices", Frontier and Innovation in Future Computing and Communications,

Proceedings of the 2014 FTRA International Symposium on Frontier and Innovation in Future Computing and Communications (FCC 2014), Auckland, New Zealand, January 13-16, 2014, 439-445.

110. Nissim, N., "ALPD: Active Learning Framework for Enhancing the Detection of Malicious PDF Files", IEEE Joint Intelligence & Security Informatics Conference (JISIC2014), Hague, Netherlands, September 24-26, 2014, 91-98. (Acceptance rate 25%)

111. Guri, M., Kedma, G., Zadov, B., **Elovici, Y.**, "Trusted Detection of Sensitive Activities on Mobile Phones Using Power Consumption Measurements", IEEE Joint Intelligence & Security Informatics Conference (JISIC2014), Hague, Netherlands, September 24-26, 2014, 145-151. (Acceptance rate 25%)

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113. Sepetnitsky, V., Guri, M., **Elovici, Y.**, "Exfiltration of Information from Air-Gapped Machines Using Monitor's LED Indicator", IEEE Joint Intelligence & Security Informatics Conference (JISIC2014), Hague, Netherlands, September 24-26, 2014, 264-267. (Acceptance rate 25%)

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Frequencies", 24th USENIX Security Symposium (USENIX Security'15), Washington, D.C., August 12-14, 2015, 849-864. (Acceptance rate 16%).

119. Guri, M., Monitz, M., Mirsky, Y., **Elovici, Y.**, "BitWhisper: Covert Signaling Channel between Air-Gapped", 28th IEEE Computer Security Foundations Symposium, Verona, Italy, July 13-17, 2015. (Acceptance rate 34%).

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124. Guri M., Monitz M., **Elovici Y.,** "AuthentIx: Detecting Anonymized Attacks via Automated Authenticity Profiling", Future Network Systems and Security - Second International Conference (FNSS 2016), Paris, France, November 23-25, 2016, 1-11. (Acceptance rate 35%)

125. Guri M., Shemer E., Shirtz D., **Elovici Y.,** "Personal Information Leakage During Password Recovery of Internet Services", 2016 European Intelligence and Security Informatics Conference (EISIC 2016), Uppsala, Sweden, August 17-19, 2016, 136-139.

126. Sachidananda V., Toh J., Siboni S., Shabtai A., **Elovici Y.**, "POSTER: Towards Exposing Internet of Things: A Roadmap", 2016 ACM SIGNAC Conference on Computer and Communications Security, Vienna, Austria, October 24-28, 2016, 1820-1822. (Acceptance rate 16.5%)

127. Mirsky Y., Shabtai A., Rokach L., Shapira B., **Elovici Y.**, "SherLock vs Moriarty: A Smartphone Dataset for Cybersecurity Research", Proceedings of the 2016 ACM Workshop on Artificial Intelligence and Security, AISec@CCS 2016, Vienna, Austria, October 28, 2016, 1-12. (Acceptance rate 32%)

128. Guri M., Solewicz Y.A., Daidakulov A.**, Elovici Y.,** "SPEAKE(a)R: Turn Speakers to Microphones for Fun and Profit", 11th USENIX Workshop on Offensive Technologies (WOOT 2017), Vancouver, BC, Canada, August 14-15, 2017.

129. Belikovetsky S., Yampolskiy M., Toh J., Gatlin J., **Elovici Y.,** "dr0wned - Cyber-Physical Attack with Additive Manufacturing", 11th USENIX Workshop on Offensive Technologies (WOOT 2017), Vancouver, BC, Canada, August 14-15, 2017.

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131. Mirsky Y., Halpern T., Upadhyay R., Toledo S., **Elovici Y.,** "Enhanced situation space mining for data streams", Proceedings of the Symposium on Applied Computing (SAC 2017), Marrakech, Morocco, April 3-7, 2017, 842-849. (Acceptance rate 23.4%)

132. Toh J., Hatib M., Porzecanski O., **Elovici Y**., "Cyber security patrol: detecting fake and vulnerable wifi-enabled printers", Proceedings of the Symposium on Applied Computing (SAC 2017), Marrakech, Morocco, April 3-7, 2017, 535-542. (Acceptance rate 23.4%)

133. Meidan Y., Bohadana M., Shabtai A., Guarnizo J.D., Ochoa M., Tippenhauer N.O**., Elovici Y.,** "ProfilIoT: a machine learning approach for IoT device identification based on network traffic analysis". ", Proceedings of the Symposium on Applied Computing (SAC 2017), Marrakech, Morocco, April 3-7, 2017, 506-509.

134. Iacovazzi A., Frassinelli D., **Elovici Y.**, "On packet loss modeling: An empirical assessment", 8th International Conference on the Network of the Future (NOF 2017), London, United Kingdom, November 22-24, 2017, 33-39. (Acceptance rate 22.4%)

135. Yampolskiy M., King W.E., Pope G., Belikovetsky S., **Elovici Y**., "Evaluation of Additive and Subtractive Manufacturing from the Security Perspective", international conference on Critical Infrastructure Protection XI - 11th (ICCIP 2017), Arlington, VA, USA, March 13-15, 23-44.

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Knowledge Discovery (ICNC-FSKD 2017), Guilin, China, July 29-31, 2017, 2080-2083.

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138. Biton R., Feher C., **Elovici Y.**, Shabtai A., Shugol G., Tikochinski R., Kur S., "A Proxy-Based Solution for Securiting Remote Desktop Connections in Mission-Critical Systems", IEEE 18th International Symposium on High Assurance Systems Engineering (HASE 2017), Singapore, January 12-14, 2017, 153-156.

139. Guri M., Mirsky Y., **Elovici Y.**, "9-1-1 DDoS: Attacks, Analysis and Mitigation", IEEE European Symposium on Security and Privacy (EuroS&P 2017), Paris, France, April 26-28, 2017, 218-232, (Acceptance rate 13%).

140. Guri M., Solewicz Y.A., Daidakulov A., **Elovici Y.**, "Acoustic Data Exfiltration from Speakerless Air-Gapped Computers via Covert Hard-Drive Noise ('DiskFiltration')", ESORICS 2017 - 22nd European Symposium on Research in Computer Security, Oslo, Norway, September 11-15, 2017, Proceedings, Part II, 98-115. (Acceptance rate 16%).

141. Guri M., Zadov B., **Elovici Y.**, "LED-it-GO: Leaking (A Lot of) Data from Air-Gapped Computers via the (Small) Hard Drive LED", Detection of Intrusions and Malware, and Vulnerability Assessment - 14th International Conference, (DIMVA 2017), Bonn, Germany, July 6-7, 2017, Proceedings, 161-184. (Acceptance rate: 27%)

142. Grube T., Volk F., Muhlhauser M., Bhairav S., Sachidananda V., **Elovici Y.**, "Complexity Reduction in Graphs: A user Centric Approach to Graph Exploration", 10th Inetrnational Conference on Advances in Human-oriented ans Personalized Mechanisms, Technologies, and Services, Athens, Greece, October 8-12, 2017, 24-31.

143. Hadar N., Siboni S., **Elovici Y.**, "A Lightweight Vulnerability Mitigation Framework for IoT Devices", Proceedings of the 2017 Workshop on Internet of Things Security and Privacy (IoT S&P@CCS), Dallas, TX, USA, November 03, 2017, 71-75. (Acceptance rate 40%)

144. Guarnizo J.D., Tambe A., Bhunia S.S., Ochoa M., Tippenhauer N.O., Shabtai A., **Elovici Y.**, "SIPHON: Towards Scalable High-Interaction Physical

Honeypots", Proceedings of the 3rd ACM Workshop on Cyber-Physical System Security (CPSS@AsiaCCS 2017), Abu Dhabi, United Arab Emirates, April 2, 2017, 57-68. (Acceptance rate 29%)

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147. Slaughter A., Yampolskiy M., Matthews M., King W.E., Guss G., **Elovici Y.**: **"**How to Ensure Bad Quality in Metal Additive Manufacturing: In-Situ Infrared Thermography from the Security Perspective", Proceedings of the 12th International Conference on Availability, Reliability and Security (ARES 2017), Reggio Calabria, Italy, August 29 - September 01, 2017, 78:1-78:10. (Acceptance rate 24%)

148. Dey V., Pudi V., Chattopadhyay A., **Elovici Y.**, "Security Vulnerabilities of Unmanned Aerial Vehicles and Countermeasures: An Experimental Study", 31st International Conference on VLSI Design and 17th International Conference on Embedded Systems (VLSID 2018), Pune, India, January 6-10, 2018, 398-403.

149. Chong P., Tan Y.X.M., Guarnizo J., **Elovici Y.**, Binder A., "Mouse Authentication Without the Temporal Aspect - What Does a 2D-CNN Learn?", IEEE Security and Privacy Workshops (SP Workshops 2018), San Francisco, CA, USA, May 24, 2018, 15-21. (Acceptance rate 11.5%)

150. Setikere S., Sachidananda V., **Elovici Y.**, "Out of Kilter: Holistic Exploitation of Denial of Service in Internet of Things", 14th International Conference on Security and Privacy in Communication Networks (SecureComm 2018), Singapore, August 8-10, 2018, Proceedings, Part I, 43-52.

151. Agarwal M., Puzis R., Haj-Yahya J., Zilberman P., **Elovici Y.**, "Anti-forensic = Suspicious: Detection of Stealthy Malware that Hides Its Network Traffic", ICT Systems Security and Privacy Protection - 33rd IFIP TC 11 International Conference (SEC 2018), Held at the 24th IFIP World Computer Congress, WCC 2018, Poznan, Poland, September 18-20, 2018, Proceedings, 216-230. (Acceptance rate 30%)

152. Ami O., **Elovici Y.**, Hendler D., "Ransomware prevention using application authentication-based file access control", Proceedings of the 33rd Annual ACM Symposium on Applied Computing (SAC 2018), Pau, France, April 09-13, 2018, 1610-1619. (Acceptance rate 25%)

153. Siboni S., Shabtai A., **Elovici Y.**, "Leaking data from enterprise networks using a compromised smartwatch device", Proceedings of the 33rd Annual ACM Symposium on Applied Computing (SAC 2018), Pau, France, April 09-13, 2018, 741-750. (Acceptance rate 25%)

154. Rosenberg S., Shabtai A., Rokach L., **Elovici Y.**, "Generic Black-Box End-to-End Attack Against State of the Art API Call Based Malware Classifiers", 21st International Symposium on Research in Attacks, Intrusions, and Defenses (RAID 2018), Heraklion, Crete, Greece, September 10-12, 2018, Proceedings, 490-510. (Acceptance rate 22.8%)

155. Guri M., Zadov B., Daidakulov A., **Elovici Y.**, "xLED: Covert Data Exfiltration from Air-Gapped Networks via Switch and Router LEDs", 16th Annual Conference on Privacy, Security and Trust, (PST 2018), Belfast, Northern Ireland, Uk, August 28-30, 2018, 1-12.

156. Mirsky Y., Doitshman T., **Elovici Y.**, Shabtai A., "Kitsune: An Ensemble of Autoencoders for Online Network Intrusion Detection", 25th Annual Network and Distributed System Security Symposium (NDSS 2018), San Diego, California, USA, February 18-21, 2018. (Acceptance rate 21.5%)

157. Hosseini S., Yin H., Zhang M., **Elovici Y.**, Zhou .X, "Mining Subgraphs from Propagation Networks through Temporal Dynamic Analysis", 19th IEEE International Conference on Mobile Data Management (MDM 2018), Aalborg, Denmark, June 25-28, 2018, 66-75. (Acceptance rate 27%)

158. Hecht A., Sagi A., **Elovici Y.**, "PIDS: A Behavioral Framework for Analysis and Detection of Network Printer Attacks", 13th International Conference on Malicious and Unwanted Software (MALWARE 2018), Nantucket, MA, USA, October 22-24, 2018, 87-94.

159. Iacovazzi A., Sarda S., **Elovici Y.,** "Inflow: Inverse Network Flow Watermarking for Detecting Hidden Servers", IEEE Conference on Computer Communications (INFOCOM 2018), Honolulu, HI, USA, April 16-19, 2018, 747-755. (Acceptance rate 19.2%)

160. Graves L., Yampolskiy M., King W.E., Belikovetsky S., **Elovici Y.**, "Liability Exposure when 3D-Printed Parts Fall from the Sky", Critical Infrastructure Protection XII - 12th IFIP WG 11.10 International Conference (ICCIP 2018), Arlington, VA, USA, March 12-14, 2018, 39-64.

161. Lim S.K., Loo Y., Tran N.T., Cheung N.M., Roig G., **Elovici Y.**, "DOPING: Generative Data Augmentation for Unsupervised Anomaly Detection with GAN", IEEE International Conference on Data Mining (ICDM 2018), Singapore, November 17-20, 2018, 1122-1127. (Acceptance rate 19.83%)

162. Bitton R., Gluck T., Stan O., Inokuchi M., Ohta Y., Yamada Y., Yagyu T., **Elovici Y.**, Shabtai A., "Deriving a Cost-Effective Digital Twin of an ICS to Facilitate Security Evaluation", Computer Security - 23rd European Symposium on Research in Computer Security (ESORICS 2018), Barcelona, Spain, September 3-7, 2018, Proceedings, Part I, 533-554 (acceptance rate 19.8%).

163. Guri M., Solewicz Y.A., **Elovici Y.**, "MOSQUITO: Covert Ultrasonic Transmissions Between Two Air-Gapped Computers Using Speaker-to-Speaker Communication", IEEE Conference on Dependable and Secure Computing (DSC 2018), Kaohsiung, Taiwan, December 10-13, 2018, 1-8.

