# 25th European Conference on Cyber Warfare and Security - ECCWS 2026

## Physical Timetable

## at The Exchange Building at The University of Nottingham, UK

## 29 - 30 June 2026

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| | **Sunday 28 June** | | |
| **18:00-** | **Welcome Drink and Pre-Conference Registration, The Jubilee Hotel (on campus) - until 19:00** | | |
| | **Monday 29 June** | | |
| **08:30** | **Conference Registration and Coffee** | | |
| **09:00** | **Welcome and opening to the Conference: Prof. Steven Furnell & Dr Dimah Almani**<br>**Room LT1** | | |
| **09:15** | **Keynote Address: Dr Lorna Kirkby, Department for Science, Innovation and Technology of the UK Government *Securing the Digital Future: The UK Government's Approach to Cyber Security*** | | |
| **10:00** | ***Conference splits into streams*** | | |
| | **Stream A: Scams and Authentication**<br>**Chair: Siphesihle Sithungu**<br>**Room: LT1** | **Stream B: Competencies**<br>**Chair: Raymond Hagen**<br>**Room: C33** | |
| **10:20** | On Definition of Vulnerability Discovery<br>Simo **Huopio**, and Erno **Pasanen**, Finnish Defence Research Agency (FDRA), Riihimäki, Finland EWS-045 | Beyond the Dashboard: Unseen Cybersecurity Vulnerabilities Caused by User Behaviour in Connected and Autonomous Vehicles Systems<br>Dimah **Almani**, Shaqra University, Riyadh, Saudi Arabia EWS-034 | |
| **10:40** | Leveraging Open-Source Intelligence to Combat Cryptocurrency Investment Scams<br>Johnny **Botha**, CSIR, Pretoria, South Africa and Louise **Leenen**, University of Western Cape, South Africa and Abraham Berkman, Breadcrumbs, Singapore EWS-048 | Digital State Erasure: Data as Both a Target and a Vector of Political and Military Influence<br>Mari **Ristolainen** and Veikko **Siukonen**, Finnish Defence Research Agency, Riihimäki, Finland EWS-044 | |
| **11:00** | Privacy Under Pressure: Assessing Online Commercial Surveillance Countermeasures and Gaps<br>Christian **Preti**, USA Military Academy, West Point, USA, Nicholas **Harrell** and Alexander **Master**, Army Cyber Institute, USA EWS-078 | Cybersecurity Management Competencies in Critical Infrastructure Organizations: A Review and Research Agenda<br>Shehu **Abubakar** and Hanna **Paananen**, University of Jyvaskyla, Finland EWS-063 | |
| **11:20** | Targeting the Human Factor: OSINT in Healthcare<br>Marie **Soukupova**, Brno University of Technology, Czech Republic EWS-122 | The CTI Oligopoly's Contractual Firewall: Restrictive Licensing as a Structural Barrier to Collective APT Defence<br>Raymond Andre **Hagen**, Norwegian University of Science and Technology, Norway EWS-076 | |
| **11:40** | Audio Deepfake Generation and Detection using Deep Learning for Digital Forensic Analysis<br>Mahra **AlNaqbi** and Richard **Adeyemi Ikuesan,** Zayed University, Abu Dhabi, UAE EWS-145 | Gamified Provocations of Interest for Cybersecurity Awareness<br>Steven **Furnell**, James **Todd**, Simon **Castle-Green,** and Xavier **Carpent**, University of Nottingham, UK and Lucija **Šmid,** University of Bath, UK EWS-111 | |
| **12:00** | Mapping the Authentication Landscape: A User-Centric View<br>Hanna **Paananen**, Naomi **Woods**, University of Jyvaskyla, Finland and Steven **Furnell**, University of Nottingham, UK EWS-056 | MITRE-ATT&CK Integration for Behavioural HARM-Based Attack Simulation<br>Fomotar **Buhnyuy**, Femi **Fasunlade**, Oluwatobi **Fajana**, Mmedo **Essien**, University of Portsmouth, UK EWS-058 | |
| **12:20** | ***Lunch Break*** | ***Lunch Break*** | ***Lunch Break*** |

