Trends, opportunities and choices in designing a cyber resilient EPES infrastructure

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ENERGYSHIELD (WORKSHOP) TOOLKIT

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EPES value chain stakeholder, critical infrastructure and/or cyber security expert, researcher, scientist or domain enthusiast

ATTEND
Virtual event engaging different stakeholders in cross-domain topics
Speeches about standardization efforts and policy updates
2 panels with high profile experts

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About EnergyShield project

EnergyShield project follows an integrative approach to assess, monitor, protect and manage security threats and insights. Several tools are combined in a toolkit that provides an unique perspective and supports the needs of Electrical Power and Energy System (EPES) value chain in predicting cyber and physical attacks, learning from previous attacks and preventing future attacks. The assessment tools add focus on the critical infrastructure components and leverages the security behaviour to improve the vulnerability analysis, monitoring & protection tools focus on allowing rapid attack response, while tools gradually automate the security information and event management process and integrate vulnerability assessment tools to create security metamodels.

Vulnerability Assessment Tool
Anomaly Detection Tool
Security Behaviour Analysis Tool
Distributed Denial of Service Mitigation Tool
Security Information and Event Management Tool

EnergyShield toolkit

SMALL SCALE ATTACKS
Targeting specific organisation
Meant to prevent them from conducting business normally

LARGE SCALE ATTACKS
Targeting EPES value chain
Meant to take down energy supplu services at regional or country level

WORKSHOP AGENDA | 15-04-2021

OPENING SESSIONS	10.00 CET - 11.30 CET
Welcome and brief introduction of EnergyShield project (10')	Otilia Bularca, SIMAVI
Recent policy developments in cybersecurity for critical infrastructure protection (10')	Christian Wilk, EC
ENISA's activities in the energy sector (15')	Konstantinos Moulinos, ENISA
Bridging the gap between EPES and cybersecurity (10')	Dr. Venizelos Efthymiou, UCY
Combining MAL with safety & functional modelling (10')	Chris Few, Ofgem UK
EnergyShield toolkit demonstration (15')	Iacob Crucianu, SIMAVI
💬 Q & A (10')	☕ Coffee break (10')

PANEL 1 | 11.30 CET - 12.00 CET	PANEL 2 | 12.00 CET - 12.30 CET
Work from home impact on the energy and IT infrastructures	Latest incidents targeting critical infrastructure and their impact on designing new technologies, business models and policies
Moderator: Tommy Wahlman, *Swedish Energy Agency* **Panelists:** Daniela Bichir, *SIMAVI* Javier Valiño, *ATOS* Prof. David Wallom, Oxford e- Research Centre Dr. Mihai PĂUN, *CRE* Loris Piana, *IREN Italy*	**Moderator:** Monica Florea, *SIMAVI* **Panelists:** Sarah Fluchs, *admeritia GmbH* Dr. Ing. Matthias Rohr, *PSI* Dan Cîmpean, *CERT-RO* Massimiliano Masi, *Autostrade per l'Italia* Matteo Merialdo, *RHEA Group*

HOST
SIMAVI — Software Imagination & Vision

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ECHO

Opening Sessions — Welcome! EnergyShield project

TOPIC 1 | Recent policy developments in cybersecurity for critical infrastructure protection

Christian Wilk, by education computer scientist, has worked for over 20 years in the field of research, education and innovation in the private and public sector, focusing on digital and emerging technologies, lately with a focus on cybersecurity and artificial intelligence. He worked for the UN, the EC and as consultant in India, Singapore, Thailand and several countries in Europe.

Christian Wilk, Research Programme Administrator, REA (European Commission)

TOPIC 2 | ENISA's activities in the energy sector

Moulinos is an expert in the network and information security area and the manager of ENISA's smart grid security project. He worked over 10 years as an information systems auditor and for eight years he contacted ENISA as an expert in the area of critical information infrastructure protection (CIIP). Moulinos has been awarded a diploma in informatics, a master of science in information systems and a Ph.D. in privacy enhancing technologies.