164. Hosseini S., Yin H., Cheung N.M., Leng K.P., **Elovici Y.**, Zhou X., "Exploiting Reshaping Subgraphs from Bilateral Propagation Graphs", 23rd International Conference on Database Systems for Advanced Applications (DASFAA 2018), Gold Coast, QLD, Australia, May 21-24, 2018, Proceedings, Part I, 342-351. (Acceptance rate 23%)

165. Karamchandani N., Sachidananda V., Setikere S., Zhou J., **Elovici Y.**, "SMuF: State Machine Based Mutational Fuzzing Framework for Internet of Things", 13th International Conference on Critical Information Infrastructures Security (CRITIS 2018), Kaunas, Lithuania, September 24-26, 2018, 101-112. (Acceptance rate 31%)

166. **Elovici Y.,** "Session details: AI for Forensics", Proceedings of the 11th ACM Workshop on Artificial Intelligence and Security (AISec@CCS 2018), Toronto, ON, Canada, October 19, 2018. (Acceptance rate 28%)

167. Afroz S., Biggio B., **Elovici Y.**, Freeman D., Shabtai A., "11th International Workshop on Artificial Intelligence and Security", Proceedings of the 2018 ACM SIGSAC Conference on Computer and Communications Security (CCS 2018), Toronto, ON, Canada, October 15-19, 2018, 2166-2167. (Acceptance rate 16.6%)

168. Tambe A., Aung Y.L., Sridharan R., Ochoa M., Tippenhauer N.O., Shabtai A., **Elovici Y.**, "Detection of Threats to IoT Devices using Scalable VPN-forwarded Honeypots", Proceedings of the Ninth ACM Conference on Data and Application Security and Privacy, (CODASPY), Richardson, TX, USA, March 25-27, 2019, 85-96.

169. Inokuchi M., Ohta Y., Yamada Y., Yagyu T., Bitton R., Stan O., **Elovici Y.**, Shabtai A., "Design Procedure of Knowledge base for Practical Attack Graph Generation", ACM Asia Conference on Computer and Communications Security (ASIACCS 2019), Auckland, New Zealand, July 7-12, 2019, 594-601. (Acceptance rate 17%)

170. Breitenbcher D., Homoliak I., Aung Y.L., Tippenhauer N.O., "HADES-IoT: A Practical Host-Based Anomaly Detection System for IoT Devices", ACM Asia Conference on Computer and Communications Security (ASIACCS 2019), Auckland, New Zealand, July 7-12, 2019, 479-484. (Acceptance rate 17%)

171. Mirsky Y., Mahler T., Shelef I., **Elovici Y.**, "CT-GAN: Malicious tampering of 3D medical imagery using deep learning", 28th {USENIX} Security Symposium, Santa Clara, CA, USA, August 14-16, 2019, 461-468.

172. Iacovazzi A., Frassinelli D., **Elovici Y.**, " The {DUSTER} Attack: Tor Onion Service Attribution Based on Flow Watermarking with Track Hiding", 22nd International Symposium on Research in Attacks, Intrusions and Defenses (RAID 2019), Beijing, China, September 23-25, 2019, 213-225.

173. Nassi B., Ben-Netanel R., Shamir A., **Elovici Y.**, "Drones' Cryptanalysis-Smashing Cryptography with a Flicker", IEEE Symposium on Security and Privacy (SP), San Francisco, CA, May 20-22, 2019, 1397-1414.

174. Katzir Z., **Elovici Y.**, "Detecting adversarial perturbations through spatial behavior in activation spaces", International Joint Conference on Neural Networks (IJCNN), Budapest, Hungary, July 14-19, 2019, 1-9.

175. Tan YXM., Iacovazzi A., Homoliak I**., Elovici Y.**, A. Binder, "Adversarial Attacks on Remote User Authentication Using Behavioural Mouse Dynamics", International Joint Conference on Neural Networks (IJCNN), Budapest, Hungary, July 14-19, 2019, 1-10.

176. Siboni S., Glezer C., Shabtai A., **Elovici Y.**, "A Weighted Risk Score Model for IoT Devices", International Conference on Security, Privacy and Anonymity in Computation, Communication and Storage, Atlanta, USA, July 14-17, 2019, 20-34.

177. Nahmias D., Cohen A., Nissim N., **Elovici Y.**, "TrustSign: Trusted Malware Signature Generation in Private Clouds Using Deep Feature Transfer Learning", International Joint Conference on Neural Networks (IJCNN), Budapest, Hungary, July 14-19, 2019, 1-8.

178. Guri M., Zadov B., Bykhovsky D., **Elovici Y.**, "CTRL-ALT-LED: Leaking Data from Air-Gapped Computers via Keyboard LEDs", IEEE 43rd Annual Computer Software and Applications Conference (COMPSAC), Milwaukee, Wisconson, USA, July 15-19, 2019, 801-810.

179. Sachidananda V., Bhairav S., Ghosh N., **Elovici Y.**, "PIT: A Probe Into Internet of Things by Comprehensive Security Analysis", 18th IEEE International Conference On Trust, Security And Privacy In Computing And Communications/13th IEEE International Conference On Big Data Science And Engineering (TrustCom/BigDataSE), Rotorua, New Zealand, August 5-8, 2019, 522-529.

180. Cohen S., Gluck T., **Elovici Y.**, Shabtai A., "Security Analysis of Radar Systems", 5th ACM Workshop on Cyber-Physical Systems Security & Privacy (CPS-SPC), London, UK, November 11, 2019, 3-14.

181. Iacovazzi A., Frassinelli D., **Elovici Y.**, "The DUSTER Attack: Tor Onion Service Attribution Based on Flow Watermarking with Track Hiding", 22nd International Symposium on Research in Attacks, Intrusions and Defenses, (RAID), Chaoyang District, Beijing, China, September 23-25, 2019, 213-225.

182. Tan M., Iacovazzi A., Cheung NMM., **Elovici Y**, "A Neural Attention Model for Real-Time Network Intrusion Detection", IEEE 44th Conference on Local Computer Networks (LCN), Osnabrück, Germany, October 14-17, 2019, 291-299.

183. Afroz S., Biggio B., Carlini N., **Elovici Y.**, Shabtai A., "AISec'19: 12th ACM Workshop on Artificial Intelligence and Security", The 26th ACM Conference on Computer and Communications Security, CCS, London, UK, November 11-15, 2019, 2707-2708.

184. Guri M., Bykhovsky D., **Elovici Y.**, "BRIGHTNESS: Leaking Sensitive Data from Air-Gapped Workstations via Screen Brightness", 12th CMI Conference on Cybersecurity and Privacy (CMI), Copenhagen, Denmark, November 28-29, 2019, 1-6.

185. Sachidananda V., Bhairav S., **Elovici Y.**, "OVER: overhauling vulnerability detection fot iot through an adaptable and automated static analysis framework", SAC '20: The 35th ACM/SIGAPP Symposium on Applied Computing, online event, Brno, Czech Republic, March 30 - April 3, 2020, 729-738.

(e) Book Chapters

1. Last, M., Shapira, B., **Elovici, Y.**, Zaafrany, O. Kandel, "Intelligent Technology for Content Monitoring on the Web". In Zhang, Y., Kandel, A.,

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115. Homoliak I., Toffalini F., Guarnizo J., **Elovici Y.**, Ochoa M., "Insight into insiders and it: A survey of insider threat taxonomies, analysis, modeling, and countermeasures", ACM Computing Surveys (CSUR) 52(2), 2019, 1-40.

116. Toubiana D., Puzis R., Wen L., Sikron N., Kurmanbayeva A., Soltabayeva A., Del Mar Rubio Wilhelmi M., Sade N., Fait A., Sagi M., Blumwald E., **Elovici Y.**, " Combined network analysis and machine learning allows the prediction of metabolic pathways from tomato metabolomics data", Communications biology 2(1), 2019, 1-13.

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118. P. Chong, **Y. Elovici**, A. Binder, "User Authentication Based on Mouse Dynamics Using Deep Neural Networks: A Comprehensive Study", IEEE Transactions on Information Forensics and Security 15, 2019, 1086-1101.

119. N. Farhi, N. Nissim, **Y. Elovici**, "Malboard: A novel user keystroke impersonation attack and trusted detection framework based on side-channel analysis", Computers & Security (85), 2019, 240-269.

120. B. Sidik, R. Puzis, P. Zilberman, **Y. Elovici**, "PALE: Time Bounded Practical Agile Leader Election", IEEE Transactions on Parallel and Distributed Systems 31 (2), 2019, 470-485.

121. M. Guri, B. Zadov, **Y. Elovici,** "Odini: Escaping sensitive data from faraday-caged, air-gapped computers via magnetic fields", IEEE Transactions on Information Forensics and Security (15) 2019, 1190-1203.

122. O. Or-Meir, N. Nissim, **Y. Elovici**, L. Rokach, "Dynamic malware analysis in the modern era—A state of the art survey", ACM Computing Surveys (CSUR) 52 (5), 2019, 1-48.

123. N. Ghosh, S. Chandra, V. Sachidananda, **Y. Elovici**, "SoftAuthZ: A Context-Aware, Behavior-Based Authorization Framework for Home IoT", IEEE Internet of Things Journal 6 (6), 2019, 10773-10785.

124. I. Sadek, P. Chong, SU. Rehman**, Y. Elovici**, A. Binder, "Memory snapshot dataset of a compromised host with malware using obfuscation evasion techniques", Data in brief 26, 2019, 104437.

125. M. Guri, R. Puzis, KKR. Choo, S. Rubinshtein, G. Kedma, **Y. Elovici**, "Using malware for the greater good: Mitigating data leakage", Journal of Network and Computer Applications 145, 2019, 102405.

126. M. Guri, B. Zadov, D. Bykhovsky, **Y. Elovici**, "PowerHammer: Exfiltrating data from air-gapped computers through power lines", IEEE Transactions on Information Forensics and Security, 2019, 1879 – 1890.

127. O. Stan, A. Cohen, **Y. Elovici**, A. Shabtai, "Intrusion Detection System for the MIL-STD-1553 Communication Bus", IEEE Transactions on Aerospace and Electronic Systems, 2019, 1-1.

128. N. Nissim, M. Kintzlinger, A. Cohen, M. Ravacha, V. Khalameizer, **Y. Elovici**, Y. Shahar, A. Katz, "CardiWall: A Trusted Firewall for the Detection of Malicious Clinical Programming of Cardiac Implantable Electronic Devices", IEEE Access(8), 2020, 48123 – 48140.

129. D. Nahmias, A. Cohen, N. Nissim, **Y. Elovici**, "Deep feature transfer learning for trusted and automated malware signature generation in private cloud environments", Neural Networks (124), 2020, 243-257.

Lectures and Presentations at Meetings and Invited Seminars

(a) **Seminar Presentations at Universities and Institutions**

1. **Elovici, Y.** "Social Networks Security", IEEE International Conference on Software Science, Technology & Engineering, June 12-13, 2012, Daniel Hotel, Herzlia, Israel.

2. **Elovici, Y.** "Social Networks Security", Yuval Ne'eman Workshop's Annual International Conference about: Cyber Security", June 6th, 2012, Tel-Aviv University, Israel.

3. **Elovici, Y.** "Addressing Information Security Challenges using Machine Learning Techniques", Tactics Symposium 2011-2012, Analytics: Sciences, Technology and Applications, December 21st, 2011, India Habitat Centre, Delhi.

4. **Elovici, Y.** "Addressing Information Security Challenges using Machine Learning Techniques", IDF annual seminar on information security, October 1st, 2011.

5. **Elovici, Y.** "Detection and Prevention of Malicious Code Spread in Social Networks", Workshop on Leveraging Social Patterns for Security, Privacy and Network Architectures, Vancouver, Canada, August 29-31, 2009.

6. **Elovici, Y.** "Unknown Malcode Detection in SCADA via text categorization", NISA International SCADA Security Forum 2009, Tel-Aviv, June 16-17, 2009.

7. **Elovici, Y.** "Deutsche-Telekom Laboratories at Ben-Gurion University", E&Y Workshop, Tel-Aviv, March 13, 2008.

8. **Elovici, Y.** "How to Protect Critical Infrastructures from Cyber-Terrorist Attacks", NATO in the 21st Century and the Mediterranean Dialogue, Ben-Gurion University, March 5, 2008.

9. **Elovici, Y.** "Privacy, Trust and Reputation, Problematic Triangle", Workshop on Privacy Dilemmas in Social Networks, Tel Aviv University, January 7, 2008.

10. **Elovici, Y.** "Protecting Digital Assets with Encryption", TRAITS Workshop, Seattle, June 7-8, 2007.

11. **Elovici, Y.** "How to Defend Against Cyber-Attacks", Seminar Artzi on Security, Ben-Gurion University of the Negev, March 21, 2007.

12. **Elovici, Y.** "How to Protect Critical Infrastructure from Cyber-Terrorist Attacks", Cyber terror, Threat on National and Business Critical Infrastructures, Ben-Gurion University of the Negev, March 20, 2007.

13. **Elovici, Y.** "PRAW – A new Model for PrivAte Web Navigation", Workshop on Security, Israeli Defense Force, September 22, 2006.

14. **Elovici, Y.** "Privacy Threats on the WWW", Workshop on Privacy & Law, Ministry of Justice, December 29, 2005.

15. **Elovici, Y.** "Architecture of E-Mail Protocol", Workshop on Junk E-Mail, Institute for Law and Technology, Haifa University, December 16, 2004.

