



Name: Nezer J. Zaidenberg
College of Management Academic Studies

Date: Feb 8th 2021

CURRICULUM VITAE

Personal Details

Permanent Home Address: 45 KKL st. Rechovot, Israel

Office Telephone Number: +972-3-9634283

Cellular Phone: 054-5531415

Electronic Address: scipio@scipio.org

Marital Status: single

Higher Education

A. Undergraduate and Graduate Studies

B.Sc Computer Science, Statistics and Operations research, Tel Aviv University, September 1999

M.Sc Operations Research, Tel Aviv University, May 2002

M.B.A specializing in finance, Tel Aviv University, June 2007

B. Doctoral Degree and Post-Doctoral Studies University of Jyväskylä June 2012

Dissertation under supervision of Prof Amir Averbuch and Prof Pekka Neittaanmäki

Dissertation title: "Developing advanced systems with aspects of virtualization"

2. DOCENT University of Jyväskylä December 2013

Field "VIRTUALIZATION AND PROTECTION OF DIGITAL CONTENT"

Academic Ranks and Tenure in Institutes of Higher Education

Dates	Institution and Department	Rank/Position
2015-Present	The collage of management Academic Studies, Israel	Senior Lecturer
2015-6	Shenkar college, Israel	Senior Lecturer Head of cyber proficiency
2014-5	Shenkar college, Israel	Lecturer

Offices in Academic Administration

2015-6 Head of cyber proficiency (Shenkar)

2017-2020 Head of Linux and infrastructure proficiency (College of Management)

2020-Present Head of cyber and infrastructure proficiency (College of Management)



Scholarly Positions and Activities outside the Institution

Teaching

Dates	Institution and Department	Rank/Position
2012-Present	University of Jyväskylä	Multiple roles
2011	Lecturer	
2012	Post Doc researcher	
2012-4	Researcher on TrulyProtect Project	
2015-7	Researcher on hardware rooted security project	
2018	Researcher	
2018- Present	Supervising Ph.D student (no formal position)	
2020-Present	New York University Abu-Dhabi Campus	Adjunct professor
Teaching (via zoom) Operating system course in XV6 environment		
2020-Present	Interdisciplinary center, Israel	Adjunct professor
Teaching competitive programming course Supervising M.Sc. students		
2019-Present	Bar Ilan university, Israel	Adjunct professor, Sport's (IOI) Captain
Teaching assembler and reversing course Coach and Captain for national IOI (International Olympiad in Informatics) team I was personal trainer for IOI 2020 and EJOI (European Junior Olympiad in informatics) 2020 gold medalists. A team I trained finished in the 2nd place world-wide in IEEEExtreme 2020		
2016-Present	Holon institute of Technology, Israel	Adjunct professor
Teaching competitive programming, Linux, cyber, real-time, operating systems, digital logic courses, Supervising M.Sc students		
2013, 2016	Shenkar college, Israel	Adjunct professor
Teaching Databases, compilers, cyber, Linux, cryptography courses		
2009-2015	Tel Aviv Jaffa College, Israel	Adjunct professor
Teaching Operating systems, Linux, advanced operating systems courses. supervising B.Sc and M.Sc students		
2009-2010	Ruppim College, Israel	Adjunct professor
Teaching operating systems, real time operating systems, OSX courses		
2010-2011	Kibbutzim seminar, Israel	Adjunct professor
Teaching operating systems, cyber security courses		
1999-2002, 2007-2012	Tel Aviv University, Israel	Multiple roles
Teaching Operating system, Linux courses Researcher on STRIMM project, EGI project Linux System administrator		



Supervising M.Sc students		
2020-Present	Ben-Gurion University Israel	
Supervising M.Sc student		

Scientific

Where	Period	Position and responsibilities
Tel Aviv University	2010-14	M.Sc theses reviewer
MTA	2013-14	M.Sc theses reviewer
IEEE/ACM CCGrid2021	2021	Program committee

Competitive programming

Where	Period	Position and responsibilities
IEEEExtreme	2020	Judge
IEEEExtreme	2012-2020	Proctor Proctor for most/all Israeli teams
IEEEExtreme	2014-2020	Coach Coach for all teams from College of management, Interdisciplinary center, Shenkar and Holon Institute of Technology, and ex-IOI teams. (all Israeli teams)
ICPC	2017-2020	Coach for teams from Interdisciplinary center, Holon Institute of Technology and college of management, Israel
IOI - International Olympiad Informatics	2020	Captain of Israel National team, Personal trainer for two
IATI - International Autumn Tournament in Informatics	2020	Team leader for Israel Junior (up to 15 y/o) and senior (up to 18 y/o) teams, coach for some teams
RMI – Romanian Masters of Informatics	2020	Team Leader
Israelmath	2021	Organizer of Israel under 15 CS olympiad