Konstantinos Moulinos, expert at ENISA

TOPIC 3 | Bridging the gap between EPES and cybersecurity

Dr. Venizelos Efthymiou worked for Electricity Authority through various posts including Executive Manager Networks / Distribution System Operator of Cyprus from 1979 to 2013. He is serving the Steering Committee of ETIP SNET, ETIP PV, SET Plan and Horizon 2020 Programme Committee. He is the Chairman of FOSS Research Centre for sustainable energy of the University of Cyprus and Cigre Cyprus.

Dr Venizelos Efthymiou, Chairman of the Research Centre Sustainable Energy of UCY

TOPIC 4 | Combining MAL with safety & functional modelling

Chris Few is currently head of cyber research and development at the United Kingdom Office of Gas and Electricity Markets (Ofgem). Ofgem's responsibilities include regulating the cyber resilience of the downstream gas and electricity subsector in Great Britain. Cyber security has been a theme through Chris' career for over 30 years working in both the public and private sector. He has a particular interest in modelling systems from a cyber-security perspective.

Chris Few, Head of cyber research and development at the UK Ofgem

TOPIC 5 | EnergyShield toolkit demonstration

Iacob Crucianu is a software engineer and software architect with over 25 years of experience in designing and developing software systems, from real time and device drivers to large enterprise web systems or Artificial Intelligence systems based on biometrics data processing. Iacob is a Professional Member of ACM and Member of IEEE Computer Society.

Iacob Crucianu, Technical Leader at Software Imagination and Vision SRL

Panel 1 — Work from home impact on the energy and IT infrastructures

Daniela Bichir has a university degree in Computer Science at Politehnica University of Bucharest. Since 1999 is involved in management systems implementation, monitoring and improvement according to various standards (ISO 9001, ISO 14001, ISO 45001, ISO 27001, ISO 20000-1, SPICE (ISO 15504)). In the last 16 years she was acting as VP of Governance and Human Resources, building and monitoring Governance and Human Resources departments and supervising the operational projects to fulfil and improve their objectives and indicators.

Daniela Bichir
Vice-president Human resources and Governance, Software Imagination and Vision SRL

Javier Valiño received a double major in Telecommunications Engineering (Telematics and Radio-communications) from the University of Cantabria in 2007 with a Final Degree Project in the field of point source detection in collaboration with the European Space Agency (ESA) Plank project. He worked as a network and systems engineer leading both commercial and research projects related to IoT and 4G/5G . He joined Atos Research and Innovation in 2016, where he currently acts as Head of the Energy, Climate and Decarbonization Unit He is the coordinator of H2020 inteGRIDy project and technical coordinator of H2020 MERLON.

Javier Valiño
Head of Energy, Climate & Decarbonization Unit, Atos Research & Innovation

Professor David Wallom is Associate Professor and Associate Director – Innovation of the Oxford e-Research Centre, Department of Engineering Science, leading two separate research groups, Energy & Environmental Informatics and Advanced e-Infrastructure & Cloud Computing. He has led over 80 research projects in areas such as Climate Change Impact, Cloud utilisation, Smart Energy Grids, Research data management, Green IT, ICT security and institutional repositories. He is also Founding Course Director for the MSc in Energy Systems.

Prof. David Wallom
Associate Professor and Associate Director – Innovation at Oxford e-Research Centre

Dr. Mihai Păun is Vice-President & co-founder of the Professional Association - Romanian Energy Center (CRE) acting in Brussels. Experience of more than 30 years in the electricity industry, at managerial and executive level in electricity Transmission, Distribution and Generation, in both national and international environment. Active in coordination of EC and EIB funded Projects on Cybersecurity, Digitalization of the Electricity Sector, Smart Grids, Critical Infrastructure Protection and Grid Investments.

Dr. Mihai Păun
Vice-President Romanian Energy Center (CRE)

Loris is currently covering the role of Cyber Security Specialist in the Iren SOC team. He previously worked in Maritime sector as Cyber Security Technical Advisor encouraging the development of process and procedures in accordance with IEC 62443 standard. He has also been lecturer for Cyber Security awareness at Genoa naval academy. Loris holds a master's degree in Computer Engineering with specialization in Cyber Security and Data protection and an ISO 27001 Lead Auditor certification.