| | Stream A: Mini Track on Satellite Cyber Security<br>Chair: Jill Slay<br>Room: LT1 | Stream B: Mini Track on Interdisciplinary Research in Cybersecurity<br>Chair: Char Sample<br>Room: C33 | Stream C: PhD and Masters Colloquium<br>Chair: Dr Xavier Carpent<br>Room: C1 (10 minute presentations with time for discussion) |
|---|---|---|---|
| **13:20** | Cybersecurity for Military Satellite Systems: Threats, Domains and Engineering Counter Measures<br>Chuck **Easttom**, Vanderbilt University and Georgetown University, Washington DC, USA EWS-120 | A Framework for Privacy-Preserving Data Analytics Using Differential Privacy<br>Huwida **Said**, Asma **Almarzooqi** and Neema **Prakash**, Zayed University, Dubai, UAE, Qusay **Mahmoud**, Ontario Tech University, Canada EWS-142 | Systematically Integrating Cyber Threat Intelligence into Resilient Space-Cyber Architectures<br>Chathura **Abeydeera**, Adelaide University, Melbourne, Australia (PhD) EWS-021<br><br>'What's in a Name?': How Does the UK Government and Media Construct Cyber Actors<br>Alice **Brett** and Iain **Reid**, University of Portsmouth, UK (PhD) EWS-052<br><br>Zero-Day Vulnerabilities, Cartography and Quantification Initiative<br>Myriam **Ouraou**, Thales Digital Factory, Paris, France (PhD) EWS-028<br><br>The Weaponization of the Marketing Funnel: Adapting Commercial Targeting Strategies for Disinformation Campaigns and Troll Detection<br>Petr **Gallus**, Dominik **Staněk**, Ivo **Klaban** and Tomáš **Ráčil**, University of Defense, Brno, Czech Republic (PhD) EWS-118<br><br>Banking Resilience: Building Cyber Incident Response in the Finnish Financial Sector<br>Jade **Karrila** and Ilona **Ilvonen**, Tampere University, Finland (Masters) EWS-162<br><br>Warfare in the Gray Zone: The Need for a Western Paradigm Shift<br>Austin **Carter** and Timothy **Shives** , Naval Postgraduate School, Montery, USA (Masters) EWS-164<br><br>AI Warfare<br>Dong **Wang**, Tokunbo **Makanju** and Yunlong **Shao**, New York Institute of Technology, Vancouver, Canada (Masters) EWS-183 |
| **13:40** | Intrusion Detection System for Software-Defined Satellite Networks<br>Uakomba **Uhongora**, Mamello **Thinyane**, Yee Wei **Law** and Jill **Slay**, Adelaide University, Australia EWS-166 | Cybersecurity Entry Points to the Energy Sector and their Time-to-Compromise<br>Engla **Rencelj Ling** and Göran **Ericsson**, Uppsala University, Sweden EWS-027 | |
| **14:00** | MAGNAS: A CCTV Searching Platform for Digital Investigation<br>Mahra **Alameri**, Richard **Adeyemi Ikuesan**, Maitha **Alnoaman**, Zayed and Noora **Alhashmi**, Zayed University, Abu Dhabi, UAE EWS-146 | Sridut: Securing Multi-Controller SDN Integrity with State-Aware Multi-Consistency Storage and Provable Convergence<br>Adir **Miller**, Avinash **Singh** and Hein **Venter**, University of Pretoria, South Africa EWS-035 | |
| **14:20** | A Multimodal Authorization Approach for Integrated Access Control Process<br>Shamma **Alhameli**, Richar Adeyemi **Ikuesan,** and Noof **Alhammadi**, Zayed University, UAE EWS-147 | Operationalizing Cyber in Multi-Domain Operations: A Kill- Chain–Centric Approach for Cyber Strike Packages<br>Timothy **Shives**, William **Stegner**, Elizabeth **Pham**, and Lieuwe Jan **Hiemstra**, Naval Postgraduate School, Monterey, USA EWS-180 | |
| **14:40** | On the Establishment of Trust: Rethinking Trust in the Age of Artificial Intelligence<br>Christoph **Lipps**, German Research Center for Artificial Intelligence (DFKI), Kaiserslautern, Germany and Siphesihle **Sinthungu**, Academy of Computer Science and Software Engineering, University of Johannesburg, South Africa EWS-132 | Integrating Cybersecurity Risk Management and Business Continuity of Family-Owned Businesses in Anambra State, Nigeria: A Conceptual Model<br>Chinwe Gloria **Obananya**, Chidimma Odira **Okeke**, Chukwuemeka Odumegwu Ojukwu University, Anambra State, Nigeria and Paschal **Anosike**, University of West England, UK EWS-178 | |
| **15:00** | *Coffee Break* | *Coffee Break* | *Coffee Break* |
| | **Stream A: AI**<br>**Chair: Fomotar Buhnyuy**<br>**Room: LT1** | **Stream B: Cyber Attack and Threats**<br>**Chair: Johnny Botha**<br>**Room: C33** | |
| **15:30** | Toward Identifying Role-Aligned AI Governance Needs in Mixed-Trust Environments<br>Bijesh **Shrestha**, Nicholas **Harrell** and Matthew **Corbett and** David **Quigg,** Army Cyber Institute, West Point, USA EWS-079 | Cyber Power Through Propergation Control<br>Gregory **Carpenter**, CW PENSEC LLC, Manassas, USA EWS-066 | |
| **15:50** | Investigating AI Enabled Attacks and Malware Within Dark Web Ecosystems: An Updated Assessment<br>Chuck **Easttom**, Vanderbilt University and Georgetown University, Washington DC, USA and William **Butler**, Capitol Technology University, USA EWS-119 | A Lightweight Real-Time Framework for Detecting Rogue Switches in Wired Local Area Network<br>Vijay **Bhuse**, Vijay **Prathap**, Reddy **Kanipakam** and Xinli **Wang**, Grand Valley State University, Allendale, USA EWS-101 | |
| **16:10** | ECUInjector: An Automotive ECU Security Analysis Tool.<br>James **Todd**, Aidan **Grant**, Tim **Muller** and Xavier **Carpent**, University of Nottingham, UK EWS-123 | Toward Better use of Cyber Threat Models in Defence Environments<br>Steve **Johnson** and Erisa **Karafili**, University of Southampton, UK EWS-115 | |
| **16:30** | Social Engineering of AI Agents<br>Jukka **Vuorinen** and Eeli **Mäkinen**, University of Jyväskylä, Finland EWS-064 | A Capability-based Approach to Evaluate and Mitigate Identified Cybersecurity Gaps in Critical Infrastructures<br>Eetu **Laakso**, Sara **Soikkeli**, CyberWatch Finland, Helsinki, Finland and Kimmo **Kaski**, Vesa **Kuikka**, Aalto University, Finland EWS-091 | |
| **16:50** | *Close of Conference Day* | *Close of Conference Day* | *Close of Conference Day* |
| **19:00** | *In Person Participants: Conference Dinner at Calcutta Club - Nottingham* | | |