16. **Elovici, Y.** "Detecting Terrorist Activities on the WWW", Workshop on Homeland Security: Threats to National Infrastructure and Cyber Terrorism", Holon Academic Institute of Technology, December 13, 2004.

17. **Elovici, Y.** "Terrorist Detection System", Conference on Fighting Terror in Cyberspace, Tel-Aviv University , April 22, 2004.

18. **Elovici, Y.** "How to Protect Critical Infrastructure from Cyber-Terror", NATO Advanced Research Workshop, Security Informatics and Terrorism-Patrolling the Web, Ben-Gurion University, June 4-5, 2007.

19. Last, M., Shapira, B., Elovici, Y., Zaafrany, O., Kandel, A., "Data Mining Methodology for Monitoring of Internet Content", Second Haifa Winter Workshop on Computer Science and Statistics CsStat'03, December 28-30, 2003.

20. **Elovici, Y.** "Privacy Enhancing Technologies", Workshop on Privacy in a Digital Environment – Haifa Center of Law and Technology – Haifa University, 17-19 Dec. 2003.

21. **Elovici, Y.** – "Privacy and Anonymity on the Web", Privacy Workshop in Neve Ilan December 18, 2003 – Organized by Haifa University Law school.

Research Grants BGU

10/2001-7/2002
Role: Principle Investigator and Research Manager (Other PI: Dr. Armin Shmilovici)
Research Topic: "Building infrastructure for research on Multi-robot cooperation"
Funding Agency: Aladdin Information Systems.
Total Grant: $7.5K, my share 50%.

7/2004-12/2004
Role: Principle Investigator and Research Manager (Other PIs: Prof. Ehud Gudes, Prof. Shlomi Dolev).
FResearch Topic: "Emerging Secure ICT" – Locating computer and network security challenges that should be addressed by Deutsche Telekom and preparing research proposals aiming at coping with the identified challenges.
Funding Agency: Deutsche Telekom.
Total Grant: $175K, my share 33%.

1/2005-3/2005
Role: Principle Investigator and Research Manager (Other PIs: Prof. Ehud Gudes, Prof. Shlomi Dolev, Prof. Yuval Shahar).
Research Topic: "eDare and eTime feasibility study and IPR survey"
Funding Agency: Deutsche Telekom.
Total Grant: $134K, my share 25%.

1/2005-6/2005
Role: Principle Investigator and Research Manager (Other PI: Dr. Bracha Shapira).
Research Topic: "Detecting Critical Communication Components in a Cellular Network"
Funding Agency: Cellcom – The largest mobile phone company in Israel.
Total Grant: $11K, my share 50%.

4/2005-6/2005
Role: Principle Investigator and Research Manager (Other PIs, Prof. Ehud Gudes, Prof. Shlomi Dolev, Prof. Yuval Shahar).
Research Topic: "Detection of the Infectious State of Computers through Data Mining and Temporal Data Mining Techniques"
Funding Agency: Deutsche Telekom.
Total Requested Grant: $133K, my share 25%.

7/2005-6/2006
Role: Principle Investigator and Research Manager (Other PIs, Prof. Ehud Gudes, Prof. Shlomi Dolev).
Research Topic: ""NetCentric Security""
Funding Agency: Deutsche Telekom**.**
Total Requested Grant: $375K, my share: 35%.

10/2005-6/2006
Role: Principle Investigator and Research Manager.
Research Topic: "deNAT"
Funding Agency: State of Israel, Prime Minister's Office**.**
Total Requested Grant: $18K.

1/2006-1/2009
Role: Principle Investigator (Research manager: Dr. Lindell Yehuda, Other PIs: Dr. Tal
Zarsky, Dr. Bracha Shapira, Prof. Oded Maimon, Dr. Ronen Feldman).
Research Topic: "Privacy in Data Mining"
Funding Agency: Ministry of Science and Technology**.**
Total Requested Grant: $260K, my share 10%.

10/2006-2/2007
Role: Principle Investigator (Research manager: Prof. Ehud Gudes, Other PIs, Prof.
Shlomi Dolev, Prof. Amnon Meisels, Dr. Danny hendler).
Research Topic: "AAA"
Funding Agency: Deutsche Telekom
Total Requested Grant: $141K, my share 20%.

1/2007-12/20018
Role: Principle Investigator and Research Manager.
Research Topic: Amendment to the Framework Agreement.
Funding Agency: Deutsche Telekom
Total Requested Grant: $67K.

3/2007-3/2008
Role: Principle Investigator and Research Manager.
Research Topic: Security, Gesture Avatar and 3DPUE spin-offs.
Funding Agency: Deutsche Telekom
Total Requested Grant: $70K.

8/2007-12/2008
Role: Principle Investigator and Research Manager (Other PIs: Dr. Bracha Shapira, Prof.
Lior Rokach).
Research Topic: Research in the Area of Computer and Network Security.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $55K, my share 33%.

9/2007-2/2009
Role: Principle Investigator (Research manager: Prof. Ehud Gudes, Other PIs, Prof.
Shlomi Dolev, Prof. Amnon Meisels, Dr. Danny hendler).
Research Topic: "AAA"
Funding Agency: Deutsche Telekom
Total Requested Grant: 879K Euro, my share 10%.

4/2008-10/2008
Role: Principle Investigator and Research Manager (Other PI, Prof. Ehud Gudes).
Research Topic: "Next Generation Database Security"
Funding Agency: Deutsche Telekom
Total Requested Grant: 99K Euro, my share 50%.

7/2008-6/2010
Role: Principle Investigator and Research Manager (Other PI, Prof. Lior Rokach).
Research Topic: "Activity Based Verification"
Funding Agency: Deutsche Telekom
Total Requested Grant: 900K Euro, my share 60%.

7/2008-6/2009
Role: Principle Investigator and Research Manager (Other PI, Prof. Shlomi Dolev).
Research Topic: "Securing Android Devices"
Funding Agency: Deutsche Telekom
Total Requested Grant: 360K Euro, my share 50%.

12/2008-03/2010
Role: Principle Investigator and Research Manager
Research Topic: Research in the Area of Computer and Network Security.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $88K

11/2008-3/2008
Role: Principle Investigator and Research Manager.
Research Topic: Next Generation Digital Signage.
Funding Agency: Deutsche Telekom
Total Requested Grant: 75K Euro

12/2008-12/2009
Role: Principle Investigator and Research Manager (Other PIs, Prof. Lior Rokach, Dr. Bracha Shapira)
Research Topic: Code Obfuscation.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $50K, my share 33%.

5/2009-12/2009
Role: Principle Investigator (Research manager: Dr. Dani Hendler, Other PIs, Dr. Ariel Felner,)
Research Topic: Spam mitigation in IPV6.
Funding Agency: Deutsche Telekom
Total Requested Grant: 400K Euro, my share 20%.

07/2009-6/2011
Role: Principle Investigator (Research manager: Prof. Lior Rokach, Other PI, Prof. Shlomi Dolev)
Research Topic: Customer Data Leakage Prevention.
Funding Agency: Deutsche Telekom
Total Requested Grant: 2M Euro, my share 33%.

9/2009-9/2010
Role: Principle Investigator and Research Manager (Other PIs, Prof. Lior Rokach, Dr. Bracha Shapira)
Research Topic: Belt Contraction Phase II.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $25K, my share 33%.

10/2009-3/2011
Role: Principle Investigator (Research manager: Dr. Bracha Shapira, Other PI, Prof. Shlomi Dolev)
Research Topic: Privacy Keeper.
Funding Agency: Deutsche Telekom
Total Requested Grant: 600K Euro, my share 20%.

3/2010-3/2011
Role: Principle Investigator and Research manager (Other PIs: Prof. Amnon Meisels, Prof. Michael Segal)
Research Topic: MobileEye.
Funding Agency: Deutsche Telekom
Total Requested Grant: 546K Euro, my share 40%.

5/2010-5/2012
Role: Principle Investigator (Research manager: Dr. Danny Hendler, Other PIs: Prof. Lior Rokach, Dr. Aryeh Kontorovich, Prof. Yuval Shahar)
Research Topic: Anomaly Detection and Early Warning System.
Funding Agency: Deutsche Telekom
Total Requested Grant: 1000K Euro, my share 10%.

9/2010-9/2011
Role: Principle Investigator and Research Manager (Other PIs, Prof. Lior Rokach, Dr. Bracha Shapira)
Research Topic: Providence.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $77K, my share 33%.

9/2010-9/2011
Role: Principle Investigator and Research Manager
Research Topic: Detecting Hidden Links and Nodes in Public Social Networks.
Funding Agency: Israeli Ministry of Defense

Total Requested Grant: $77K

11/2010-10/2015
Role: Principle Investigator and Research Manager
Research Topic: Fourth Amendment to Framework Agreement – Aviram Dayan.
Funding Agency: Deutsche Telekom
Total Requested Grant: $159,151, my share 100%.

11/2010-10/2015
Role: Principle Investigator (Research Manager: Prof. Lior Rokach, Other PI, Dr. Meir Kalech)
Research Topic: Using Anomaly Detection Techniques to Diagnose and Prognosticate.
Funding Agency: General Motors
Total Requested Grant: $75K, my share 33%.

12/2010-12/2011
Role: Principle Investigator and Research Manager (Other PIs: Prof. Lior Rokach, Dr. Bracha Shapira)
Research Topic: Data Leakage Prevention.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $54K, my share 33%.

1/2011-4/2011
Role: Principle Investigator and Research Manager
Research Topic: Social Network Security.
Funding Agency: Deutsche Telekom
Total Requested Grant: 46K Euro.

1/2016-12/2016
Role: Principle Investigator and Research Manager
Research Topic: Administrative Budget – DT Lab at BGU.
Funding Agency: Deutsche Telekom
Total Requested Grant: $38,000.

5/2011-11/2012
Role: Principle Investigator (Research manager: Prof. Bracha Shapira)
Research Topic: BizDroid.
Funding Agency: Deutsche Telekom
Total Requested Grant: 900K Euro, my share 60%.

7/2011-3/2012
Role: Principle Investigator (Research manager: Prof. Lior Rokach)
Research Topic: RiMaDePa.
Funding Agency: Deutsche Telekom
Total Requested Grant: 280K Euro, my share 50%.

9/2011-6/2012

Role: Principle Investigator (Research manager: Prof. Lior Rokach, Other PIs, Prof. Bracha Shapira, Dr. Guy Shani)
Research Topic: Customer Analytics.
Funding Agency: Deutsche Telekom
Total Requested Grant: 280K Euro, my share 25%.

10/2011-10/2012

Role: Principle Investigator and Research Manager (Other PIs, Prof. Lior Rokach, Dr. Bracha Shapira)
Research Topic: Information Leakage Detection.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $27K, my share 33%.

10/2011-04/2013

Role: Principle Investigator and Research Manager (Other PIs, Prof. Lior Rokach, Dr. Bracha Shapira, Dr. Rami Puzis)
Research Topic: Evaluation Environment for Simulating Cyber Attacks.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $95K, my share 25%.

10/2011-10/2012

Role: Principle Investigator and Research Manager (Other PI, Dr. Rami Puzis)
Research Topic: Active Group and Individual Private Data Collector for Social Networks.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $68K, my share 50%.

10/2011-10/2012

Role: Principle Investigator and Research Manager (Other PI, Prof. Lior Rokach, Dr. Bracha Shapira)
Research Topic: Global Attacks by Local Intruder-2.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $108K, my share 33%.

1/2012-12/2014

Role: Principle Investigator and Research Manager (Other PI, Dr. Rami Puzis)
Research Topic: Optimal Network Monitoring for detecting APT while taking into account acquisition cost.
Funding Agency: Ministry of Trade and Commerce
Total Requested Grant: $382K, my share 50%.

1/2012-12/2014

Role: Principle Investigator and Research Manager (Other PIs, Dr. Rami Puzis, Prof. Lior Rokach)

Research Topic: Optimal Network Monitoring of Communication Networks.

Funding Agency: Ministry of Trade and Commerce

Total Requested Grant: $93,117, my share 33%.

1/2012-12/2014

Role: Principle Investigator and Research Manager (Other PI, Prof. Lior Rokach, Prof. Bracha Shapira)

Research Topic: Detecting small anomalies.

Funding Agency: Ministry of Trade and Commerce

Total Requested Grant: $265K, my share 33%.

1/2012-12/2014

Role: Principle Investigator and Research Manager (Other PI, Prof. Lior Rokach, Prof. Bracha Shapira)

Research Topic: Detecting small anomalies.

Funding Agency: Ministry of Trade and Commerce

Total Requested Grant: $85,244, my share 33%.

1/2012-12/2013

Role: Principle Investigator and Research Manager (Other PI, Dr. Rami Puzis, Prof. Lior Rokach, Dr. Ariel Felner)

Research Topic: Reconstruction of Hidden or non-existent Identities through Automatic Social Network Crawling.

Funding Agency: Ministry of Trade and Commerce

Total Requested Grant: $114,978, my share 25%.

1/2012-1/2014

Role: Principle Investigator and Research Manager (Other PI, Dr. Rami Puzis, Prof. Lior Rokach, Dr. Ariel Felner)

Research Topic: Reconstruction of Hidden or non-existent Identities through Automatic Social Network Crawling.

Funding Agency: Ministry of Trade and Commerce

Total Requested Grant: $296K, my share 25%.