Participation in Scholarly Conferences

a. Active Participation

Date	Name of Conference	Place	Subject of Lecture/Discussion	Role
2011	CAO 2011	Finland	streaming	
2011	SPECTS 2011	Holland	LgDB	
2011	IEEE NAS 2011	China	Async mirroring	
2011	IEEE NSS 2011	Italy	TrulyProtect	
2012	ECCOMAS 2012	Austria	Games	
2013	IEEE ICI 2013	UZ	Grid2go	
2013	ECIW 2013	Finland	3 papers	Best paper
2013	SPECTS 2013	Canada	LgDb	
2014	ICCSM 2014	UK	2 papers	
2015	CSCloud 2015	NY	2 papers	
2016	Spepts 2015	Chicago	Caching	
2017	ICISSP2017	Portugal	Java protection	
2018	Systor 2018	Haifa	Posters	
2019	Systor 2019	Haifa	Posters	
2019	ECCWS 2019	Portugal	Multiple papers	
2019	ICISSP 2019	Czech	Memory acquisition	Selected for extended version
2020	SPECTS 2020	Zoom	Hyplet	
2020	IEEE NSS 2020	Zoom	Hyperwall	Best paper
2021	MODELSWARD 2021	Zoom	Hero vs. Zombie paper	
2021	ICISSP 2021	zoom	2 papers	

b. Organization of Conferences or Sessions

Date	Name of Conference	Place	Subject/Role of Conference, Comments	Role
2021	CCGrid 2021	Australia		Program committee

7. Invited Lectures\ Colloquium Talks

Date	Place of Lecture	Name of Forum	Presentation/Comments
2013	Shenkar, Israel	Colloquium	Virtualization
2014	UCD, Ireland	Colloquium	Erasmus visit
2015	JYU, Finland	Colloquium	TrulyProtect
2016	HIT, Israel	Colloquium	Bridge story
2017	JYU, Finland	Colloquium	Hardware rooted security
2018	Colman, Israel	Colloquium	Virtualization
2019	Colman, Israel	Colloquium	Hardware rooted security
2020	Bar Ilan, Israel	IOI group	Bridge story



8. Research Grants

a. Grants Awarded

Role in Research	Co-Researchers	Topic	Funded by/Amount	Year
PI	Pekka Neittanmaki	TrulyProtect	1.25M euro	2012
PI	Pekka Neittanmaki	Hardware rooted security	1.33M Euro	2015

9. Scholarships, Awards and Prizes

4. Ellen and Artturi Nyysosen foundation grant (18,600€) 2011
 5. Erasmus Mundus 2014
 6. TrulyProtect Business plan I co-authored won CCSU 2013 innovation award
 7. Shenkar college software engineering department excelling faculty member 2014
 8. Shenkar teaching excellence 2015
 9. Holon Institute of Technology (HIT) excellence award 2018
 10. College of management research grant 2018
 11. College of management research grant 2019
 12. College of management research grant 2020
 13. College of management Excelling researcher 2020
 14. Best paper NSS 2020
 15. I was personal trainer for IOI 2020 and EJOI 2020 gold medalist and IEEEExtreme 2nd worldwide team.
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10. Teaching