# Tuesday 30 June

| | Stream A: Mini Track on AI for Cyber Defence and Securing AI<br>Chair: Hanna Paananen<br>Room: LT1 | Stream B: Cyber Treats & Compliance Auditing<br>Chair: Chuck Easttom<br>Room: C33 |
|---|---|---|
| 09:00 | Automatically Attacking Software Reverse Engineering AI Agents<br>Brian **Crawford,** Justin **Phillips** and Patrick **McClure**, Naval Postgraduate School, Monterey, CA, USA EWS-103 | Hybrid Threats Against the Finnish Society: Reported by YLE News<br>Harri **Ruoslahti**, Jarmo **Heinonen** and Ilkka **Tikanmäki**, Laurea University of Applied Sciences, Espoo, Finland EWS-086 |
| 09:20 | Expanding Tactical Cyber Operations for Information-Age Warfare<br>Archie **Bass** and Timothy **Shives**, Naval Postgraduate School, Montery, USA EWS-159 | What motivates cyberattacks: lack of consequences or abundance of attack vectors?<br>Matthias **Schulze** and Florian **Erdle**, Institute for Peace Research and Security Policy at the University Hamburg (IFSH), Germany EWS-065 |
| 09:40 | Data Governance Frameworks for Enabling Responsible AI in Small, Medium, and Micro Enterprises: A Systematic Literature Review<br>Siphambili **Nokuthaba** and Norman **Nelufule**, CSIR, Pretoria,South Africa EWS-140 | LLM-Assisted Forensic and Compliance Auditing for Public Sector Organizations<br>João **Santos,** Tiago **Cruz** and Paulo **Simões,** University of Coimbra, CISUC, DEI, Portugal, João **Henriques**, Filipe **Caldeira et al** CISeD—Research Centre in Digital Services, Polytechnic Institute of Viseu, Portugal EWS-128 |
| 10:00 | ***Break and Poster Presentations*** | |
| 10:40 | **Keynote Address: Adam Joinson, University of Bath, UK *Mapping the Impact of Future & Emerging Technologies on Cybersecurity Room: LT1*** | |
| 11:25 | **Introduction to ECCWS 2027** | |
| 11:30 | ***Conference splits into streams*** | |
| | **Stream A: Cyber Operations<br>Chair: Tim Grant<br>Room: LT1** | **Stream B: Cyber Security & Cyber Warfare<br>Chair: Nourah Alshomrani<br>Room: C33** |
| 11:40 | Cyber and Electromagnetic Activities (CEMA) in a Multi-Domain Battlefield<br>Juha Kai **Mattila**, Aalto University, Helsinki, Finland EWS-054 | Future Smart Devices in Future Digital Environments<br>Aarne **Hummelholm**, IEEE member, Tampere, Finland, Pekka **Neittaanmäki**, University of Jyväskylä, Finland and Kaila **Ruth**, Aalto University, Finland EWS- |
| 12:00 | Assessing Non-Kinetic Effects in Support of Military Operations: An Inference-Driven Framework<br>Bruce **Chojnacki** and Nick **Harrell**, U.S. Army / Army Cyber Institute, West Point, USA EWS-061 | Cyber Security at Universities: Comparison of Australia, Lithuania and Ukraine.<br>Matthew **Warren**, RMIT, Melbourne, Australia, Marius **Laurinaitis**, Mykolas Romeris University, Lithuania and Mykhailo **Prazian**, G.E. Pukhov Institute for Modeling in Energy Engineering, Ukraine EWS-015 |
| 12:20 | Offensive Cyber Space Operations: Operational Logic, Strategic Utility, and Governance in Contemporary Cyber Conflict<br>Chuck **Easttom**, Vanderbilt University and Georgetown University, Washington DC, USA EWS-121 | Information Campaigns in Irregular Warfare: A Framework for Expanding the Threshold of Competition<br>Nickolas **Elekes**, Timothy **Shives** and Michael **Richardson**<br>Naval Postgraduate School, Monterey, California, USA EWS-172 |
| 12:40 | Evaluating the Reliability of LLMs in OSINT Investigations: A Friend or Foe?<br>Errol **Baloyi**, Nokuthaba **Siphambili**, Ntomfuthi **Ntshangase**, Mpho **Letshwenyo**, Fhatuwani **Makharamedzha**, Rendani **Mmbodi** and Ndabezinhle **Hlongwane**, Council for Scientific and Industrial Research (CSIR), Pretoria, South Africa | Beyond Missiles and Marines: A Multidomain Strategy for Deterring a PRC Invasion of Taiwan<br>Timothy **Shives** and Rose **Kingham,** Naval Post Graduate School, Monterey, USA EWS-175 |
| 13:00 | Predicting Sabotaged Open-source Libraries<br>Alexander **Petty**, William **Glisson**, Louisiana Tech University, USA and Ryan **Benton**, University of South Alabama, USA EWS-125 | |
| 13:20 | **Summary of the conference and Award to the winner of the best PhD paper and Best Poster<br>Close of Conference** | |
| 13:30 | ***Lunch*** | ***Lunch Break*** |