1/2012-12/2014

Role: Principle Investigator and Research Manager (Other PIs: Prof. Lior Rokach, Dr. Rami Puzis)

Research Topic: Optimization of distributed network monitoring

Funding Agency: Ministry of Trade and Commerce

Total Requested Grant: $87,799, my share: 33%.

1/2012-12/2014
Role: Principle Investigator and Research Manager (Other PIs: Prof. Lior Rokach, Prof. Bracha Shapira)
Research Topic: Identification of Minute Anomalies
Funding Agency: Ministry of Trade and Commerce
Total Requested Grant: $90K, my share: 33%.

1/2012-12/2014
Role: Principle Investigator and Research Manager (Other PIs: Dr. Rami Puzis)
Research Topic: Optimization of distributed network monitoring
Funding Agency: Ministry of Trade and Commerce
Total Requested Grant: $117,521, my share: 50%.

5/2012-4/2013
Role: Principle Investigator and Research Manager
Research Topic: Limiting Accidental Data Leakage.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $90K.

5/2012-4/2013
Role: Principle Investigator and Research Manager
Research Topic: Detecting Malicious Code based on its Anti-forensic Behavior.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $90K.

5/2012-4/2013
Role: Principle Investigator and Research Manager
Research Topic: Detecting Potential Data Misuser.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $90K.

4/2012-3/2013
Role: Principle Investigator (Research Manager and PI, Prof. Lior Rokach)
Research Topic: RiMaDePa Productization.
Funding Agency: Deutsche Telekom
Total Requested Grant: 350K Euro, my share 50%.

7/2012-12/2012
Role: Principle Investigator (Research manager: Prof. Lior Rokach, Other PIs, Prof. Bracha Shapira, Guy Shani)
Research Topic: Customer Analytics.
Funding Agency: Deutsche Telekom
Total Requested Grant: 225K Euro, my share 25%.

7/2012-12/2012
Role: Principle Investigator (Research manager: Prof. Lior Rokach, Other PIs, Prof. Bracha Shapira)
Research Topic: Location and Movement Analytics.
Funding Agency: Deutsche Telekom
Total Requested Grant: 821K Euro, my share 50%.

9/2012-8/2013
Role: Principle Investigator and Research Manager (Other PIs, Prof. Lior Rokach, Prof. Bracha Shapira)
Research Topic: Anomaly Detection Laboratory.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $230K.

9/2012-3/2016
Role: Principle Investigator and Research Manager
Research Topic: Abnormal Profile.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $23,075.

12/2012-11/2013
Role: Principle Investigator and Research Manager
Research Topic: Cyber Warfare Infrastructure.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $79K.

12/2012-11/2013
Role: Principle Investigator and Research Manager (Other PIs, Prof. Lior Rokach, Prof. Bracha Shapira)
Research Topic: Information Protection II.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $66K, my share 33%.

12/2012-12/2015
Role: Principle Investigator and Research Manager (Other PIs, Prof. Brach Shapira, Prof. Lior Rokach)
Research Topic: Leakage of Confidential Information in Social Networks.
Funding Agency: Ministry of Science and Technology
Total Requested Grant: $34,536, my share 33%.

12/2012-12/2015
Role: Principle Investigator and Research Manager (Other PIs, Prof. Brach Shapira, Prof. Lior Rokach)
Research Topic: Leakage of Confidential Information in Social Networks.
Funding Agency: Ministry of Science and Technology

Total Requested Grant: $206,741, my share 33%.

12/2012-12/2015
Role: Principle Investigator and Research Manager (Other PIs, Prof. Brach Shapira, Prof. Lior Rokach)
Research Topic: Leakage of Confidential Information in Social Networks.
Funding Agency: Ministry of Science and Technology
Total Requested Grant: $43,746, my share 33%.

11/2012-10/2013
Role: Principle Investigator and Research Manager (Other PIs, Prof. Lior Rokach, Dr. Asaf Shabtai)
Research Topic: Low amplitude anomaly detection.
Funding Agency: RSA
Total Requested Grant: $104K, my share 33%.

11/2012-10/2013
Role: Principle Investigator and Research Manager (Other PIs Prof. Lior Rokach, Prof. Bracha Shapira, , Dr. Rami Puzis)
Research Topic: Cyber Command and control infrastructure
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $63,685, my share 25%.

1/2013-12/2014
Role: Principle Investigator (Research Manager Dr. Asaf Shabtai)
Research Topic: Detecting SSH Proxies
Funding Agency: Ministry of Trade and Commerce
Total Requested Grant: $244K, my share 50%.

1/2013-12/2014
Role: Principle Investigator and Research Manager (Other PIs: Dr. Asaf Shabtai)
Research Topic: Cabernit Cyber Consortium **-** Year One
Funding Agency: Ministry of Trade and Commerce
Total Requested Grant: $95,472K, my share 50%.

1/2013-12/2014
Role: Principle Investigator and Research Manager (Other PIs: Dr. Asaf Shabtai)
Research Topic: Cabernit Cyber Consortium **-** Year One
Funding Agency: Ministry of Trade and Commerce
Total Requested Grant: $142,485K, my share 50%.

1/2013-12/2015
Role: Principle Investigator (Principle Investigator and Research Manager Prof. Bracha Shapira, Other PIs, Prof. Lior Rokach, Prof. Michael Birenhak, Prof. David G. Schwartz, Dr. Inbal Yahav)
Research Topic: Data Leakage in Social Networks, Detection and Prevention.
Funding Agency: Ministry of Science and Technology
Total Requested Grant: $380K, my share 33%.

1/2013-5/2015
Role: Principle Investigator
Research Topic: Fellowship grant for Cyber Defense and Advanced Computing for Ph.D student Nir Nissim.
Funding Agency: Ministry of Science and Technology
Total Requested Grant: $70K.

1/2013-11/2014
Role: Principle Investigator (Other PI, Prof. Bracha Shapira)
Research Topic: Fellowship grant for Cyber Defense and Advanced Computing for Ph.D student Gilad Katz.
Funding Agency: Ministry of Science and Technology
Total Requested Grant: $50K, my share 50%.

1/2013-6/2013
Role: Principle Investigator (Research manager: Prof. Lior Rokach, Other PIs, Prof. Bracha Shapira)
Research Topic: Location and Movement Analytics.
Funding Agency: Deutsche Telekom
Total Requested Grant: 356,640 Euro, my share 50%.

3/2013-7/2014
Role: Principle Investigator and Research Manager (Other PIs, Prof. Lior Rokach, Prof. Bracha Shapira, Dr. Rami Puzis)
Research Topic: Acceleration of cyber-attacks over time.
Funding Agency: Elbit LTD, Israeli Ministry of Defense
Total Requested Grant: $681K, my share 25%.

2/2013-3/2014
Role: Principle Investigator (Principle Investigator and Research Manager, Dr. Asaf Shabtai, Other PIs, Dr. Rami Puzis)
Research Topic: Detecting APTs.
Funding Agency: Deutsche Telekom
Total Requested Grant: $1381K, my share 30%.

2/2013-3/2014
Role: Principle Investigator (Principle Investigator and Research Manager, Dr. Asaf Shabtai)
Research Topic: Abnormal profile.
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $32K, my share 50%.

4/2013-3/2015
Role: Principle Investigator (Other PIs: Prof. Lior Rokach, Prof. Bracha Shapira, Dr. Rami Puzis)
Research Topic: Development of Simulation Model for Cyber Control and Management
Funding Agency: Altiv
Total Requested Grant: $409,402 my share 25%.

7/2013-2/2014
Role: Principle Investigator (Research manager: Prof. Lior Rokach, Other PIs, Prof. Bracha Shapira)
Research Topic: MotionLogic.
Funding Agency: Deutsche Telekom
Total Requested Grant: 594,072 Euro, my share 50%.

10/2013-4/2014
Role: Principle Investigator and Research Manager
Research Topic: Abnormal profile – "Strong Hand".
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $52K

10/2013-9/2015
Role: Principle Investigator and Research Manager
Research Topic: Detecting attacks via Email.
Funding Agency: Israeli Prime Minister Office.
Total Requested Grant: $110K, my share, 100%.

11/2013-11/2014
Role: Principle Investigator and Research manager: (Other PIs: Prof. Lior Rokach, , Prof. Bracha Shapira, Dr. Rami Puzis)
Research Topic: Cyber Command and Control Infrastructure.
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant $56,553, my share 25%.

10/2013-4/2014
Role: Principle Investigator and Research Manager
Research Topic: Abnormal profile – "Strong Hand".
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $52K

11/2013-10/2014
Role: Principle Investigator and Research Manager
Research Topic: Cyber Warfare Infrastructure
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $71,063

12/2013-12/2016
Role: Principle Investigator (Research Manager: ,Dr. Asaf Shabtai, Other PIs, Prof. Bracha Shapira, Prof. Lior Rokach, Prof Assaf Schuster)
Research Topic: Context Aware Data Leakage Prevention for Mobile Devices.
Funding Agency: Israeli Ministry of Science.
Total Requested Grant: $513K, my share 20%.

12/2013-12/2014
Role: Principle Investigator (Research Manager: Dr. Rami, Other PIs: Dr. Roni Stern, Prof. Ariel Felner)
Research Topic: Real Time Tracking of Information Diffusion in social networks based on VMAB topology.
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $58K, my share 25%.

12/2013-12/2016
Role: Principle Investigator (Other PIs: Prof. Lior Rokach, Prof. Bracha Shapira, Dr. Asaf Shabtai)
Research Topic: Relationship-based mechanism for identifying information leakage from mobile phones.
Funding Agency: Ministry of Science and Technology.
Total Requested Grant: $348,931, my share 25%.

12/2013-12/2016
Role: Principle Investigator (Other PIs: Prof. Lior Rokach, Prof. Bracha Shapira, Dr. Asaf Shabtai)
Research Topic: Relationship-based mechanism for identifying information leakage from mobile phones.
Funding Agency: Ministry of Science and Technology.
Total Requested Grant: $150,057, my share 25%.

1/2014-4/2014
Role: Principle Investigator and Research Manager
Research Topic: Abnormal Profile
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $115,240.

1/2014-1/2015
Role: Principle Investigator and Research Manager (Other PIs, Bracha Shapira, Lior Rokach)
Research Topic: Local Intruder.
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $57K, my share 33%.

1/2014-1/2015
Role: Principle Investigator and Research Manager
Research Topic: Abnormal profile – Paved road.
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $144K

1/2014-6/2014
Role: Principle Investigator (Research Manager, Dr. Asaf Shabtai)
Research Topic: Context based predictive recommendation for mobile device users.
Funding Agency: Deutsche Telekom
Total Requested Grant: $465,584, my share 50%.

3/2014-10/2015
Role: Principle Investigator and Research Manager
Research Topic: Data Protection.
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $51,456.

3/2014-2/2015
Role: Principle Investigator and Research Manager
Research Topic: Data Protection.
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $57K

3/2014-2/2015
Role: Principle Investigator and Research Manager
Research Topic: Abnormal profile - DaVinci.
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $130K

4/2014-12/2015
Role: Principle Investigator and Research Manager
Research Topic: Cyber Security Center.
Funding Agency: Israeli Prime Minister's Office.
Total Requested Grant: $2,611,306, my share, 100%.

4/2014-12/2016
Role: Principle Investigator and Research Manager
Research Topic:.
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $197K

4/2014-9/2017
Role: Principle Investigator and Research Manager
Research Topic: Mobile Information Protection Trap.
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $189,004

5/2014-4/2015
Role: Principle Investigator and Research Manager
Research Topic: Mobile Honeypot.
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $197K

5/2014-12/2016
Role: Principle Investigator and Research Manager
Research Topic: Fellowship grant for Cyber Defense and Advanced Computing for Ph.D
student Nir Nissim.
Funding Agency: Prime Minister Office.
Total Requested Grant: $14K

6/2014-5/2015
Role: Principle Investigator and Research Manager
Research Topic: Abnormal profile - Internet Identifiers.
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $143,884

6/2014-9/2014
Role: Principle Investigator and Research Manager (Other PIs: Dr. Rami Puzis, Dr. Asaf
Shabtai)
Research Topic: Cyber Security as a Platform for SMEs.
Funding Agency: Deutsche Telekom
Total Requested Grant$137,730, my share 33%.

6/2014-5/2015
Role: Principle Investigator and Research Manager
Research Topic: SIM Data Protection.
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $86,330

6/2014-10/2015
Role: Principle Investigator and Research Manager
Research Topic: SIM Data Protection.
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $77,235.

7/2014-7/2015
Role: Principle Investigator and Research Manager
Research Topic: ARM Environment.
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $156,729.

7/2014-12/2014
Role: Principle Investigator (Research Manager, Dr. Asaf Shabtai)
Research Topic: ConGeor - Data Analytics.
Funding Agency: Deutsche Telekom
Total Requested Grant: $127,520, my share 30%.

7/2014-12/2014
Role: Principle Investigator (Research Manager, Dr. Asaf Shabtai)
Research Topic: ConGeor - Data Analytics.
Funding Agency: Deutsche Telekom
Total Requested Grant: $297,111, my share 30%.

7/2014-12/2014
Role: Principle Investigator (Research Manager, Dr. Asaf Shabtai)
Research Topic: ConGeor - Data Analytics.
Funding Agency: Deutsche Telekom
Total Requested Grant: $579,000, my share 30%.

7/2014-12/2015
Role: Principle Investigator (Research Manager, Dr. Asaf Shabtai)
Research Topic: ConGeor – Local Prediction and Personalization Phase.
Funding Agency: Deutsche Telekom
Total Requested Grant: $94,957, my share 30%.