a. Courses Taught in Recent Years

mic courses

Year	School	Course Name	Type	Degree
2013-14	JYU	ITKST50- SECURE SYSTEM DESIGN	LECTURE	M.Sc
2013-14	JYU	ITKST51- OPERATING SYSTEM SECURITY 1	LECTURE	M.Sc
2013-14	JYU	ITKST52- OPERATING SYSTEM SECURITY 2	LECTURE	M.Sc
2011-12	JYU	TIES597 - FIBRECHANNEL	WORKSHOP	M.Sc
2011-2	JYU	TIES596 - TRUSTED COMPUTING	WORKSHOP	M.Sc
2014-5	JYU	TIES391 - HARDWARE ROOTED SECURITY	LECTURE	B.Sc
2015-20	COLMAN BB JYU IDC HIT	COMPETITIVE PROGRAMMING	WORKSHOP READING	B.Sc M.Sc
2014-5	MTA	CYBER WORKSHOP	Workshop	M.Sc
2009-11	MTA TAU	LINUX WORKSHOP	Workshop	B.Sc
2014-6	SHENKAR	SECURE ENGINEERING	Lecture	B.Sc
2015-7	SHENKAR	CYBER SYSTEMS	Lecture	B.Sc
2011-5	SMKB SHENKAR	UNIX SYSTEM PROGRAMMING	Workshop	B.Sc
2010-4	TAU MTA	ADVANCED TOPICS IN OS	Lecture	M.Sc
2010-20	RUPPINHIT	REAL TIME OS (CS, SE, EE VERSIONS)	Lecture	B.Sc
2016-20	HIT	CYBER FOR RT SYSTEMS	Workshop	B.Sc
2010-5	TAU MTA SMKB RUPPIN	OPERATING SYSTEMS (CS, SE VERSIONS)	Lecture	B.Sc
2020	NYU	OPERATING SYSTEMS (XV6)	Lecture	B.Sc
2013-4	SHENKAR	DATABASES	Lecture	B..Sc
2007-8	MTA	CALCULUS I	Lecture	B.Sc
2014-6	COLMAN	CLOUD INFRASTRUCTURE	Workshop	B.Sc
2014-5	COLMAN	LARGE SCALE INTERNET INFRA	Workshop	B.Sc
2015-6	SHENKAR	COMPILERS	Lecture	B.Sc
2015-6	SHENKAR SMKB	CRYPTOGRAPHY	Lecture	B.Sc
2014-20	JYU COLMAN BB	SEMINARS LINUX , CYBER, BIG DATA	Seminar	B.Sc M.Sc
2016-20	COLMAN	INTRO TO CYBER	Lecture	B.Sc
2016-7	HIT	DIGITAL LOGIC	Lecture	B.Sc
2016-21	COLMAN BB	LINUX KERNEL	Workshop	B.Sc
2010-21	COLMAN	B CLOUD SECURITY INFRASTRUCTUREEW	Lecture	B.Sc
2020-21	COLMAN	ADVANCED CYBER	Lecture	B.Sc
2018-9	COLMAN BB	NETWORKING	Lecture	B.Sc
2015-7	COLMAN	NETWORKING WORKSHOP	workshop	B.Sc
2019-21	BIU COLMAN	COMPUTER STRUCTURE (x86 ASSEMBLER, GPGPU)	Lecture	B.Sc
2019-20	BIU	IOI NATIONAL TEAM COACHING AND CAPTAIN		-



b. **Supervision of Graduate Students (graduated)**

Name of Student and school	Title of Thesis	Degree	Completion Date / in Progress	Students' Achievements
Michael Kiperberg @ University of Jyväskylä	Preventing Reverse Engineering of Native and Managed Program	Ph.D	Graduated 2015	Cum laude; Michael (4/5) is now a tenure track faculty member in SCE, Israel
Amit Resh @ University of Jyväskylä	Enforcing Trust for Execution-Protection in Modern Environments	Ph.D	Graduated 2016	Amit is now a tenured faculty member in Shenkar
Roe Leon @ University of Jyväskylä (co supervision w/ Prof P. Neittaanmäki)	Execution protection of managed code	Ph.D	Graduated 2019	Summa cum laude 5/5 Roe Leon is now tenure-track faculty member in Shenkar
David Bass @ Tel Aviv Jaffa academic college	Managed code support for preventing the execution of unauthorized software	M.Sc	Graduated 2017	Cum laude
Alexei Sragovitch @ Tel Aviv Jaffa-academic college	Signature verification ability on Shared objects in Linux OS based systems	M.Sc	Graduated 2017	
Vered Gatt @ University of Jyväskylä	Large cell defect inspection in semi-conductors manufacturing	M.Sc	Graduated 2016	Cum laude
Evyatar Tamir @ Tel Aviv Jaffa-academic college)	TrulyTrusted OS Drivers	M.Sc	Graduated 2016	Summa Cum Laude
Asaf Algawi @ University of Jyväskylä	Enforcing Trust in modern environments	M.Sc	Graduated 2015	
Roe Leon @ University of Jyväskylä	Hardware rooted security for UNIX based systems	M.Sc	Graduated 2015	
Asaf David @ Tel Aviv Jaffa-academic college	Trusted Video Delivery	M.Sc	Graduated 2014	
Limor Gavish –@ Tel Aviv university	New Caching Policies for Memcached	M.Sc	Graduated 2013	
Tomer Margalit @ Tel Aviv University	Replication of Block Devices and Virtual Machines on Low Bitrate Systems	M.Sc	Graduated 2013	
Tamir Erez @ Tel Aviv Jaffa-academic	Grid2Go	M.Sc	Graduated 2013	Summa cum laude