## Poster Presentations

***Posters will be presented on Tuesday Morning during the coffee break. Please give your poster to the registration desk on arrival and we will display it for you.***

| Work in Progress | Posters Only |
|---|---|
| The future of Authentication: Not as Simple as Providing a Secure Solution<br>Naomi **Woods** and Hanna **Paananen**, University of Jyväskylä, Finland (WIP) EWS-050 | Framing Ransomware: Risk Construction and Policy Responses in the UK Cyber Governance Landscape<br>Faria **Pitafi**, Royal Holloway, University of London, UK (Poster Only) EWS-169 |
| No Rules: Can Removing Password Creation Rules Improve Password Memorability and Security?<br>Naomi **Woods**, University of Jyväskylä, Finland (WIP) EWS-075 | MappingHuman Cognition to Machine Capability: A Doctrinal Suitability Framework for AIin the Joint Targeting Cycle<br>Archie **Bass**, Naval Postgraduate School, Montery, USA |
| Compliant Cyber Threat Intelligence Sharing in Hospitals: Evaluating the Data Anonymisation Tool<br>Ilkka **Tikanmäki**, Ammar **Alhamada**, James **Lukins**, Retina **Nerjovaj**, Marco **Pastore** and Lauri **Pöllänen**, Laurea University of Applied Sciences, Espoo, Finland (WIP) EWS- | Cognitive Hallucination Attacks: A Multi-Modal Framework for Detecting AI Perception Manipulation in Autonomous Vehicles<br>Dimah **Almani** , Shaqra University, Riyadh, Saudi Arabia |
| Privacy-Preserving Cyber Threat Intelligence Sharing in Healthcare: Automated Anonymisation Under EU Regulations<br>Ilkka **Tikanmäki,** Lillebi **Seistola,** Harri **Silvola** and Pihla **Parviainen,** Laurea University of Applied Sciences, Espoo, Finland (WIP) EWS-055 | Constructing Coherent Deception Stories in Cyber-Kinetic Operations<br>Tim **Grant**, R-BAR, Benschop, Netherlands (Poster only) EWS-186 |
| Enhancing Cybersecurity in Water Plant Infrastructure with SecureAI<br>Ilkka **Tikanmäki,** Diana **Marinca**, Muhibba Saani **Mohammed** and Rakyan KadarSlamet, Laurea University of Applied Sciences, Espoo, Finland (WIP, Main) EWS-059 | Automatic Detection and Classication of Cyberattacks Based on Ontologies and Knowledge Engineering<br>Rita **Ramos**, Tiago **Cruz,** Paulo **Simões,** University of Coimbra, CISUC, DEI, Portugal, João **Henriques** and Filipe **Caldeira,** CISeD—Research Centre in Digital Services, Polytechnic Institute of Viseu, Portugal |
| | The APT Attribution Issue<br>Raymond Andre **Hagen**, Norwegian University of Science and Technology, Norway |