7/2014-12/2015
Role: Principle Investigator (Research Manager, Dr. Asaf Shabtai)
Research Topic: ConGeor – Local Prediction and Personalization Phase II.
Funding Agency: Deutsche Telekom

Total Requested Grant: $109,448, my share 30%.

7/2014-12/2016
Role: Principle Investigator (Research Manager, Dr. Asaf Shabtai)
Research Topic: ConGeor – Local Prediction and Personalization Phase III.
Funding Agency: Deutsche Telekom
Total Requested Grant: $226,134, my share 50%.

10/2015-12/2015
Role: Principle Investigator (Research Manager, Dr. Asaf Shabtai)
Research Topic: ConGeor – Local Prediction and Personalization Phase III.
Funding Agency: Deutsche Telekom
Total Requested Grant: $226,962, my share 50%.

7/2014-10/2014
Role: Principle Investigator and Research Manager (Other PIs: Dr. Rami Puzis, Dr. Asaf Shabtai)
Research Topic: Social Network Honeypot – Field Trial.
Funding Agency: Deutsche Telekom
Total Requested Grant: $88,658, my share 33%.

9/2014-9/2015
Role: Principle Investigator (Research Manager, Rami Puzis, Other PIs: Bracha Shapira, Lior Rokach)
Research Topic: Lightweight Dynamic Distributed Monitoring System.
Funding Agency: EMC/Lockheed Martin.
Total Requested Grant: $600K, my share 25%.
10/2014-12/2014
Role: Principle Investigator (Research Manager, Dr. Rami Puzis)
Research Topic: Diffusion Tracking in Social Media for TD CRM.
Funding Agency: Deutsche Telekom
Total Requested Grant: 50K Euro, my share 20%.

10/2014-9/2015
Role: Principle Investigator (Research manager: Dr. Rami Puzis)
Research Topic: SOMEC- Social & Media Big Data Analytics @ CRM.
Funding Agency: Deutsche Telekom
Total Requested Grant: $231,610, my share 30%.

10/2014-9/2015
Role: Principle Investigator and Research Manager.
Research Topic: Cyber infrastructure – leakage via side channel attacks.
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $60,000.

10/2014-9/2018
Role: Principle Investigator and Research Manager.
Research Topic: Contributions.
Funding Agency: Cyber Security Applied Research Institute - CSARI
Total Requested Grant: $319,618.

10/2014-10/2015
Role: Principle Investigator and Research Manager (Other PIs, Prof. Lior Rokach, Prof. Bracha Shapira, Dr. Rami Puzis)
Research Topic: Cyber Command and Control Infrastructure
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $52,687, my share 25%.

10/2014-4/2015
Role: Principle Investigator and Research Manager.
Research Topic: Cyber Abnormal Profile - First Channel.
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $41,980.

11/2014-01/2015
Role: Principle Investigator (Research manager: Prof. Yuval Elovici, Other PI: Dr. Asaf Shabtai)
Research Topic: Post-Docs Program
Funding Agency: Deutsche Telekom
Total Requested Grant: $89,392.

12/2014-09/2015
Role: Principle Investigator and Research manager
Research Topic: Virtual Security Officer (VSO).
Funding Agency: Deutsche Telekom
Total Requested Grant: $121,342, my share 50%.

12/2014-12/2015
Role: Principle Investigator and Research manager
Research Topic: Social Network Extraction
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $47,668, my share 33%.

1/2015-12/2015
Role: Principle Investigator and Research Manager
Research Topic: Abnormal Profile – Data Transfer using Electricity.
Funding Agency: Israeli Ministry of Security
Total Requested Grant: $131,499, my share: 100%.

1/2015-10/2015
Role: Principle Investigator and Research Manager
Research Topic: Abnormal Profile – Paved Road
Funding Agency: Israeli Ministry of Security
Total Requested Grant: $28,027, my share: 100%.

1/2015-12/2015
Role: Principle Investigator and Research Manager
Research Topic: Administrative Budget – DT Lab at BGU.
Funding Agency: Deutsche Telekom
Total Requested Grant: $38K.

1/2015-12/2015
Role: Principle Investigator and Research Manager.
Research Topic: Amendment to the Framework Agreement.
Funding Agency: Deutsche Telekom.
Total Requested Grant: $67,000, my share 100%.

1/2015-12/2015
Role: Principle Investigator and Research Manager.
Research Topic: Connected Cars.
Funding Agency: Deutsche Telekom.
Total Requested Grant: $27,020, my share 100%.

1/2015-9/2016
Role: Principle Investigator and Research Manager.
Research Topic: Connected Cars.
Funding Agency: Deutsche Telekom.
Total Requested Grant: $26,676 my share 100%.

1/2015-12/2016
Role: Principle Investigator and Research Manager.
Research Topic: Connected Cars.
Funding Agency: Deutsche Telekom.
Total Requested Grant: $25,632 my share 100%.

1/2015-12/2016
Role: Principle Investigator and Research Manager.
Research Topic: Connected Cars.
Funding Agency: Deutsche Telekom.
Total Requested Grant: $25,598 my share 100%.

1/2015-12/2015
Role: Principle Investigator (Research Manager: Dr. Rami Puzis)
Research Topic: Data Extraction from Social Networks.
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $46,000, my share 50%.

1/2015-12/2015
Role: Principle Investigator and Research Manager.
Research Topic: Magic Palace
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $128,567.

1/2015-10/2015
Role: Principle Investigator and Research Manager.
Research Topic: Paved road.
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $27,159.

1/2015-07/2017
Role: Principle Investigator and Research Manager.
Research Topic: Exceptional profile - data transfer using electricity
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $179,652

1/2015-12/2019
Role: Principle Investigator and Research Manager.
Research Topic: Connected Cars.
Funding Agency: Deutsche Telekom.
Total Requested Grant: 24,612 $ my share 100%.

2/2015-12/2015
Role: Principle Investigator and Research Manager (Other PI: Dr. Asaf Shabtai)
Research Topic: Education on Cyber Security.
Funding Agency: Deutsche Telekom
Total Requested Grant: $ 42,900, my share 50%.

2/2015-12/2015
Role: Principle Investigator and Research Manager (Other PI: Dr. Asaf Shabtai)
Research Topic: Web RTC Secured.
Funding Agency: Deutsche Telekom
Total Requested Grant: $ 113,806, my share 50%.

2/2015-12/2015
Role: Principle Investigator and Research Manager.
Research Topic: Exploring Cyber Canary.
Funding Agency: Deutsche Telekom

Total Requested Grant: $ 44,544, my share 100%.

2/2015-12/2015
Role: Principle Investigator and Research Manager (Other PI: Dr. Rami Puzis)
Research Topic: Meddle Me.
Funding Agency: Deutsche Telekom
Total Requested Grant: $ 114,752, my share 50%.

3/2015-3/2016
Role: Principle Investigator and Research Manager.
Research Topic: Tectonic 1 Moving Target Defense
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $79,495, my share 100%.

3/2015-12/2016
Role: Principle Investigator and Research Manager (Other PI: Dr. Asaf Shabtai)
Research Topic: Virtual Security Officer (VSO) CeBIT and Beyond.
Funding Agency: Deutsche Telekom
Total Requested Grant: $581,029, my share 50%.

3/2015-11/2015
Role: Principle Investigator and Research Manager (Other PI: Dr. Asaf Shabtai)
Research Topic: Virtual Security Officer (VSO) Next Phase.
Funding Agency: Deutsche Telekom
Total Requested Grant: $355,559, my share 50%.

3/2015-3/2016
Role: Principle Investigator and Research Manager
Research Topic: Tectonic.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $74,719, my share 100%.

3/2015-11/2016
Role: Principle Investigator and Research Manager
Research Topic: Tectonic 2.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $129,098, my share 100%.

5/2015-4/2016
Role: Principle Investigator and Research Manager.
Research Topic: Connected Cars.

Funding Agency: Deutsche Telekom.
Total Requested Grant: $23,436, my share 100%.

5/2015-8/2015
Role: Principle Investigator and Research Manager (Other PIs: Dr. Rami Puzis, Dr. Asaf Shabtai)
Research Topic: SPARK – EME Security Evaluation.
Funding Agency: Deutsche Telekom
Total Requested Grant: $ 110,580, my share 33%.

5/2015-8/2015
Role: Principle Investigator and Research Manager (Other PIs: Dr. Asaf Shabtai)
Research Topic: Attack on Connected Car Platform.
Funding Agency: Deutsche Telekom
Total Requested Grant: $ 122,192, my share 50%.

5/2015-4/2016
Role: Principle Investigator and Research Manager
Research Topic: Connected Cars - dcs.
Funding Agency: Deutsche Telekom
Total Requested Grant: $ 23,436, my share 100%.

5/2015-8/2015
Role: Principle Investigator and Research Manager (Other PIs: Dr. Asaf Shabtai)
Research Topic: Connected Cars.
Funding Agency: Deutsche Telekom
Total Requested Grant: $ 50,911, my share 50%.

5/2015-8/2015
Role: Principle Investigator and Research Manager (Other PIs: Dr. Asaf Shabtai)
Research Topic: Connected Cars.
Funding Agency: Deutsche Telekom
Total Requested Grant: $ 50,911, my share 50%.

5/2015-4/2018
Role: Principle Investigator and Research Manager
Research Topic: Exception profile
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $248,750, my share 100%.

6/2015-6/2016
Role: Principle Investigator and Research Manager
Research Topic: Identifying Exploitation Activities at the Kernel Level.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $52,260, my share 100%.

7/2015-6/2016
Role: Principle Investigator and Research Manager (Other PIs: Dr. Asaf Shabtai, Dr. Rami Puzis)
Research Topic: SCADA: Dynamic Proxy-Based Monitoring System.
Funding Agency: Deutsche Telekom
Total Requested Grant: $247,077, my share 33%.

7/2015-6/2016
Role: Principle Investigator and Research Manager
Research Topic: Cyber Warfare Infrastructure in Closed Systems.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $53,064, my share 100%.

9/2015-2/2016
Role: Principle Investigator and Research Manager (Other PIs: Dr. Asaf Shabtai)
Research Topic: Fraud Detection Customer Platform.
Funding Agency: Deutsche Telekom
Total Requested Grant: $113,230, my share 50%.

9/2015-11/2015
Role: Principle Investigator and Research manager (Other PIs: Dr. Rami Puzi)
Research Topic: SOMEC – Social & Media Big Data Analytics @ CRM.
Funding Agency: Deutsche Telekom
Total Requested Grant: $14,159, my share 30%.

10/2015-6/2016
Role: Principle Investigator (Research manager: Prof. Yuval Elovici, Other PIs: Dr. Asaf Shabtai, Dr. Rami Puzis)
Research Topic: Securing Web RTC Platform in Falcon.
Funding Agency: Deutsche Telekom
Total Requested Grant: $290,887, my share 33%.

10/2015-9/2016
Role: Principle Investigator and Research Manager.
Research Topic: Connected Cars - dcs.
Funding Agency: Deutsche Telekom.
Total Requested Grant: $26,672, my share 100%.

10/2015-12/2019
Role: Principle Investigator and Research Manager.
Research Topic: Contributions.
Funding Agency: Cyber Security Applied Research Agency-CSARI
Total Requested Grant: $1,200,000.

10/2015-4/2018
Role: Principle Investigator and Research Manager (Other PIs: Asaf Shabtai)
Research Topic: Research and Security Innovation Lab - ReSILIoT
Funding Agency: SUTD – Singapore University for Technology and Design
Total Requested Grant: $522,839.

11/2015-12/2015
Role: Principle Investigator and Research Manager (Other PIs: Prof. Asaf Shabtai)
Research Topic: Education on Cyber Security – Ethical Hacking.
Funding Agency: Deutsche Telekom.
Total Requested Grant: $54,168, my share 50%.

11/2015-10/2016
Role: Principle Investigator and Research Manager (Other PIs: Prof. Lior Rokach)
Research Topic: Advanced Forensic Analysis of VM Snapshots.
Funding Agency: Ministry of Finance and Trade
Total Requested Grant: $129,141, my share 50%.

11/2015-1/2016
Role: Principle Investigator and Research Manager (Other PIs: Asaf Shabtai)
Research Topic: RiMaDePa Support.
Funding Agency: Deutsche Telekom
Total Requested Grant: $23,826, my share 50%.

11/2015-10/2016
Role: Principle Investigator and Research Manager.
Research Topic: Connected Cars.
Funding Agency: Deutsche Telekom.
Total Requested Grant: $25,805 my share 100%.

11/2015-11/2016
Role: Principle Investigator and Research Manager.
Research Topic: Tectonic 2 Moving Target Defense
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $132,492, my share 100%.

11/2015-11/2016
Role: Principle Investigator and Research Manager (Other PI: Dr. Asaf Shabtai, Rami Puzi).
Research Topic: Social Network Extraction
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $44,771, my share 33%.

11/2015-3/2016
Role: Principle Investigator and Research Manager
Research Topic: Abnormal Profile – "Paved Road"
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $23,468, my share 100%.

11/2015-12/2017
Role: Principle Investigator and Research Manager
Research Topic: Moving target defense
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $138,194, my share 100%.

12/2015-12/2016
Role: Principle Investigator and Research Manager
Research Topic: Infrastructure for Cyber Control and Management
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: $52,599, my share 100%.

12/2015-6/2016
Role: Principle Investigator and Research Manager (Other PI: Dr. Asaf Shabtai)
Research Topic: Virtual Security Officer (VSO) Next Phase.
Funding Agency: Deutsche Telekom
Total Requested Grant: $583,170, my share 50%.