Eviatar Khen @ Tel Aviv University	Using Virtualization for building kernel development tools	M.Sc	Graduated 2014	
Yuval Meir @ Tel Aviv University	A Virtualization-Based Approach to Software Protection on the Personal Computer Platform	M.Sc	Graduated 2014	
Amit Resh @ University of Jyväskylä	TrulyProtect software copy protection	M.Sc	Graduated 2013	
Michael Kiperberg @ Tel Aviv University	software protection through virtualization	M.Sc	Graduated 2012	Cum laude



c. Supervision of Graduate Students (ongoing)

Amir Hussain Rahnama @ University of Jyväskylä	Hyperparameter optimization	Ph.D	In progress (co supervision w/ Prof P. Neittaanmäki)	Inactive
Juhani Rauhala @ University of Jyväskylä	Willingness to spend on privacy and security	Ph.D	In Progress (co supervision w/ Prof P. Tyrvaainen and Prof P. Neittaanmäki)	To graduate in 2022
Asaf Algawi @ University of Jyväskylä	Managed code protection	Ph.D	In progress (co supervision w/ Prof P. Neittaanmäki)	To graduate in 2021
Raz Ben Yehuda @ University of Jyväskylä	IoT cyber protection	Ph.D	In progress (co supervision w/ Prof P. Neittaanmäki and Prof. T. Hamalainen)	To graduate in 2021 Raz is to join tenure track position with MTA
Aviv Avitan @ Open University, Israel	Trusted computing	M.Sc	progress In	Inactive
Ron Stajnsrod @ IDC	Trusted computing	M.Sc	In progress	To graduate and also start Ph.D
Amit Kitenberg @ IDC	Trusted computing	M.Sc	In progress	
Roi Vazan @ HIT	Forensics	M.Sc	In progress	
Lior Siag @ BGU	Infrastructure	M.Sc	In progress	
Guy Amit @ BGU	Data leak prevention	M.Sc	In progress	



11. Miscellaneous

Miscellaneous

1. IEEE senior member since 2015
2. ACM member since 2017
3. SCS member since 2017
4. INSTICC member since 2017

Hobbies

Bridge life master, 3rd 2020 Israel mixed pairs. 3rd national cup 2008 5th national pairs 2007 member of national student team to European championship Rotterdam 2005

Teaching competitive programming for school kids.

Supervising and judging Israel Olympiad for Informatics up to 15 years old.

Languages:



Mother tongue



C2



B1/2



A1/2



A1/2

Other

I suffered from Long disability leave from September 2012-April 2013 following car accident disability leave.



12. Professional Experience

EMPLOYMENT POSITIONS

- Axanna - VP R&D 2007-2008
 - Managed 3M\$ per annum budget
- Uterasoft – Founder and CTO 2005-2007
 - Led two rounds of financing
- Corigin – Project manager and chief software architect 2002-2005
 - Led two flagship projects
- vTtrails – Founder, President and CTO 1999-2002
 - Led 3 rounds of financing, Managed team of 40
- ECI telecom – System administrator, DBA 1998-1999
- Tel Aviv University – System administrator 1997-1998

CONSULTANT

- *Matrix defence (Herzelia, Israel); Fellow 2020-Present*
 - *TrulyProtect (Jyväskylä, Finland); Scientific advisor to University of Jyväskylä spin off company. Inventor of 5 patents, product management 2015-2020*
 - *Perion (Rehovot, Israel); consultant; Mac (OSX) internals 2013-14*
 - *MCE-systems(Tel Aviv, Israel); Consultat; User space driver development 2013*
 - *Videocells (Herzelia, Israel); acting CTO; redesigned and led the company through product and infrastructure transformations 2011-2012*
 - *Expay-Global (Israel/Bulgaria); acting CTO; Solution infrastructure and R&D focus, security, PCI authorization. Forensic analysis post mortem analysis for cyber incident 2011-2012*
 - *Diligent/IBM (Tel Aviv Israel); consultant; Fibrechannel driver development under Linux 2010-11*
 - *NDS/Cisco (Jerusalem, Israel); consultant; provided training on Mac architecture internals; generated repeated business for the implementation of three products. Designed PS3 port of PC-Show product. 2010-11*
 - *SintecMedia (Jerusalem, Israel); Technology advisor for the CTO; Software architecture for STB. Data mining. 2010-11*
 - *EDF Energy (Plymouth, UK); UK's #1 utility provider. Transfer from mainframe to open systems. 2009-2010*
 - *Friendly Technologies (Ramat Gan, Israel); acting CTO; Faced product design and performance challenges. 2008-2009*
 - *Axxana (Tel Aviv, Israel); consultant; Research on high speed interconnects 2007, 2009*
 - *Forex.fr (Israel-France) software design and cyber security 2005*
 - *Infowrap/Blusky (Israel/Italy); acting CTO; Supervised technology transfer to Italian buyer. 2005*
 - *Kardan VC (Tel Aviv, Israel); headed technology due-diligence for investment. 2005*
 - *Finjan (Natanya, Israel); freelance developer; Windows to Solaris porting 2002*
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PUBLICATIONS

A. Ph.D. Dissertation

Under Supervision of Prof. Pekka Neittaanmäki and Prof. Amir Averbuch

<https://jyx.jyu.fi/dspace/bitstream/handle/123456789/38273/9789513947637.pdf?sequence=1>

B. Articles in Refereed Journals

Published

1. Averbuch A., Kiperberg M., **Zaidenberg N.** (2013) "Truly Protect : An Efficient VM-Based Software Protection" IEEE System journal September 2013 455-466
<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6553406>
2. Kiperberg M. and **Zaidenberg N.** (2013) "Efficient Remote Authentication" Journal of information warfare October 2013
3. Resh, A.; Kiperberg, M.; Leon, R.; **Zaidenberg, N.J.** Preventing Execution of Unauthorized Native-Code Software. JDCTA, International Journal of Digital Contents Technology and its Applications, 2017.
4. Resh, A.; Kiperberg, M.; Leon, R.; **Zaidenberg, N.J.** System for Executing Encrypted Native Programs. JDCTA, International Journal of Digital Contents Technology and its Applications, 2017.
5. Rahnama, A.H.A., Toloo, M. & **Zaidenberg, N.J.** An LP-based hyperparameter optimization model for language modeling. *J Supercomput* **74**, 2151–2160 (2018).
<https://doi.org/10.1007/s11227-018-2236-6>
6. Kiperberg M. , Leon R., Resh A., Algawi A. and **Zaidenberg N. J.**, "Hypervisor-Based Protection of Code," in *IEEE Transactions on Information Forensics and Security*, vol. 14, no. 8, pp. 2203-2216, Aug. 2019, doi: 10.1109/TIFS.2019.2894577.
7. Leon R. S., Kiperberg M., Leon Zabag A. A., Resh A., Algawi A. and **Zaidenberg N. J.**, "Hypervisor-Based White Listing of Executables," in *IEEE Security & Privacy*, vol. 17, no. 5, pp. 58-67, Sept.-Oct. 2019, doi: 10.1109/MSEC.2019.2910218.
8. Ben Yehuda, R., **Zaidenberg, N.J.** Protection against reverse engineering in ARM. *Int. J. Inf. Secur.* **19**, 39–51 (2020). <https://doi.org/10.1007/s10207-019-00450-1>

Accepted for Publication

C. Articles or Chapters in Scientific Books

Published

1. Averbuch, A., Roditi, Y., & **Zaidenberg, N.** (2013). PPPC — peer-2-peer streaming and algorithm for creating spanning trees for peer-2-peer networks. In S. Repin, T. Tiihonen, & T. Tuovinen (Eds.), *Numerical Methods for Differential Equations, Optimization, and Technological Problems*. Dedicated to Professor P. Neittaanmäki on His 60th Birthday (pp. 363-377).



Computational Methods in Applied Sciences (27). Berlin: Springer. doi:10.1007/978-94-007-5288-7_20

2. **Zaidenberg N.**, Resh A. (2015) Timing and Side Channel Attacks. In: Lehto M., Neittaanmäki P. (eds) *Cyber Security: Analytics, Technology and Automation*. Intelligent Systems, Control and Automation: Science and Engineering, vol 78. Springer, Cham. https://doi.org/10.1007/978-3-319-18302-2_11
3. **Zaidenberg N.**, Neittaanmäki P., Kiperberg M., Resh A. (2015) Trusted Computing and DRM. In: Lehto M., Neittaanmäki P. (eds) *Cyber Security: Analytics, Technology and Automation*. Intelligent Systems, Control and Automation: Science and Engineering, vol 78. Springer, Cham. https://doi.org/10.1007/978-3-319-18302-2_13
4. Harison E., **Zaidenberg N.** (2018) Survey of Cyber Threats in Air Traffic Control and Aircraft Communications Systems. In: Lehto M., Neittaanmäki P. (eds) *Cyber Security: Power and Technology*. Intelligent Systems, Control and Automation: Science and Engineering, vol 93. Springer, Cham. https://doi.org/10.1007/978-3-319-75307-2_12
5. **Nezer Jacob Zaidenberg** (2019) Hardware Rooted Security in Industry 4.0 Systems in NATO Science for Peace and Security Series - D: Information and Communication Security Volume 51: Cyber Defence in Industry 4.0 Systems and Related Logistics and IT Infrastructures Pages 135 – 151 DOI 10.3233/978-1-61499-888-4-135
6. Rauhala, J., Tyrväinen, P., & **Zaidenberg, N.** (2020). Online Expression, Personal Cybersecurity Costs, and the Specter of Cybercrime. In Khosrow-Pour D.B.A., M. (Ed.), *Encyclopedia of Criminal Activities and the Deep Web* (pp. 990-1002). IGI Global. <http://doi:10.4018/978-1-5225-9715-5.ch067>
7. Algawi, A., Kiperberg, M., Leon, R. S., Resh, A., & **Zaidenberg, N. J.** (2020). Modern Blue Pills and Red Pills. In Khosrow-Pour D.B.A., M. (Ed.), *Encyclopedia of Criminal Activities and the Deep Web* (pp. 1136-1149). IGI Global. <http://doi:10.4018/978-1-5225-9715-5.ch078>
8. **Zaidenberg, N. J.** (2020). Game Console Protection and Breaking It. In Khosrow-Pour D.B.A., M. (Eds.), *Encyclopedia of Criminal Activities and the Deep Web* (pp. 449-461). IGI Global. <http://doi:10.4018/978-1-5225-9715-5.ch031>
9. **Zaidenberg, N. J.**, Ben Yehuda, R., & Leon, R. S. (2020). Arm Hypervisor and Trustzone Alternatives. In Khosrow-Pour D.B.A., M. (Ed.), *Encyclopedia of Criminal Activities and the Deep Web* (pp. 1150-1162). IGI Global. <http://doi:10.4018/978-1-5225-9715-5.ch079>
10. **Zaidenberg N.J.**, Kiperberg M., Yehuda R.B., Leon R., Algawi A., Resh A. (2020) Hypervisor Memory Introspection and Hypervisor Based Malware Honey-pot. In: Mori P., Furnell S., Camp O. (eds) *Information Systems Security and Privacy*. ICISSP 2019. Communications in Computer and Information Science, vol 1221. Springer, Cham. https://doi.org/10.1007/978-3-030-49443-8_15

Accepted for Publication

11.

D. Articles in Conference Proceedings

Published

1. Averbuch, A., Roditi, Y., & **Zaidenberg, N.** (2011). An algorithm for creating a spanning graph for peer-2-peer internet broadcast. In S. Repin, T. Tiihonen, & T. Tuovinen (Eds.), *Proceedings of CAO2011: ECCOMAS Thematic Conference on Computational Analysis and Optimization* : University of Jyväskylä, June 9-11, 2011 (pp. 73-76). Reports of the Department of Mathematical Information Technology. Series A, Collections (1/2011). [Jyväskylä]: University of Jyväskylä



2. Khen E., **Zaidenberg N.** & Averbuch A. (2011) Using virtualization for online kernel profiling, code coverage and instrumentation SPECTS 2011
http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=5984854&tag=1
3. Averbuch A., T. Margalit, N. **Zaidenberg N.** & Khen E. (2011) "A low bitrate approach to replication of block devices and virtual machines" IEEE NAS 2011
["http://www.computer.org/csdl/proceedings/nas/2011/4509/00/4509a180-abs.html"](http://www.computer.org/csdl/proceedings/nas/2011/4509/00/4509a180-abs.html)
4. Averbuch A., Kiperberg N, **Zaidenberg N.** (2011) "An Efficient VM-Based Software Protection" IEEE NSS 2011 pages 121-128 <http://www.cs.tau.ac.il/~kiperber/truly.pdf>
5. **Zaidenberg N.** & Eshel I. (2012) "Zaidenberg's learning model for the evolution of altruistically cooperation" ECCOMAS 2012
6. Khen E., **Zaidenberg N.**, Averbuch A. & Fermovich E. (2013) "LgDb 2.0: A code coverage and profiler architecture for the Linux kernel" SPECTS 13
7. Erez T. & **Zaidenberg N.** (2013) "Grid2Go – A web based internet of things grid computing engine requiring only a browser. ICI 2013
8. Resh A. & **Zaidenberg N.** (2013) "Can keys be hidden inside the CPU on modern Windows host" ECIW 2013 pages 231-235
9. **Zaidenberg N.** & David A. (2013) Truly protect video delivery ECIW 2013 pages 405-407
10. Kiperberg M. & **Zaidenberg N.** (2013) "Efficient Remote Authentication" ECIW 2013 pages 144-148
11. Tamir E., **Zaidenberg N.** & Neittaanmäki P. (2014) "TrulyTrusted Operating System Environment" ICCSM 2014 pages 154-157
12. Algawi A., Neittaanmaki P., **Zaidenberg N.** & Parisinos T. (2014) "In kernel implementation of RSA routines" ICCSM 2014 pages 149-153
13. David A. & **Zaidenberg N.** (2014) "Maintaining streaming video DRM" to appear ICCSM 2014 pages 158-162
14. **Zaidenberg N.** (2014) HoneyGuard - Opensource VSaaS ICCMS 2014 158-162
15. Kiperberg M. Resh A. and **Zaidenberg N.J.** Remote Attestation of Software and Execution-Environment in Modern Machines IEEE CSCloud 2015
16. **Zaidenberg N.J.** , Gavish L. and Meir Y.- New caching algorithms performance evaluation SPECTS 2015
17. Khen E. and **Zaidenberg N.J.** Detecting Kernel Vulnerabilities During the Development Phase IEEE CSCloud 2015
18. Kiperberg, M.; Resh, A.; Algawi, A.; **Zaidenberg, N.J.** System for Executing Encrypted Java Programs. 3rd International Conference on Information Systems Security and Privacy (ICISSP 2017), 2017.(*)
19. Ben Yehuda R., Zaidenberg N.J Hyplets-Multi Exception Level Kernel towards Linux RTOS Proceedings of the 11th ACM International Systems and Storage Conference (SYSTOR 2018), 2018 (*)
20. Algawi A., Kiperberg M., Leon R., Resh A., **Zaidenberg N.** "Hypervisor-assisted Atomic Memory Acquisition in Modern System" ICISSP 2019, 2019 (*)
21. Algawi A., Kiperberg M., Leon R., Resh A, **Zaidenberg N.** "Efficient protection for VDI workstations" IEEE CScloud 2019, 2019 (*)
22. Ben-Yair I., Rogovoy P., **Zaidenberg N.J.** AI and eBPF-based Performance Anomaly Detection Proceedings of the 11th ACM International Systems and Storage Conference (SYSTOR 2019), 2019(*)
23. Rauhala J., P Tyrväinen, **Zaidenberg N.J.** Online Expression and Spending on Personal Cybersecurity ECCWS 2019 18th European Conference on Cyber Warfare and Security, 2019 (*)



24. Algawi A., Kiperberg M., Leon R., **Zaidenberg N.** "Using hypervisors to overcome Structured Exception Handler attacks" ECCWS 2019 18th European Conference on Cyber Warfare and Security, 2019(*)
25. Ben Yehuda R., Leon R., **Zaidenberg N.** ARM Security Alternatives ECCWS 2019 18th European Conference on Cyber Warfare and Security, 2019(*)
26. Rauhala J., Tyrväinen P., **Zaidenberg N.** "Does Time Spent on Device Security and Privacy Inhibit Online Expression?" ECCWS 2019 18th European Conference on Cyber Warfare and Security, 2019(*)
27. Algawi A., Kiperberg M., Leon R., Resh A., **Zaidenberg N.J.** creating modern blue pills and red pills ECCWS 2019 18th European Conference on Cyber Warfare and Security, 2019(*)
28. Ben Yehuda R., **Zaidenberg N.J.** The hyplet-Joining a Program and a Nanovisor for real-time and Performance 2020 International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS 2020), 2020(*)
29. Kiperberg M., Ben Yehuda R., **Zaidenberg N.J.** "HyperWall: A Hypervisor for Detection and Prevention of Malicious Communication" NSS2020 14th International Conference on Network and System Security – 2020(*) , **Best paper award**
30. Amit G, Yeshooroon A. Kiperberg M., **Zaidenberg N.J.** DLP-Visor: A Hypervisor-based Data Leakage Prevention System ICISSP 2021 (*) (Accepted)
31. Kiperberg M. **Zaidenberg N.J.** HyperPass: Secure Password Input Platform ICISSP 2021 (*) (Accepted)
32. Elinav Y. Moshinsky A. Siag L. **Zaidenberg N.J.** HERO vs. Zombie: Identifying Zombie Guests in a Virtual Machine Environment Modelsward 2021 (*) (Accepted)

E. Entries in Encyclopedias

1. Our research about the bridge scandal is mentioned in Wikipedia and other bridge resources https://en.wikipedia.org/wiki/Cheating_in_bridge

F. Other Scientific Publications

Published

1. M.Sc thesis : "sFDPC and the Internet real time streaming packet cascading" **Zaidenberg N.** Tel Aviv University September 2001
2. Resh, A.; Kiperberg, M.; Leon, R.; **Zaidenberg, N.J.** Preventing Execution of Unauthorized Native- Code Software. *Reports of the Department of Mathematical Information Technology, Series B. Scientific Computing, No. B 11/2016, ISBN 978-951-39-6809-0, 2016 (*)*
3. Resh, A.; Kiperberg, M.; Leon, R.; **Zaidenberg, N.J.** System for Executing Encrypted Native Programs. *Reports of the Department of Mathematical Information Technology, Series B. Scientific Computing, No. B 12/2016, ISBN 978-951-39-6810-6, 2016 (*)*
4. Defcon 24 presentation on bridge scandal 2016 "catching a cheat" (*)

G. Other Publications

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ward.

H. Other Works Connected with my Scholarly Field

[Hebrew] תכנות תחרותי קבוצת גריזלי. (ספר לימוד בעברית בתכנות תחרותי מופץ חינם)

I. Submitted Publications



1. "Hypervisor-assisted Dynamic Malware Analysis" w/ R. Leon M. Kiperberg and A.A. Zabag-Leon
2. "The offline microvisor" w/ R. Ben Yehuda
3. "Trustzone attack" w/ R. Stajnsrod and R. Ben Yehuda
4. "C-Flat nanovised" w/ R. Ben Yehuda A. Aronov O. Ekstein
5. "HyperIO: Hypervisor-assisted Secure Input/Output" w/ M. Kiperberg

J. Patents

1. Virtual Machine Software Protection" N. Zaidenberg and M. Kiperberg (US 13/889,609 granted)
 2. "System and Methods for CPU Cache Pinning of a Computing Device" N. Zaidenberg M. Kiperberg and A. Resh (PCT/IB2014/065767 US 14/088,406 granted)
 3. System and Methods for Remote Software Authentication of a Computing Device N Zaidenberg M. Kiperberg and A. Resh (PCT/IB2014/065771 US 14/088,405 granted)
 4. System for Execution of Encrypted Managed Programs N Zaidenberg M. Kiperberg and A. Resh US 14/938,015 (pending)
 5. System and Methods for Hypervisor based protection of code (US 16/980,468 (pending))
- 3 more US patents in the field of peer-2-peer streaming submitted with vTrails (expired.)

K. Appearances in international press

bridge scandal - partial list

China (+English)

http://news.xinhuanet.com/english/2016-06/17/c_135443143.htm

http://www.china.org.cn/world/Off_the_Wire/2016-06/17/content_38684032.htm

Finland (+English)

<http://www.karjalainen.fi/uutiset/uutis-alueet/kotimaa/item/108487-jyvaskylan-yliopiston-tutkija-loysi-bridgen-huippupelaajien-kayttaman-vilpin>

<http://yle.fi/uutiset/3-8962216>

<http://www.ksml.fi/teemat/sunnuntaisuomalainen/Jyv%C3%A4skyl%C3%A4I%C3%A4istutkija-paljasti-korttipelin-Euroopan-mestarit-huijareiksi/910039>

<http://www.radiokompassi.fi/uutiset/jyvaskylan-yliopiston-tutkija-paljasti-bridgen-huippupelaajien-kayttaman-vilpin>

Israel (+English)

<http://www.haaretz.com/israel-news/sports/.premium-1.722651>

www.haaretz.co.il/captain/net/.premium-1.2959424

Italy + English (International)

<http://neapolitanclub.altervista.org/eng/ev-eng/fisher-schwartz-new-research.html>

<http://neapolitanclub.altervista.org/itl/caso-fisher-schwartz-una-nuova-ricerca.html>

Netherlands

<http://www.imp-bridge.nl/nieuws-archief/hoefisher-schwartz-vals-speelden>

International /USA

<http://bridgewinners.com/article/view/three-israelis-say-theyve-broken-the-full-fisher-schwartz-code/>



Numerous appearances in Israeli press as cybersecurity expert and as coach of gold-medal winning IOI teams.

L. Summary of My Research Activities and Future Plans

I am a researcher in the field of systems and cyber security. I am also expert on x86 and ARM architecture and Linux internals.

My latest research (e.g. paper nine and numerous paper still under review) focus on forensics, digital investigation and detection of attacks. This exciting research field affects national security as the latest threats arrive in unknown fronts and forms. I have several other submitted papers waiting for a decision in this field.

I am also interested in trusted computing, protection against reverse engineering and cybersecurity of critical infrastructures. Most of my papers come from this field.

Last I am lately started researching on overcoming air-gapped networks. Such research is very interesting for homeland security agencies.

I demonstrate that I am a research leader capable of gathering and leading groups of younger researchers. I showed this with TrulyProtect team that included 5 PhDs at JYU (3 already finished and two will graduate soon) and 14 M.Sc students (currently supervising five more) in JYU and other schools.