# 25th European Conference on Cyber Warfare and Security - ECCWS 2026

## Virtual Timetable

## hosted by ACPI and The University of Nottingham, UK

## 29 - 30 June 2026

## Programme is in UK Summertime (GMT+1)

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| | **Monday 29 June** | | |
| **08:30** | ***Zoom Room 1 Opens*** | | |
| **09:00** | **Zoom Room 1**<br>**Welcome to the Conference: Prof. Steven Furnell & Dr Dimah Almani** | | |
| **09:15** | **Keynote Address: Dr Lorna Kirkby, UK Government**<br>***Securing the Digital Future: The UK Government's Approach to Cyber Security*** | | |
| **10:00** | ***Conference splits into three streams*** | | |
| | **Stream A: Operations**<br>**Chair: Oludolamu Onimole**<br>**Zoom Room 1** | **Stream B: AI**<br>**Chair: Nourah Alshomrani**<br>**Zoom Room 2** | **Stream C: Security**<br>**Chair: Allison Wylde**<br>**Zoom Room 3** |
| **10:10** | Artificial Immune System for Proportionality Assessment in Military Operations<br>Clara **Maathuis**, Open University of the Netherlands, Heerlen, Netherlands EWS-016 | Officers' Perceptions on Cyberwarfare Enhanced with Artificial Intelligence<br>Maija **Turunen** and Maria **Keinonen**, Finnish National Defence University, Helsinki, Finland EWS-007 | Cyber Early Warning System on Security Operations Center<br>Timo **Koskimäki**, Jouni **Pöyhönen**, Martti **Lehto**, University of Jyväskylä, Finland and Mika **Hållfast**, DNV Cyber, Finland EWS-013 |
| **10:30** | Proportionality Assessment in Military Operations with Cellular Automation<br>Clara **Maathuis**, Open University, Heerlen, Netherlands EWS-017 | A Potential Digital Evidence Classification Model for 5G NFV Environments using Supervised Machine Learning Algorithms.<br>Sheunesu **Makura**, Lucas **Blanc** and Hein **Venter,**University of Pretoria, Pretoria, South Africa EWS-505 | Detecting Obfuscated Circumvention Traffic via Anomaly Detection: A Semi-supervised Approach to Tor Snowflake Identification<br>Ban **AlOmar**, Higher Colleges of Technology, Dubai, United Arab Emirates and Zouheir **Trabelsi**, United Arab Emirates University, United Arab Emirates EWS-020 |
| **10:50** | System Dynamics Model for Proportionality Assessment in Military Operations<br>Clara **Maathuis**, Open University, Heerlen, Netherlands EWS-018 | A Knowledge-Driven, AI-Assisted Cyber Defence Framework for IoMT Remote Patient Monitoring<br>Kulsoom **Bughio**, David **Cook**, Edith Cowan University, Joondalup, Australia and Abdul M. Unar, Mehran University of Engineering and Technology, Jamshoro, Pakistan EWS-160 | Trustworthy Secure and Measured Boot on a Raspberry Pi 4<br>Torben **Woltjen**, Michelle **Jakobi**, Richard **Sethmann**, FRI, University of Applied Sciences Bremen, Germany and Michael **Eckel**, Janik **Gorbracht**, ATHENE Center, Fraunhofer SIT, Darmstadt, Germany EWS-062 |
| **11:10** | Operationalizing a "Secure-by-Design" Checklist for COTS Satellite Components<br>Sandeep **Taileng**, IEEE, Melbourne, Australia (Presentation only) EWS-087 | Educating in the Age of AI: Ethical, Pedagogical, and Institutional Challenges<br>Russell **Beauchemin**, Rhode Island College, Providence, USA, Doug **White**, Roger Williams University, USA and Aaran **Leyland**, Pantheon, UK (Presentation only) EWS-008 | A Systematization of Knowledge on Biomarker Based Encryption Keys<br>Mohiuddin **Ahmed**, Adalaide University, Australia, Matthew **Gaber,** Thammasat University, Pathum Thani, Thailand and Al-Sakib Khan **Pathan,** United International University, Bangladesh EWS-019 |
| **11:30** | Defending the Cosmos: Honeypot-Based Adversary Detection and Emulation System (HADES)<br>Yuk Tong **Chan**, University of South Australia, Sydney, Australia and Sam **Seo** and Ady **James**, Adelaide University, Australia EWS-024 | AI Supporting Cybersecurity Curriculum<br>Henry **Collier**, Thomas Edison State University, Trenton, USA EWS-047 | Disinformation and Trust in Digital Environments: Expert Decisionmaking, Dismiss or Discuss?<br>Allison **Wylde**, University of Kent, School of Computing, Canterbury, UK, Fabio James **Petani**,Université Bourgogne Europe, Burgundy School of Business, Dijon, France and Helmi **Issa** ESSCA, Paris, France EWS-083 |
| **11:50** | Satellite Cyber Security Assurance Framework: Assured Unified SPARTA-COSMOS2 Assessment Notation (AUSCAN<br>Sam **Seo** and Jill **Slay**, University of South Australia, Adelaide, Australia EWS-026 | RAG-H: A RAG-Hardened SOC Framework for Trustworthy Threat Intelligence and AI Defence<br>Daniela **Ceraku**, Thales Digital Factory / Thales Group, Paris, France EWS-038 | AI, Urban Warfare and Cyber Warfare: Ethical and Anticipated Ethical Issues<br>Richard **Wilson,** and Noah **Donnelly**, Towson University, Towson MD, USA EWS-152 |
| **12:10** | ***Lunch Break*** | ***Lunch Break*** | ***Lunch Break*** |