Loris Piana
Cyber Security Specialist in the Iren's SOC team.

Panel 2 — Latest incidents targeting critical infrastructure and their impact on designing new technologies, business models and policies

Sarah Fluchs is the CTO of admeritia, which specializes in security consulting for the process industry, manufacturing, and critical infrastructures. A process and automation engineer herself, Sarah is convinced that creating solid engineering methods that speak the language of automation engineers is key for OT Security. Her main research interests include security and systems engineering, security for safety, and security engineering information models. Sarah is an active contributor to ISA/IEC standards and a Director at the ISA Standards & Practices board.

Sarah Fluchs
CTO and Security Consultant at admeritia GmbH,

Matthias Rohr is consultant and business developer in the marketing & sales group of PSI Software AG's business unit PSI Energie EE. His current focus is on switching operation management, field force management, and cyber security. Since 2008, he worked as product manager, consultant, and project manager in the area of software systems for smart energy grids. Matthias Rohr studied computer science at the University of Oldenburg and Monash University (Australia), and received a Ph.D. (Dr.-Ing.) from the Faculty of Engineering at Kiel University in 2015.

Dr. Ing. Matthias Rohr
Business Development Manager and Management Consultant, PSI Software AG

Dan accumulated over 20 years of experience in cyber security, risk management in Brussels, Bucharest and internationally. He led professional teams that supported European Institutions, National Competent Authorities and large industry actors in defining and implementing their cyber security policies, strategies, operational and technical measures. Since May 2020 he was appointed as General Director of CERT-RO by decision of the Romanian Prime Minister. He has the exciting mission to lead the effort for transforming this great organisation.

Dan Cimpean
General Director CERT-RO

Massimiliano Masi (PhD) has been working in cybersecurity for Critical Infrastructures since 2007, in the Health, Energy, and Trasport Sectors. He contributed to the development of cybersecurity standards (from IHE) and infrastructures in Europe, USA, and Africa. His research interests are in the Cybersecurity aspects of Enterprise Architectures for both IT, and OT. He is working at Autostrade Per L'Italia for the security of the Intelligent Transport Systems.

Massimiliano Masi
IT Security Architect, Autostrade per l'Italia

Matteo Merialdo works as R&D Senior Manager in the Security Business division at RHEA Group and he is responsible for the security product portfolio of the company. He has wide experience on cyber-security product development, including cyber-ranges, dynamic risk assessment and information sharing systems. As project manager, he led multiple wide research projects for the EC and the European Space Agency. Among other activities, he is currently technically leading the H2020 project ECHO, a large initiative aiming at developing a European-wide network of cyber-security centers.

Matteo Merialdo
Manager, Security Research and Development (R&D) Projects, RHEA Group

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Otilia Bularca, Project Manager, Software Imagination and Vision SRL

Otilia Bularca is Project Manager at Software Imagination & Vision SRL. She is currently leading H2020 projects on behalf of SIMAVI as Coordinator or Consortium partner. With 10 years of experience in IT consultancy and project management, she is an experienced professional with solid coordination, monitoring and communication skills.
Contact details: Otilia.Bularca@siveco.ro | 0040731202178 | Skype: otilia.bularca

EVENT HOST

Tommy Wahlman, Programme Manager, The Swedish Energy Agency

Tommy Wahlman was the project manager for the Swedish implementation of the NIS directive in the energy sector, currently working with the supervision of sector information security. Tommy has a background in crisis management, information analysis and management.

MODERATOR

Monica Florea, Dr., Head of Unit European projects, Software Imagination & Vision SRL

Monica Florea has over 20 years of experience in IT sector, with a background in computer science and economics. She is leading SIMAVI's participation in the R&D projects co-financed by European Commission and the collaboration with national and international bodies in the framework of European Union under Horizon 2020, being responsible for the management, Quality Assurance and Risk Management Strategy.

MODERATOR

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