12/2015-12/2016
Role: Principle Investigator and Research Manager
Research Topic: Automatic Monitoring Protection.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $66,246, my share 100%.

12/2015-4/2017
Role: Principle Investigator and Research Manager
Research Topic: Treasure Hunt.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $128,252, my share 100%.

12/2015-6/2017
Role: Principle Investigator and Research Manager
Research Topic: Infrastructure Cyber Web Architecture
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $55,277, my share 100%.

12/2015-6/2017
Role: Principle Investigator and Research Manager
Research Topic: Automatic monitoring
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $69,097, my share 100%.

12/2015-9/2017
Role: Principle Investigator and Research Manager
Research Topic: Treasure Hunt
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: $133,772, my share 100%.

1/2016-12/2016
Role: Principle Investigator and Research Manager
Research Topic: RiMaDePa Support.
Funding Agency: Deutsche Telekom
Total Requested Grant: $157,560, my share 100%.

1/2016-12/2016
Role: Principle Investigator and Research Manager (other PI : Dr. Asaf Shabtai_
Research Topic: Research and Development Classification Definition
Funding Agency: ELTA
Total Requested Grant: $95,280, my share 50%.

1/2016-8/2016
Role: Principle Investigator and Research Manager
Research Topic: SPARK – EME Security Evaluation.
Funding Agency: Deutsche Telekom
Total Requested Grant: $203,004, my share 33%.

1/2016-2/2017
Role: Principle Investigator and Research Manager
Research Topic: Cyber Fellowships.
Funding Agency: Deutsche Telekom
Total Requested Grant: $160,087, my share 100%.

7/2016-12/2016
Role: Principle Investigator and Research Manager (other PI: Dr. Asaf Shabtai)
Research Topic: Big Data Framework Support.
Funding Agency: Deutsche Telekom
Total Requested Grant: $110,514, my share 50%.

05/2016-12/2017
Role: Principle Investigator and Research Manager (other PI: Dr. Asaf Shabtai)
Research Topic: Samsung Knox Review.
Funding Agency: Deutsche Telekom
Total Requested Grant: $103,965, my share 50%.

03/2016-05/2016
Role: Principle Investigator and Research Manager (other PI: Dr. Asaf Shabtai)
Research Topic: Fraud Detection Customer Platform
Funding Agency: Deutsche Telekom
Total Requested Grant: $50,360, my share 50%.

04/2016-03/2017
Role: Principle Investigator and Research Manager (other PI: Dr. Ashaf Shabtai)
Research Topic: intrusion detection for avionic
Funding Agency: Astronautics
Total Requested Grant: 92,943$, my share 50%

05/2016-07/2016
Role: Principle Investigator and Research Manager (other PI: Dr. Ashaf Shabtai)
Research Topic: EMC- project POC
Funding Agency: EMC
Total Requested Grant: 10,753$, my share 50%

05/2016-04/2018
Role: Principle Investigator and Research Manager
Research Topic: Abnormal profile- De-Vinci
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: 241,935$, my share 100%

05/2016-08/2019
Role: Principle Investigator and Research Manager
Research Topic: Abnormal profile- De-Vinci 2
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: 360,962$, my share 100%

07/2016-01/2018
Role: Principle Investigator and Research Manager
Research Topic: Abnormal profile- Environmental protection
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: 134,408$, my share 100%

11/2016-12/2016
Role: Principle Investigator and Research Manager (other PI: Dr. Rami Puzis, Dr. Asaf Shabtai, Prof. Lior Rokach)
Research Topic: Right in Time

Funding Agency: Deutsche Telekom
Total Requested Grant: 51,102$ my share 25%

10/2016-12/2016
Role: Principle Investigator and Research Manager
Research Topic: Education on Cyber Security
Funding Agency: Deutsche Telekom
Total Requested Grant: 2,121$ my share 100%

12/2016-03/2017
Role: Principle Investigator and Research Manager (other PI: Dr. Asaf Shabtai)
Research Topic: Augnented IoT –Initial Phase
Funding Agency: Deutsche Telekom
Total Requested Grant: 167,408$ my share 50%

01/2017-12/2017
Role: Principle Investigator and Research Manager (other PI: Dr. Asaf Shabtai)
Research Topic: Fraud and Security Analyrics as a Service (FASAS)
Funding Agency: Deutsche Telekom
Total Requested Grant: 1,162,296$ my share 50%

01/2017-03/2017
Role: Principle Investigator and Research Manager (other PI: Dr. Asaf Shabtai)
Research Topic: Enhcing Virtual Security Officer (VSO)
Funding Agency: Deutsche Telekom
Total Requested Grant: 290,430$ my share 50%

11/2017-12/2018
Role: Principle Investigator and Research Manager (other PI: Dr. Asaf Shabtai)
Research Topic: Fraud and Security Analyrics as a Service (FASAS)
Funding Agency: Deutsche Telekom
Total Requested Grant: 1,344,902 my share 50%

07/2016-12/2016
Role: Principle Investigator and Research Manager (other PI: Dr. Asaf Shabtai)
Research Topic: Big Data Farmwork Support – change request
Funding Agency: Deutsche Telekom
Total Requested Grant: 28,140$ my share 50%

01/2015-12/2017
Role: Principle Investigator and Research Manager
Research Topic: Connected Cars
Funding Agency: Deutsche Telekom
Total Requested Grant: 25,218$ my share 100%

01/2015-09/2017
Role: Principle Investigator and Research Manager
Research Topic: Connected Cars-dcs
Funding Agency: Deutsche Telekom
Total Requested Grant: 26,316$ my share 100%

10/2016-09/2017
Role: Principle Investigator and Research Manager
Research Topic: Connected Cars-dcs
Funding Agency: Deutsche Telekom
Total Requested Grant: 26,316$ my share 100%

12/2015-04/2017
Role: Principle Investigator and Research manager
Research Topic: Treasure Hunt.
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: 124,103$, my share 100%.

07/2016-12/2017
Role: Principle Investigator and Research Manager (other PI: Dr. Asaf Shabtai)
Research Topic: IOT sentinels software and vulnerability analysis
Funding Agency: NEC Corporation
Total Requested Grant: 628,470$, my share 50%

11/2016-10/2018
Role: Principle Investigator and Research manager
Research Topic: Tectonic time to run
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: 78,534$, my share 100%.

11/2016-11/2018
Role: Principle Investigator and Research manager
Research Topic: Cyber Control Systems PCM
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: 52,631 $, my share 100%.

11/2016-11/2018
Role: Principle Investigator and Research manager
Research Topic: Joint Test Action Project
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: 52,631$, my share 100%.

12/2016-11/2017
Role: Principle Investigator and Research manager
Research Topic: information protection

Funding Agency: Israeli Ministry of Defense
Total Requested Grant: 51,282 $, my share 100%.

12/2016-12/2018
Role: Principle Investigator and Research manager
Research Topic: Malware Analysis Detection and Prevention
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: 52,219 $, my share 100%.

01/2017-04/2017
Role: Principle Investigator and Research manager (Other PIs: prof. Bracha Shapira, Prof. Lior Rokach)
Research Topic: Single household view- Initial Phase.
Funding Agency: Deutsche Telekom
Total Requested Grant: 111,680$, my share 33%.

05/2017-03/2019
Role: Principle Investigator and Research manager
Research Topic: IoT Honeypot
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: 277,008 $, my share 100%.

6/2017-5/2019
Role: Principle Investigator and Research manager
Research Topic: Air Time
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: 345,485 $, my share 100%.

09/2017-03/2020
Role: Principle Investigator and Research manager
Research Topic: Abnormal Profile - Kalia
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: 328,651 $, my share 100%.

10/2017-03/2019
Role: Principle Investigator and Research manager
Research Topic: continues threat analysis framework for OT systems
Funding Agency: Israeli Ministry of Defense
Total Requested Grant: 576,875 $, my share 50%

05/2017-04/2018
Role: Principle Investigator and Research Manager
Research Topic: Connected Cars-dcs
Funding Agency: Deutsche Telekom
Total Requested Grant: 27,534 $ my share 100%

10/2017-09/2018
Role: Principle Investigator and Research Manager
Research Topic: Connected Cars-dcs
Funding Agency: Deutsche Telekom
Total Requested Grant: 26,316 $ my share 100%

11/2017-10/2018
Role: Principle Investigator and Research Manager (other PI's: Dr. Asaf Shabtai, Dr. Rami Puzis)
Research Topic: Blockchain research cluster
Funding Agency: Deutsche Telekom
Total Requested Grant: 1,325,482 $ my share 33%

12/2017-05/2018
Role: Principle Investigator and Research Manager
Research Topic: Cyber control and monitoring infrastructures
Funding Agency: Israeli ministry of Defense
Total Requested Grant: 10,750$ my share 100%

12/2017-01/2019
Role: Principle Investigator and Research Manager
Research Topic: Cyber control and monitoring infrastructures
Funding Agency: Israeli ministry of Defense
Total Requested Grant: 28,716 $ my share 100%

11/2017-10/2018
Role: Principle Investigator and Research Manager
Research Topic: Cyber Corpus Warfare
Funding Agency: Israeli ministry of Defense
Total Requested Grant: 56,980$ my share 100%

09/2017-03/2018
Role: Principle Investigator and Research Manager (other PI: Dr. Asaf Shabtai)
Research Topic: intrusion detection for avionic
Funding Agency: Astronautics
Total Requested Grant: 6,858$, my share 50%

01/2018-03/2018
Role: Principle Investigator and Research Manager (other PI: Dr. Asaf Shabtai)
Research Topic: IOT sentinels software and vulnerability analysis
Funding Agency: NEC Corporation
Total Requested Grant: 98,750$, my share 50%

01/2018-06/2018

Role: Principle Investigator and Research Manager (other PI: Dr. Asaf Shabtai)
Research Topic: Research on IOT attack scenarios based on IOT future vision
Funding Agency: Fujitsu
Total Requested Grant: 87,788$, my share 50%

12/2017-07/2018
Role: Principle Investigator and Research Manager (other PI: Prof. Lior Rokach Prof. Bracha Shapira)
Research Topic: Quality Insurance & Technical service Digitization
Funding Agency: Audi
Total Requested Grant: 496,250$, my share 33%

10/2017-03/2019
Role: Principle Investigator and Research Manager (other PI: Dr. Asaf Shabtai)
Research Topic: Continuous threat analysis framework for OT systems
Funding Agency: NEC Corporation
Total Requested Grant: 576,875$, my share 50%

07/2017-06/2018
Role: Principle Investigator and Research Manager
Research Topic: Connected Cars-dcs
Funding Agency: Deutche Telekom
Total Requested Grant: 26,748 $, my share 100%

09/2017-03/2018
Role: Principle Investigator and Research Manager (other PI: Dr. Asaf Shabtai)
Research Topic: Fraud and Security Analytics as a Service (FASAS)
Funding Agency: Deutche Telekom
Total Requested Grant: 1,371,648 $, my share 50%

 01/2018-12/2018
Role: Principle Investigator and Research Manager
Research Topic: Connected Cars-dcs
Funding Agency: Deutche Telekom
Total Requested Grant: 38,000 $, my share 100%

06/2018-05/2019
Role: Principle Investigator and Research Manager
Research Topic: Connected Cars-dcs
Funding Agency: Deutche Telekom
Total Requested Grant: 23,490 $, my share 100%

06/2018-05/2020

Role: Principle Investigator and Research Manager (other PI: Dr. Asaf Shabtai)
Research Topic: Adversarial AI Research Cluster
Funding Agency: Royal Bank of Canada
Total Requested Grant: 1,027,500 $, my share 50%

08/2018-04/2020
Role: Principle Investigator and Research Manager (other PI: Dr. Asaf Shabtai)
Research Topic: Black Box
Funding Agency: Israeli ministry of Defense
Total Requested Grant: 324,758 $, my share 50%

08/2018-07/2019
Role: Principle Investigator and Research Manager (other PI: Dr. Asaf Shabtai)
Research Topic: collaborative intelligent analysis for detecting compromised IOTs
Funding Agency: Bullguard Israel Ltd.
Total Requested Grant: 143,750 $, my share 50%

08/2018-12/2019
Role: Principle Investigator and Research Manager
Research Topic: ME
Funding Agency Israeli ministry of Defense
Total Requested Grant: 152,439$, my share 100%

08/2018-01/2020
Role: Principle Investigator and Research Manager.
Research Topic: Tectonic Moving Target Defense
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: 122,615$, my share 100%.

08/2018-01/2020
Role: Principle Investigator and Research Manager.
Research Topic: Mobile Forensic Investigation
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: 135,980$, my share 100%.

08/2018-07/2020
Role: Principle Investigator and Research Manager.
Research Topic: Corfus
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: 212,525$, my share 100%.

09/2018-08/2019
Role: Principle Investigator and Research Manager
Research Topic: Connected Cars-dcs
Funding Agency: Deutche Telekom
Total Requested Grant: 55,020 $, my share 100%

10/2018-03/2020
Role: Principle Investigator and Research Manager.
Research Topic: Autonomous Cyber Systems
Funding Agency: Israeli Ministry of Defense.
Total Requested Grant: 138,121$, my share 100%.

11/2018-03/2020
Role: Principle Investigator and Research Manager (other PI's: Dr. Asaf Shabtai)
Research Topic: Automated attack knowledge creation system for cyber security risk analysis.
Funding Agency: NEC Corporation
Total Requested Grant: 599,375 $, my share 50%

12/2018-06/2019
Role: Principle Investigator and Research Manager (other PI's: Dr. Asaf Shabtai)
Research Topic: Research on new threats created by drones
Funding Agency: Fujitsu system integration laboratories ltd.
Total Requested Grant: 132,563 $, my share 50%

12/2018-12/2020
Role: Principle Investigator and Research Manager (other PI's: Dr. Asaf Shabtai)
Research Topic: Sensor Attacks & Defenses on Autonomous Vehicle
Funding Agency: Rafael Advanced Defense Systems
Total Requested Grant: 307,692 $, my share 50%

12/2018-12/2019
Role: Principle Investigator and Research Manager (other PI's: Dr. Asaf Shabtai)
Research Topic: Blockchain research cluster
Funding Agency: Deutsche Telekom
Total Requested Grant: 724,132 $, my share 50%

01/2019-12/2019
Role: Principle Investigator and Research Manager
Research Topic: Deep Neural Chicken
Funding Agency: Deutsche Telekom
Total Requested Grant: 263,225 $, my share 100%

01/2019-12/2022
Role: Principle Investigator and Research Manager (other PI's: Prof. Lior Rokach, Dr. Asaf Shabtai, Prof. Bracha Shapira)
Research Topic: CONCORDIA – Cyber security cOmpeteNce fOr Research anD Innovation
Funding Agency: Horizon 2020
Total Requested Grant: 342,912 $, my share 25%

01/2019-12/2019
Role: Principle Investigator and Research Manager (other PI: Prof. Lior Rokach Prof. Bracha Shapira)
Research Topic: Research on Technical Service Digitization
Funding Agency: Audi
Total Requested Grant: 602,229 $, my share 33%

01/2019-06/2019
Role: Principle Investigator and Research Manager
Research Topic: Mobile and IoT Computing
Funding Agency: Toga Networks Ltd.
Total Requested Grant: 9,890 $, my share 100%

01/2019-06/2020
Role: Principle Investigator and Research Manager
Research Topic: Honey Pot
Funding Agency: Israeli ministry of Defense
Total Requested Grant: 133,689 $, my share 100%

03/2019-02/2020
Role: Principle Investigator and Research Manager
Research Topic: Connected Cars - dcs.
Funding Agency: Deutsche Telekom
Total Requested Grant: 26,583 $, my share 100%.

05/2019-10/2019
Role: Principle Investigator and Research Manager (other PI: Dr. Asaf Shabtai)
Research Topic: Preempt First Phase.
Funding Agency: Deutsche Telekom
Total Requested Grant: 571,271$, my share 50%.

05/2019-12/2019
Role: Principle Investigator and Research Manager (other PI: Dr. Asaf Shabtai)
Research Topic: testing machine learning
Funding Agency: Deutsche Telekom
Total Requested Grant: 319,363$, my share 50%.

05/2019-10/2019
Role: Principle Investigator and Research Manager (other PI: Dr. Rami Puzis)
Research Topic: Network analytics research
Funding Agency: Deutsche Telekom
Total Requested Grant: 275,468$, my share 50%.

01/2020-06/2020
Role: Principle Investigator and Research Manager
Research Topic: Phantom Attacks Research.
Funding Agency: Toshiba
Total Requested Grant: 142,500 $, my share 100%.

03/2020-02/2021
Role: Principle Investigator and Research Manager (other PI: Prof. Asaf Shabtai)
Research Topic: Distributed analysis of data for cyber purposes
Funding Agency: Israeli ministry of Defense
Total Requested Grant: 173,903 $, my share 50%.

Research Grants Singapore

1/2015-12/2018
Role: Principle Investigator (Other PIs Prof. David Yau)
Research Topic: Center for Cyber Information Systems for Decision Making - T5 - Network level trace back & attribution.
Funding Agency: Singapore Ministry of Defense.
Total Requested Grant: S$ 609,000

5/2015-2/2016
Role: Principle Investigator and Research manager (Other PIs Prof. Nils Ole Tippenhauer, Dr. Jemin Lee)
Research Topic: SECLab (Secure Embedded Computing Lab).
Funding Agency: SUTD-MIT International Design Centre (IDC).
Total Requested Grant: S$ 433,000

5/2015-2/2016
Role: Principle Investigator (Other PIs, Prof. Aditya Mathure, Prof. Nils Ole Tippenhauer, Prof. Roland Bouffanais, Mr. Ivan Lee)
Research Topic: Design of Digital Manufacturing Lablet for Research and Education in Safe and Secure Cyber Physical Systems.
Funding Agency: SUTD-MIT International Design Centre (IDC).
Total Requested Grant: S$ 200,000

9/2015-9/2018
Role: Principle Investigator (Other PIs, Prof. Prof. Nils Ole Tippenhauer, Prof. Martin Orcha)
Research Topic: IoT security Innovation Lab.
Funding Agency: Singapore Ministry of Defense.
Total Requested Grant: S$ 4,500,000

8/2016-8/2022
Role: Principle Investigator (10 other Co-PIs will join the lab)
Research Topic: Corporate lab on Cyber Security with STEE-Infosec.
Funding Agency: NRF, ST Electronics, SUTD (in-kind).
Total Requested Grant: S$ 44,000,000

01/2017-12/2018
Role: Principle Investigator (other PI's Dr. Rami Puzis, Prof. Thambipillai Srikanthan)
Research Topic: BICSAF – Bio Inspired.
Funding Agency: Nanyang Technological University (NTU)
Total Requested Grant: S$ 700,000, my share 50%

10**/2019-12/2021**
Role: Principle Investigator (other PI's Prof. Dinh Tien Tuan Anh)
Research Topic: FBI - Featherlight Blockchain for IoT.
Funding Agency: NRF
Total Requested Grant: S$ 1,000,000, my share 50%

01/2020-12/2021
Role: Principle Investigator (other PI's Prof. Asaf Shabtai)
Research Topic: Securing Avionics Communication Bus.
Funding Agency: STEA (St Engeneering Aerospace)
Total Requested Grant: S$ 500,000, my share 50%

Patents

1. **Title:** US 7841503 B2 Endoscopic device comprising linear staplers and a video camera on its distal end.
   Inventors: Elazar Sonnenschein, Amir Govrin, Yoav Avidor, **Yuval Elovici**, Minelu Sonnenschein

2. **Title:** US 7941853 B2 Distributed system and method for the detection of eThreats.
   Inventors: Boris Rozenberg, Ehud Gudes, **Yuval Elovici**

3. **Title:** US 7941851 B2 Architecture for identifying electronic threat patterns.
   Inventors: Yuval Shahar, Asaf Shabtai, Gil Tahan, **Yuval Elovici**

4. **Title:** US 8171554 B2 System that provides early detection, alert, and response to electronic threats.
   Inventors: Yuval Elovici, Gil Tachan, Asaf Shabtai

5. **Title:** US 8244652 B2 Stacking Schema for Classification Tasks.
   Inventors: Eitan Menahem, Lior Rokach, **Yuval Elovici**

6. **Title:** EP1959367 B1 Automatic extraction of signatures for Malware.
   Inventors: Yuval Elovici, Asaf Shabtai, Gil Tahan

7. **Title:** US 8332944 System and method for detecting new malicious executable, based on discovering and monitoring characteristic system call sequences.
   Inventors: Boris Rozenberg, Ehud Gudes, **Yuval Elovici**

8. **Title:** US 8353040 B2 Automatic extraction of signatures for malware.
   Inventors: Gil Tahan**,** Asaf Shabtai, **Yuval Elovici**

9. **Title:** EP 1887754 B1 A System that provides early detection, alert, and response to electronic threats.

Inventors: Yuval Elovici, Gil Tahan, Asaf Shabtai

10. **Title:** US 8490194 B2 Method and system for detecting malicious behavioral patterns in a computer, using machine learning.
    Inventors: Robert Moskovitch, Dima Stopel, Zvi Boger, Yuval Shahar, **Yuval Elovici**

11. **Title:** US 8463404 B2 Electrode assemblies, tools, and methods for gastric wall implantation.
    Inventors: Tamir Levi, Paul Spehr, Offer Glasberg, Tami Harel, Lena Milman, Benny Rousso, Elazar Sonnenschein, **Yuval Elovici**, Minelu Sonnenschein, Amir Govrin

12. **Title:** EP 2228743 B1 Method for detecting new malicious executables, based on discovering and monitoring characteristic system call sequences.
    Inventors: Boris Rozenberg, Ehud Gudes, **Yuval Elovici**

13. **Title:** EP 1887744 B1 Method for finding the most prominent group of vertices in complex data communication networks.
    Inventors: Rami Puzis, **Yuval Elovici**, Shlomi Dolev

14. **Title:** US 8516584 B2 Method and system for detecting malicious behavioral patterns in a computer, using machine learning.
    Inventors: Robert Moskovitch, Dima Stopel, Zvi Boger, Yuval Shahar, **Yuval Elovici**

15. **Title:** US 8776231 B2 Unknown malcode detection using classifiers with optimal training sets.
    Inventors: Robert Moskovitch, **Yuval Elovici**

16. **Title:** EP 1755437 B1 Multipurpose endoscopy suite.
    Inventors: Elazar Sonnenschein, **Yuval Elovici**, Minelu Sonnenschein

17. **Title:** US 8678994 B2 Devices and methods for treating morbid obesity.
    Inventors: Elazar Sonnenschein, Amir Govrin, Yoav Avidor**, Yuval Elovici**, Minelu Sonnenschein

18. **Title:** US 8639947 B2 Structure preserving database encryption method and system.
    Inventors: Yuval Elovici, Ronen Waisenberg, Erez Shmueli

19. **Title:** EP 1995929 B1 Système distribué pour la détection de menaces électroniques.
    Inventors: Boris Rozenberg, Ehud Gudes, **Yuval Elovici**

20. **Title**: US 9369476 B2 System for detection of mobile applications network behavior- netwise

Inventors: Lena Chekina, Bracha Shapira, Dudu Mimran, **Yuval Elovici**, Christoph Peylo

21. **Title**: EP 1990973 B1 Deployment of distributed network intrusion detection systems in social networks
    Inventors: Meital Tubi, Rami Puzis, **Yuval Elovici**

22. **Title**: EP 1814055 B1 Improved method system for detecting malicious behavioral patterns in a computer using machine learning.
    Inventors: Robert Moskovitch, Dima Stopel, Zvi Boger, Yuval Shahar, **Yuval Elovici**

23. **Title**: EP 2833604 B1 System for analyzing mobile telephone users locations and classifications, while maintaining users privacy constraints
    Inventors: **Yuval Elovici**, Dudu Mimran, Barak Chizi, Pavel Ackerman, Moshe Bixenspaner

24. **Title:** EP 2871869 B1 An accurate mechanism for estimating a mobile communication service provider's market share
    Investors: Barak Chizi, **Yuval Elovici**, David Mimran, Lior Rokach

25. **Title**: US 9509716 B2 Social network honeypot
    Inventors: Asaf Shabtai, Rami Puzis, **Yuval Elovici**

26. **Title:** US 9420427 B2 Method and system for tracking the whereabouts of people in urban settings
    Inventors: Barak Chizi, Dudu Mimran, **Yuval Elovici**, Alex Binon

27. **Title**: EP 2447808 B1 Apparatus for operating a computer using thoughts or facial impressions
    Inventors: Rami Puzis, Ory Ossmy, Ofir Tam, Ariel Rozen, **Yuval Elovici**

28. **Title**: CA 2568435 C Multipurpose endoscopy suite
    Inventors: Elazar Sonnenschein, **Yuval Elovici**, Minelu Sonneschein

29. **Title**: US 8332944 B2 System and method for detecting new malicious executables, based on discovering and monitoring characteristic system call sequences.
    Inventors: Boris Rozenberg, Ehud Gudes, **Yuval Elovici**

30. **Title**: US 9659185 B2 Method for detecting spammers and fake profiles in social networks
    Inventors: Gilad Katz, Micael Fire, **Yuval Elovici**

31. **Title**: US 9646245 B2 System and method for identifying contacts of a target user in a social network

Inventors: Rami Puzis, Roni Stern, Lior Rokach, Tal Beja, Ariel Felner, Zahy Bnaya, Liron Samama, **Yuval Elovici**

32. **Title**: US 9703954 B2 Method and system for protecting computerized systems from malicious code
Inventors: Mordechai Guri, Gabi Kedma, **Yuval Elovici**

33. **Title**: EP 2477136B1 Method for continuously verifying user identity via keystroke dynamics
Inventors: Tomer Shimshon, Robert Moskovitch, Lior Rokach, **Yuval Elovici**

34. **Title**: US 9934337 B2 Flexible and scalable simulations of mass participants in real time
Inventors: **Yuval Elovici**, Dudu Mimran, Barak Chizi, Moshe Bixenspaner, Tomer Zrihen

35. **Title**: EP 2942919 A1 Social network honeypot
Inventors: **Yuval Elovici**, Rami Puzis, Asaf Shabtai

36. **Title**: EP 2571225 B1 A method for detecting data misuse in an organization's network
Inventors: Asaf Shabtai**,** Ma'ayan Gafny, Lior Rokach, **Yuval Elovici**

37. **Title**: EP 2570959 B1 A method of estimating the potential damage of data leakage incident by assigning misuseability weight
Inventors: Amir Harel, Asaf Shabtai, Lior Rokach, **Yuval Elovici**

38. **Title**: EP 2946330 B1 Method and system for protecting comtuterizad systems from malicious code
Inventors: Mordehai Guri, **Yuval Elovici,** Gabi Kedma

39. **Title**: US 9609483 B2 System for characterizing geographical locations based on multi sensors anonymous data sources
Inventors: **Yuval Elovici,** Dudu Mimran, Bark Chizi, Alexander Binun, Moshe Bixenspaner, Pavel Ackerman

40. **Title:** EP 2892206 B1 System and method for push framework security
Inventors: Ran Yahalom, Yuri Poliak, David Mimran, Bracha Shapira, **Yuval Elovici**, Christoph Peylo

41. **Title**: US 9934388 B2 Method and system for database encryption
    Inventors: **Yuval Elovici**, Ronen Vaisenberg, Erez Shmueli.

42. **Title**: EP 2919448 B1 A method for creating a collection of sound signatures for identifying objects
    Inventors: **Yuval Elovici**, Bracha Shapira, Barak Chizi, Dudu Mimran

43. **Title**: US 10192057 B2 Misuseability analysis for it infrastructure
    Inventors: Asaf Shabtai, **Yuval Elovici**

44. **Title**: US 10192057 B2 Misuseability analysis for it infrastructure
    Inventors: Asaf Shabtai, **Yuval Elovici**

45. **Title**: US 10091220 B2 Platform for protecting small and medium enterprises from cyber security threats
    Inventors: Asaf Shabtai, **Yuval Elovici**, Christoph Peylo, Barak Chizi, Barak Zacharish, David Mimran, Tobias Glemser

Synopsis of Research

My main research interests are in the fields of computer and network security. The main topics of my research are listed below, with referrals to the relevant journal (J), conference (C) and book chapter (B) publications listed in the CV.

(a) Privacy and Anonymity in the Electronic Society

Surfing the World-Wide-Web (hereafter: the Web) feels as if it is a bilateral private interaction. However, this impression is far from being accurate, as users leave identifiable digital tracks at every Web site they visit [J6]. Within my research, I have demonstrated how a collaborative attack on WWW users' anonymity can be performed by analyzing only a small part of the Internet routers [J18]. Additionally, I developed a new protocol that allows users to surf the World-Wide-Web while maintaining their anonymity [C9, J13]. The protocol was implemented by several Mix-type servers connected at different points to the Internet and by agents installed inside the users' computer. The protocol was extended to anonymize the P2P communication [C16], as well as another protocol that was developed for anonymous publishing [C54, C72].

 The computer security community has concentrated on improving users' privacy by concealing their identities on the Web. However, users may want or need to identify themselves over the net in order to receive certain services, while retaining the privacy of their interests, needs and intentions. PRAW, the privacy model [C3, C4, C7, C15, J8, J9, J11], is aimed at hiding users' navigation tracks, in an attempt to prevent eavesdroppers from inferring their profiles, while still allowing them to be identified.

 Securing data at rest stored in a database is a very challenging task. I've developed a new database encryption scheme named SPDE, which preserves the structure of the database and encrypts its content, such that even the DBA cannot view or modify the database cells content [C13, C18, J26].

(b) Malware Detection

The area of Cyber security covers the flagship project of T-Labs at BGU (Net Centric Security), which aims to purify NSP networks of malware [J35]. During the project, I developed methods based on machine learning techniques for detecting whether a suspected file is malicious or benign. The methods were based on static code analysis [C26, C31, C34, C35, C36, C39, C40, C43, C63, J21, J22, J44] and dynamic code analysis, where the suspected file activity was monitored in a sandbox [C19, C20, C21, C22, C23 ,C25, C29, C32, C33, C37, C42, J17, J19, J20, J27, J48]. One of the challenges in this research was the synthesis of powerful malware signatures yielding a low false-positive detection rate [J28, J36]. The issues of detection scalability and performance were addressed in [C27, C28, C41, C45, C52, C77, B6, B7, B9, J33, J15, J16, J24, J39], by employing the Complex Networks' theory to pinpoint the most influential set of routers for deploying monitoring and filtering devices. Currently, I am extending this research (including a simulator), to find the optimal places for deploying a scribing center for mitigating the denial of service attack launched via botnets.

(a) Mobile Phone Security

Before the Android-based mobile devices were introduced into the market for the first time by T-Mobile USA, I was asked to study Android vulnerabilities, threats and security mechanisms. My findings were summarized in several publications [C60, J31]. Following my analysis, I developed several security mechanisms for the android platform. First, I demonstrated how to secure Android mobile devices using SELinux [J32]. Then, I developed several prototypes of an Intrusion Detection System for hardening Android-based devices based on various techniques, such as temporal reasoning and anomaly detection [C46, C50, C58, C61, J42, J34]. All of my publications on Android security are highly cited by the scientific and professional communities. In addition, an efficient, collaborative application-monitoring scheme was developed for mobile devices that will allow the devices to detect malicious applications without relying on a central authority [C51, C53].

(b) Web Intelligence and Social Network Security

Terrorist groups use the Web as their infrastructure for various purposes. The Advanced Terrorist Detection System (ATDS), which I designed, is aimed at tracking down online access to abnormal content, which may include terrorist-generated sites by analyzing the content of information accessed by the web users. ATDS was developed and evaluated using real users and terror-related data [C6, C8, C12, C14, C17, J7, J30].

In another research, I hypothesize that a new type of information security threat may involve a class of malware, which does not have a goal to corrupt and take control of the machines it infects or steal explicit information stored on them. Rather, its goal is to steal social network and behavioral information through data collection and network science inference techniques. I define this a stealing-reality attack [J40]. I demonstrated how such an attack can propagate in real social networks. Many journalists quoted the results of this study in their articles.

Link prediction in social networks is one of the key tools in web intelligence. It may allow identifying a connection between terrorists that does not exist in a social graph. I developed a very accurate link prediction algorithm that was evaluated on several large social networks [C73, J50]. The link prediction algorithm was used to detect fake profiles in social networks. Fake profiles in social networks may be used for good as well as malicious purposes. In [C81], I show how one can derive the organizational structure using socialbots. In [C82], I show how a fake profile that distributes Spam in a social network can be detected. The Social Network Protector was developed by me as well, which is a software based on advanced detection mechanisms that may allow teenagers to identify suspicious members in their social network. The Social Network Protector Facebook app was installed by more than 3000 users and Mr. Michael Fire, my Ph.D student, presented it live on FoxNews.

Additional Information

(a) Average teaching evaluations – student surveys:

4.4 (out of 5) in fall semester 2003
4.3 (out of 5) in fall semester 2008
4.2 (out of 5) in fall semester 2009
4.8 (out of 5) in spring semester 2011
4.8 (out of 5) in fall semester 2012
4.4 (out of 5) in spring semester 2012

(b) Reviewer of scientific journals:

Information Sciences
IEEE Transactions on Dependable and Secure Computing
ACM Transactions on Information and Systems Security
IEEE Transactions on SMC part C
Journal of the American Society for Information Science and Technology
ACM Transactions on Embedded Computing Systems

(c) In the media:

Research Title	Date	Media Publication
Data Mining Opportunities in Geosocial Networks for Improving Road Safety	January 2013 December 2012 December 2012 January 2013 January 2013 December 2012 January 2013 January 2013 January 2013	Gigaom Globes Haaretz IBN JUF News The Jerusalem Post The Times of Israel UPI Yahoo! India News
Predicting Student's Exam Scores by Analyzing Social Network Data	March 2014 December 2012 December 2012 December 2012 December 2012 December 2012	Academia.edu Blog CTV News Nocamels NRG Maariv Phys.ORG Science Daily

| Friends or Foe? Fake Profile Identification in Online Social Networks | March 2013
July 2012
July 2012
July 2012 | The Connectivist
Examiner
Facerooks
Fox News |

	July 2012 August 2012 July 2012 July 2012 July 2012 July 2012 July 2012 June 2012	Hindustan Times Israel21c NBC News NDTV Tech2 Tech News Daily Think Digit The Times of Israel
Organization Mining using Online Social Networks	March 2013 April 2013 April 2013	MIT Technology Review NY Times Tecnoetica
Social Amplifier	August 2013 July 2013 July 2013	Academia.edu Blog IEEE Spectrum The Jerusalem Post
Homing Socialbots	September 2013	Infosec Institute
Data Mining of Online Genealogy Datasets for Revealing Lifespan Patterns in Human Population	December 2013	The Physics arXiv Blog
Possible Security Gap in Samsung Phone	January 2014 December 2013 January 2014 December 2013 January 2014 November 2013 December 2013	CSO Online Globes Info World Jewish Business News PC World Tech Central The Wall Street Journal

AirHopper: Bridging the air-gap between isolated networks and mobile phones using radio frequencies	November 2014	Ad Hoc News
	November 2014	Ars Technica
	October 2014	Bank Info Security
	November 2014	Bloomberg: GlobalTech
	October 2014	Computer World
	October 2014	Daily Bhaskar
	October 2014	Discovery News
	November 2014	FutureGov
	November 2014	HiperTextual
	November 2014	Mail Online
	November 2014	Mobile Market Portal
	November 2014	Network World
	November 2014	Norse
	October 2014	Phys.org
	October 2014	PC Advisor
	October 2014	RT
	June 2014	SC Magazine
	October 2014	SC Magazine
	December 2014	SC Magazine
	June 2014	Security Affairs
	October 2013	Security Week
	June 2014	Start Up Israel
	October 2014	Tech Worm
	October 2014	The Hacker News
	November 2014	The Times of Israel
	November 2014	Tom's Guide
	June 2014	The Register
	November 2014	TMCnet Blog
	November 2014	Threat Post
	November 2014	We Live Security
	November 2014	Wired
BitWhisper: Covert Signaling Channel between Air-Gapped Computers using Thermal Manipulations	March 2015	AABGU
	March 2015	Administrator
	April 2015	Audea
	March 2015	Before Its News
	June 2015	BOT24
	March 2015	CD Disk
	May 2015	Chip Online
	March 2015	CIOReview
	April 2015	Citizen's Journal
	March 2015	Click4Support
	April 2015	Code and Command
	March 2015	Communication ACM
	March 2015	CrazyChucks.com
	March 2015	Cyber Defense

	March 2015	Dark Matters
	March 2015	DefensiveSecurityPodcast
	March 2015	DerStandard.at
	March 2015	DigitalIC
	March 2015	Disqus
	March 2015	Extreme Tech
	March 2015	fNews
	April 2015	FanBoyGeek
	March 2015	Fedge
	March 2015	Geek
	March 2015	Geek.com
	March 2015	Golem
	June 2015	Hacking Lab
	March 2015	HackintoshOSX
	March 2015	Hack Read
	March 2015	Heise Online
	March 2015	Homeland Security Newswire
	March 2015	iHLS
	March 2015	IlFattoQuotidiano.it
	March 2015	InfoSecurity
	March 2015	Int'l Business Times: UK
	March 2015	ITCua
	March 2015	ITespresso
	March 2015	IT Security News
	March 2015	Journal Focus
	March 2015	LooTech
	March 2015	MuySeguridad.net
	March 2015	NeoTeo
	March 2015	NewsKiller
	April 2015	Network World
	March 2015	Nourishing Obscurity
	March 2015	OptClean
	April 2015	PCSafe Blog
	March 2015	PDM
	March 2015	PointRaiser
	March 2015	Popular Science
	March 2015	ProvanceTek
	March 2015	Phys.org
	April 2015	Routing
	March 2015	Saznajnovo
	March 2015	SAP Computing Network
	March 2015	SC Magazine
	March 2015	Security Affairs
	March 2015	SecurityLab.ru
	March 2015	Softpedia

	March 2015	SpeedyTown
	March 2015	Sputnik
	March 2015	Stack Exchange
	March 2015	Tech Explore
	March 2015	Tech Talk Thai
	March 2015	Tech Today
	March 2015	Tex Industries
	March 2015	The Hacker News
	March 2015	The Register
	March 2015	To Inform is to Influence
	March 2015	WatchGuard Security Ctr.
	March 2015	Wired
	March 2015	Wopular
GSMem: Data Exfiltration from Air-Gapped Computers over GSM Frequencies	July 2015	Cellular News
	July 2015	Int'l Business Times
	July 2015	Interference Technology
	July 2015	Innovation Toronto
	July 2015	E&T
	July 2015	SCMagazine
	July 2015	Security Week
	July 2015	Spam Fighter
	August 2015	Spam News
	July 2015	Tech Daily
	July 2015	The Register
	July 2015	Wired
Cyber Security Patrol	October 2015	Cyber Defense Magazine
	October 2015	Doncentrum
	October 2015	Drone Universities
	October 2015	Future Tense
	October 2015	Info Security Magazine
	October 2015	Information Week
	October 2015	Mapples.net
	October 2015	Motherboard
	October 2015	Recensioni Droni
	October 2015	SC Magazine
	October 2015	SC Magazine
	October 2015	Silicon Valley Business
	October 2015	Softpedia
	October 2015	SUTD
	October 2015	Techradar.Pro
	October 2015	The Hacker News
	October 2015	The Spill
	October 2015	Wired
	October 2015	WRP
USBee: Breaching the		

Air-Gap using USB	August 2016 August2016 August 2016 September 2016 September 2016	SC Magazine ARS Technica The Register Bleeping Computer Dark Reading
Disabling 911 services in the U.S.A	September 2016 September 2016 September 2016 September 2016 September 2016 September 2016 September 2016 September 2016 September 2016	Washington Post CNET The Register Graham Cluley HelpNetSecurity The Hacker News Hackread RT International Business Times
Breaching the Air gap using a computer fan	June 2016 June 2016 July 2016 September 2016	The Register WIRED INFOSEC National Cybersecurity Institute
Breaching the Air gap using a HDD	August 2016 August 2016	Threatpost Homeland Security News Wire