| | Stream A: Compliance and Vunerability<br>Chair:<br>Zoom Room 1 | Stream B: Cyber Issues<br>Chair:<br>Zoom Room 2 | Stream C: Cyber Issues<br>Chair: Bijesh Shrestha<br>Zoom Room 3 |
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| 13:00 | Exploring Personalized Personnel Protection within Cyberbiosecurity<br>Oludolamu **Onimole**, Independent Researcher, UK, Austin **James**, University of East London, UK, Denzel A. **Pryor**, Angel-Khalil **Jones**, Independent Researcher, USA, Xavier **Palmer**, Lucas **Potter**, BiosView Labs, USA and Jude **Osamor**, Glasgow Caledonian University, UK EWS-095 | Artificial Intelligence, Drones and Cyber Warfare: Ethical and Anticipated Ethical Issues<br>Richard **Wilson**, and Noah **Donnelly**, Towson University, Towson MD, USA EWS-151 | From Evidence to Decisions: Interview-based Study of Reporting Practices in Defensive Cyber Operations<br>Justin **Raynor**, Cody **Dunne**, Melanie **Tory**, Northeastern University, Boston, USA and Bijesh **Shrestha**, Lane **Harrison**, Worcester Polytechnic Institute, Worcester, USA EWS-081 |
| 13:20 | A Framework for Automated STIG Compliance for Navy Ships<br>Alan **Shaffer**, Margaret **Graves** and Gurminder **Singh**, Naval Postgraduate School, Monterey CA, USA EWS-039 | Apache Daffodil for Network Traffic Validation<br>Benjamin **Cavanagh** and Stephen **Taylor**, Dartmouth College, Hanover, NH, USA EWS-042 | The University of Maryland's Cyber Events Database 2.0: A Systematic Framework for Analyzing Global Cyber Threats<br>Devin **Entrikin**, Charles **Harry** and William **Lucyshyn** , University of Maryland; Center for Governance of Technology and Systems (GoTech), USA EWS-069 |
| 13:40 | An Assessment Methodology for Learning Mission Characteristics<br>Joshua **Meise** and Stephen Taylor Dartmouth College, Hanover, USA EWS-046 | Enhancing Credit Fraud Detection in e-Payments Through Predictive Analytics Using Machine Learning: A Scoping Review<br>Zenande **Nondula** and Moses **Moyo**, Rhodes University, Grahamstown, South Africa EWS-043 | The Baseband Sovereignty Paradox: Anticipated Ethical and Technical Issues of Baseband Processors<br>Richard **Wilson** and Noah **Donnelly**, Towson University, USA EWS-153 |
| 14:00 | The End of Infodemic? The 2021-2024 UN Effort to Ensure the Integrity of Public Information<br>Teemu **Häkkinen**, Laurea University of Applied Sciences, Tikkurila, Finland and Dominic **Saari**, University of Jyväskylä, Finland EWS-060 | Supervised Classification of Cloud Workload Behavior Using Out-of-Band Performance Metrics<br>Maureen **Van Devender**, Angela **Buie**, Ryan **Benton** and Than **Le,** et al University of South Alabama, USA EWS-094 | Incorporating S.P.I.C.Y. DICOM Polyglot Threats into Cyber Warfare Exercises<br>Danny "Danhammer" **Hetzel**, Hetzel Security, Marshall, USA, Xavier **Palmer**, Lucas **Potter**, BiosView Labs, USA and Janine (Nina Alli) **Medina**, Biohacking Village, USA (MT on Cyber Deception) EWS-131 |
| 14:20 | A Double-Edged Sword: How Lab Cameras May Enable Some Cyber Deception in Biosecurity<br>Rachid **Soro**, Independent Researcher, Herndon, USA, Xavier **Palmer** and Lucas **Potter**, BiosView Labs, USA and Michaela **Barnett,** Blacks In Cybersecurity Headquarters, Inc., Virginia, USA EWS-029 | Immersive CyberVerse: The State of Immersive learning techniques in Cybersecurity Education in Small Colleges<br>Sayonnha **Mandal,** Metro State University, St. Paul, USA EWS-037 | The Military Tech Complex and Cyberwarfare: Ethical and Anticipated Ethics Issues<br>Richard **Wilson**, and Noah **Donnelly**, Towson University, Towson MD, USA EWS-156 |
| 14:40 | Securing the AI Revolution: A Maturity Framework for Trustworthy and Resilient Software<br>Jami **Carroll**, Prisidian Security Solutions, Inc., Somerset, USA EWS-093 | Lost at Sea: GPS Spoofing Threats to Maritime Shipping<br>Sandali **Srivastava**, Shaunak **Srivastava** and Nithya **Vemuri**, Texas A&M University, College Station, USA EWS-176 | |
| 15:00 | ***Break*** | ***Break*** | ***Break*** |
| | **Stream A: Defence**<br>**Chair:**<br>**Zoom Room 1** | **Stream C: Gaming, IoT & AI**<br>**Chair: Richard Wilson**<br>**Zoom Room 2** | |
| 15:20 | Graph Neural Networks on Phase Space Graphs for Cybersecurity<br>Parker **Cole**, Ryan **Benton,** Ralf **Riedel,** David **Bourrie,** Rebecca **Clark** and Todd **McDonald,** University of South Alabama, Mobile, USA EWS-099 | From Play to Mobilization: A Sociotechnical Pathway from Youth Gaming Communities to Geopolitical Cyber Operations<br>Anvesha **Nigam**, Independent, Frisco, USA and Shreyas **Kumar**, Emma **Johansson**, Texas A&M University, College Station, USA EWS-130 | |
| 15:40 | An Integrated Framework for Ransomware Mitigation: A NIST-Aligned Defense Model Linking Cyber Insurance and Risk Management<br>Li **Huang** and Kimberly A. **Cornell**, University at Albany, USA EWS-036 | Preparing Industry for IIoT: Separate Sensor Networks for Industrial Automation Security<br>Ricky **Green**, Ryan **Benton** and Michael **Black**, University of South Alabama, Mobile, USA EWS-149 | |
| 16:00 | The Forgotten Stub: Exploring Malicious Use of the PE DOS Header<br>Sayonnha **Mandal**, Metro State University, St. Paul, USA, Kshitiz **Aryal** and William **Mahoney**, University of Nebraska at Omaha, USA EWS-032 | Detecting DDoS Attacks in IoT Healthcare<br>Eurydice Tracy **Makena** and Sara **Sutton**, Grand Valley State University, Allendale, USA EWS-161 | |
| 16:20 | Building Cyber Defenders of the Future: Curriculum Design for Emerging Roles<br>Toby **Meyer**, Jael **Rivera** and Austin **Vershave**, Software Engineering Institute, Pittsburgh, USA (Non-Academic) EWS-067 | AI to AI Autonomous Cyber Warfare: Ethical and Anticipated Ethical Issues<br>Richard **Wilson**, and Noah **Donnelly**, Towson University, USA EWS-150 | |
| 16:40 | **Close of Conference Day** | **Close of Conference Day** | **Close of Conference Day** |

# Tuesday 30 June

| | Stream A: Security Issues<br>Chair: Chuck Easttom<br>Zoom Room 1 | Stream B: Deepfakes, AI, Hacking and Education<br>Chair: Edmont Pasipamire<br>Zoom Room 2 | Virtual Poster Session (5 minute presentations with time for discussion)<br>Chair:<br>Zoom Room 3 |
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| **09:00** | A Physically Unclonable Function Authentication Protocol to Secure IEEE C37.118 Communications<br>Taylah **Griffiths**, Mohiuddin **Ahmed** and Chadni **Islam**, Paul **Haskell-Dowland**, Edith Cowan University, Joondalup, Australia EWS-105 | Deepfake Technology in Social Engineering: Threats, Detection and Defence Strategies<br>Tanaka **Makamure** and Daniel **Ogwok**, University of Johannesburg, Johannesburg, South Africa EWS-173 | Defending the Cosmos: Honeypot-based Adversary Detetion & Emulation System<br>Arnold **Chan**, University of South Australia, Sydney, Australia<br><br>AI Safety Under Uncertainty: Hallucinations and Unpredictable Failures<br>Joon **Park**, Syracuse University, Syracuse, USA (WIP) EWS-040<br><br>Towards a Resilience Framework for Securing ADS-B Surveillance Systems in Air Traffic Management<br>Victoria **Mofolo**, Regenesys Business School, South Africa (WIP)<br><br>Securing Open-Source Artificial Pancreas Systems: A Framework for Assessing Cybersecurity Risks in Open-Source Automated Insulin Delivery Systems.<br>James **Austin**, University of East London, London, UK<br><br>Cognitive Warfare 8 Fundamental Categories: Ethical and Anticipated Ethical Issues Richard **Wilson**, Towson University, Towson MD, USA<br><br>Professional Wrestling, Televangelism, and Political Extremism: Ethical and Anticipated Ethical Issues<br>Richard **Wilson**, Towson University, Towson MD, USA<br><br>The Correspondence Theory of Truth, January 6th and Cognitive Warfare: Ethical and Anticipated Ethical Issues<br>Richard **Wilson**, Towson University, Towson MD, USA<br><br>Significance of Biological Design-Based Strategies Towards Sustainability and Security in Space Biology Research: A Partial Taxonomy and Exploration<br>Aswati **Subramanian**, Simpson College, Indianola, USA and Xavier **Plamer**, Independent researcher, USA EWS-072 |
| **09:20** | NEXUS-HC: A Framework for Technology Foresight in Strategic Communications<br>Yukai **Zeng**, Singapore Ministry of Defence Communications Organisation (MCO), Singapore EWS-167 | Bayesian Modeling of Uncertainty in Anti-Phishing Training: A Serious Game for Adversarial Email Crafting<br>Dimitrios **Lappas**, Aristeidis Angelos **Zoumpakis**, Hellenic Centre for Defence Innovation, Athens, Greece, Diogo Alexandre **Silva**, Portuguese Air Force Academy, Portugal, and Panagiotis **Karampelas**, Hellenic Air Force Academy, Greece EWS-033 | |
| **09:40** | Beyond Obscurity: Developing CubeSat Cybersecurity<br>Joshua **Davis**, Jill **Slay**, Adelaide University, Australia and Nalin **Arachchilage**, RMIT University, Australia (PhD) EWS-074 | Cognitive Deception: Cognitive Hacking Phenomenon and Cognitive Security<br>Mikko **Luomala** and Jyri **Naarmala**, University of Vaasa, Finland EWS-102 | |
| **10:00** | A Harmonised-Dashboard for Smart Home Device Security<br>Samiah **Alghamdi**, Steven **Furnell** and Steven **Bagley**, The University of Nottingham, UK EWS-080 | Cybersecurity in the Era of Quantum Computing and Advanced AI: Emerging Threats and Future Directions<br>Hisham **Alnabulsiyyah** and Meteabh **Aldawsri**, Shaqra University, Riyadh, Kingdom of Saudi Arabia EWS-112 | |
| **10:20** | ***Break*** | ***Break*** | ***Break*** |
| **10:40** | **Keynote Address: Adam Joinson, Bath University, UK**<br>***Mapping the Impact of Future & Emerging Technologies on Cybersecurity*** | | |
| **11:25** | **Introduction to ECCWS 2027** | | |
| **11:30** | ***Conference splits into streams*** | | |

| | Stream A: Trust, Vulnerability and Detection<br>Chair:<br>Zoom Room 1 | Stream B: Resilience and Ethics<br>Chair: Richard Wilson<br>Zoom Room 2 | Stream C: Competence and Implementation<br>Chair:<br>Zoom Room 3 |
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| 11:40 | A Hybrid, Transparent Trust and Risk Assessment Framework for Cryptocurrency Exchanges<br>Bongani **Mawhayi**, University of the Western Cape, Cape Town, South Africa, Johnny **Botha**, Council for Scientific and Industrial Research, South Africa and Louise **Leenen**, University of the Western Cape, South Africa EWS-092 | Enhancing Cybersecurity Resilience in the Real Estate Industry: Mitigating Phishing and BEC Attacks<br>Oludolamu **Onimole**, Independent, Glasgow, UK, Etinosa **Imafidon**, Flexmore Tech Ltd, Edinburgh, UK, Denzel A. **Pryor**, Independent Researcher, Philadelphia, Pennsylvania, USA, Lucas **Potter** and Xavier **Palmer**, Biosview | Strengthening Analytical Competence in Cyber Intelligence<br>Gazmend **Huskaj**, Geneva Centre for Security Policy, Department of Computer and Systems Sciences Stockholm University, Geneva, Kista, Switzerland, Sweden, and Stefan **Axelsson**, Department of Computer and Systems Sciences, Stockholm University, Sweden EWS-049 |
| 12:00 | Balancing Security and Safety: A Look at Emergency Access Solutions for Implantable Medical Devices (IMDs)<br>James **Austin,** University of East London, London, UK, Veronica **Schmitt**, Noroff University, Norway, Janine **Medina,** Biohacking Village, USA and Xavier-Lewis **Palmer** et al EWS-108 | Decision Resilience in AI-Enabled Cyber-Physical Defence: Securing the Sense–Decide–Act Chain<br>Laura **Samso**, Synarea Insights, UK | Fact or Fiction? Libraries as Frontline Defenders Against Disinformation Warfare<br>Edmont **Pasipamire**, The IIE Rosebank College, Cape Town, South Africa (MT AI for Cyber Defence and Securing AI) EWS-165 |
| 12:20 | A Lightweight Automated SQL Injection Testing Tool with Integrated Discovery and Structured Reporting<br>Ugochukwu **Onwudebelu**, Alex Ekwueme Federal University Ndufu Alike, Nigeria, Olusanjo Olugbemi **Fasola**, Ibrahim **Ismail**, Federal University of Technology, Minna, Nigeria and Nancy Chinyere **Woods**, University of Ibadan, | Weaponizing Firmware, Cyberwarfare and Battery Management Systems: Ethical and Anticipated Ethical Issues<br>Richard **Wilson** and Noah **Donnelly**, