

Marcin Piotr PAWLOWSKI
Phone: 0048 696 228 393
Email: pawlowski.mp@gmail.com



Education

- 2017** **WARSAW UNIVERSITY OF TECHNOLOGY**, Poland.
Doctorate in Computer Science.
Thesis titled: *Lightweight, scalable and manageable link-layer authentication for security of the process of acquiring network access for the Internet of Things devices.*
- 2013** **AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY IN KRAKOW**, Poland.
Bachelor of Science Degree in Electronics and Telecommunications Engineering – 3.5-year program.
Finished with thesis: *Analysis of efficiency of Xen virtualization environment.*
- 2010** **JAGIELLONIAN UNIVERSITY IN KRAKOW**, Poland.
Master of Science Degree in Computer Science – Uniform Master’s 5-year program.
Finished with thesis: *Assembly of laboratory for executing and analyzing attacks and threats in computer networks* (with great focus on wireless networks security).

Summary

Interested in applying scientific knowledge in practical solutions, designing strategies and solutions, product development. Likes research and development projects that require expertise in security, networks and computing. Have full-stack knowledge with top-down and bottom-up approaches. Background is a combination of academia and business experience. Can work alone, in a team or lead a team. Passionate, motivated and not afraid of any challenge.

Scientific summary

Authored and co-authored 6 journal papers and 8 conference publications; over 190 citations and h-index 5 (from Google Scholar). Served as Technical Program Committee member for international conferences (IEEE ICC), summits (GIoTS), symposiums (UNet, IEEE TENSYP) and forums (IEEE WF-IoT, IoTGIF). Reviewed papers for renowned journals (Elsevier, IEEE).

Professional Experience

- 2018** AKENA, POLAND.
Cryptography and Blockchain Researcher: cryptography and blockchain research, scientific papers translation to development team, proof-of-concept design and development of cryptographic and blockchain algorithms and protocols..
- 2017 – 2018** SECURE SECURE, UNITED KINGDOM.
Innovation Associate: IoT security research, vulnerabilities discovery, development of penetration tests tools and methods and reporting, security compliance specifications and innovation management. *Project supported by Horizon 2020 Innovation Associate pilot program.*

- 2016 – 2017** HOP UBIQUITOUS, SPAIN.
Head of Security/Principal Security Researcher: Research and development of security mechanism for the Internet of Things; IoT solutions security investigation; Envisioning and designing new security solutions for IoT products; Integration of security standards with the company solutions; Representation of the company in standards development working groups.
- 2014 – 2015** UNIVERSITY OF APPLIED SCIENCES - WESTERN SWITZERLAND, SWITZERLAND.
 (18 months)
Researcher: Analysis, design and evaluation of Bootstrapping, Authentication, Security and Trust for the Internet of Things Networks - Extending IEEE 802.15.4 with IEEE 802.1X support on MSP430 devices with ContikiOS; ECC optimization for Jennic MCUs; EAP authentication methods design; EAP protocol optimization; Design and develop security scheme for Internet of Things networks; Analyze and optimize designed solution; C embedded programming for MSP430 constrained devices; IEEE 802.15.4 MAC (link) layer modifications of ContikiOS implementation; Implement various authentication mechanisms; Design and implement authentication protocols.
- 2013 –2014** WiMAX NETWORKS, POLAND.
Developer: Development and integration of provisioning system for simplifying installation process; Embedded linux programming; Design automatic client device commissioning solution for large area wireless internet service provider; Develop firmware based on embedded Linux for access point devices with an automatic configuration service; Protect all process with wireless security solutions (WPA-Enterprise); Design a frontend for the solution (hardest part); Prepare solution documentation.
- 2010 – 2014** NINTHELL, POLAND.
Owner and researcher: Wireless networks security, penetration testing and wireless networks solution development.
- 2012** GOOGLE, GSOC, POLAND.
 (3 months)
Contract Developer: NAT64/46 and NPTv6 integration with NPF NetBSD Packet Filter.
- 2010** EVIZONE, POLAND.
 (3 months)
Contract Penetration Tester: Conducting various security related application tests.
- 2007 – 2009** HAKIN9 ENGLISH EDITION.
Volunteer: Merit support.

Certificates

- 2018** C)PTE: CERTIFIED PENETRATION TESTING ENGINEER.
 mile2, Qualification date: 2018-03-07, Certificate number: 805100.
- 2018** C)PTC: CERTIFIED PENETRATION TESTING CONSULTANT V2.
 mile2, Qualification date: 2018-03-16, Certificate number: 816400.
- 2018** CIS LI: ISO 27001 CERTIFIED ISMS LEAD IMPLEMENTER.
 IBITGQ, Qualification date: 2018-04-20, Certificate number: 487698.
- 2018** CIS LA: ISO 27001 CERTIFIED ISMS LEAD AUDITOR.
 IBITGQ, Qualification date: 2018-05-04, Certificate number: 757108.

Trainings

- 2018** Industrial Innovation Management in the context of the European SME Innovation Associate-pilot.

2018	Offensive Security: Penetration Testing with Kali Linux (PWK), ongoing, OSCP certification pending.
2018	Offensive Security: Cracking the Perimeter (CTP), ongoing, OSCE certification pending.
2018	Certified Information Systems Security Professional, done, certification pending.
2010	Advanced Juniper Networks Routing in the Enterprise.
2010	Networks Security.
2010	Operating Juniper Networks Routing in the Enterprise.
2009	WWW Application Security.

Teaching Experience

2012	WIMAX NETWORKS. FreeBSD system Administration.
2011 – 2012	JAGIELLONIAN UNIVERSITY. Open Source Networks Workshops.
2011 – 2012	JAGIELLONIAN UNIVERSITY. Data Transmission Fundamentals.
2011 – 2012	JAGIELLONIAN UNIVERSITY. IPv6 Workshops.

Languages

Polish:	mother tongue.
English:	fluent.

Professional skills

Coding in C and also various assemblers, Python, C++, Perl, Shell...
 Running Unix-like, ContikiOS and FreeRTOS operating systems.
 Working with AVR, MSP430, Cortex-M3, Cortex-A8 and i386+ processors.
 Computing with FPGA, CUDA technologies.
 Building networks using OSPF, BGP, RIP, MPLS, RPL.
 Communicating by IPv4, IPv6, 6LowPAN, TCP, UDP, ICMPv4, ICMPv6, CoAP.
 Networking with 802.11, 802.15.4, BLE, 802.16 and basic GSM, UMTS, LTE.
 Protecting using WPA, EAP, TLS, DTLS, Radius, pf.
 Attacking using appropriate tools.
 Knowing ways around HP Blade and Intel Modular Server solutions.
 Virtualizing thanks Xen, vSphere, Hyper-V, KVM, LXC, Jail, OpenStack and OpenNebula.
 Soldering electronics at basic level.
 Describing electronics using VHDL, Verilog, SystemC.
 Despising Java.

List of journal publications

- [1] Antonio J Jara, Luc Dufour, Gianluca Rizzo, Marcin Piotr Pawlowski, Dominique Genoud, Alexandre Cotting, Yann Bocchi, and Francois Chabbey. I-bat: A data-intensive solution based on the internet of things to predict energy behaviors in microgrids. *International Journal of Data Warehousing and Mining (IJDWM)*, 12(2):39–61, 2016.
- [2] Marcin Piotr Pawlowski, Antonio J Jara, and Maciej J Ogorzalek. Compact extensible authentication protocol for the internet of things: Enabling scalable and efficient security commissioning. *Mobile Information Systems*, 2015, 2015.
- [3] Marcin Piotr Pawlowski, Antonio Jara, and Maciej Ogorzalek. Harvesting entropy for random number generation for internet of things constrained devices using on-board sensors. *Sensors*, 15(10):26838–26865, 2015.
- [4] Leandro Marin, Marcin Piotr Pawlowski, and Antonio Jara. Optimized ecc implementation for secure communication between heterogeneous iot devices. *Sensors*, 15(9):21478–21499, 2015.
- [5] Jose L Hernandez-Ramos, Marcin Piotr Pawlowski, Antonio J Jara, Antonio F Skarmeta, and Latif Ladid. Toward a lightweight authentication and authorization framework for smart objects. *IEEE Journal on Selected Areas in Communications*, 33(4):690–702, 2015.
- [6] Marcin P Pawlowski, Antonio J Jara, and Maciej J Ogorzalek. Harvesting entropy from on-board sensors of constrained devices for hardening security of iot communication mechanisms. *Research Briefs on Information & Communication Technology Evolution*, 1(3), 2015.

List of conference publications

- [1] Marcin Piotr Pawlowski and David Linten. SecIoT: Towards a standardized approach for automated threats detection for internet of things. In *ETSI Security Week 2018*. European Telecommunications Standards Institute, 2018.
- [2] Marcin Piotr Pawlowski, Antonio J Jara, and Maciej J Ogorzalek. Maximizing the extensible authentication protocol maximum transfer unit to minimize the authenticating data transmission in the iee 802.15. 4 networks. In *2015 IEEE Global Communications Conference (GLOBECOM)*, pages 1–6. IEEE, 2015.
- [3] Marcin Piotr Pawlowski, Antonio J Jara, and Maciej J Ogorzalek. Eap for iot: More efficient transport of authentication data—tepanom case study. In *Advanced Information Networking and Applications Workshops (WAINA), 2015 IEEE 29th International Conference on*, pages 694–699. IEEE, 2015.
- [4] Marcin Piotr Pawlowski, Antonio J Jara, and Maciej J Ogorzalek. Harvesting entropy from on-board sensors of constrained devices for hardening security of iot communication mechanisms. In *6th International Workshop on Managing Insider Security Threats (MIST 2014)*, 2014.
- [5] Marcin Piotr Pawlowski, Antonio J Jara, and Maciej J Ogorzalek. Extending extensible authentication protocol over iee 802.15. 4 networks. In *IMIS*, pages 340–345, 2014.
- [6] Leszek A Nowak, Marcin P Pawłowski, Katarzyna Grzesiak-Kopeć, and Maciej J Ogorzałek. Color calibration model of skin lesion images for computer-aided diagnostic. In *Operations Research and its Applications in Engineering, Technology and Management 2013 (ISORA 2013), 11th International Symposium on*, pages 1–5. IET, 2013.
- [7] Leszek A Nowak, Maciej J Ogorzałek, and Marcin P Pawłowski. Texture analysis for dermoscopic image processing. In *2012 IEEE Biomedical Circuits and Systems Conference (BioCAS)*, pages 292–295. IEEE, 2012.
- [8] Leszek A Nowak, Maciej J Ogorzalek, and Marcin P Pawlowski. Pigmented network structure detection using semi-smart adaptive filters. In *2012 IEEE 6th International Conference on Systems Biology (ISB)*, pages 310–314. IEEE, 2012.
- [9] Weronika Piątkowska, Leszek Nowak, Marcin Pawłowski, and Maciej Ogorzałek. Stafflines pattern detection using the swarm intelligence algorithm. In *International Conference on Computer Vision and Graphics*, pages 557–564. Springer Berlin Heidelberg, 2012.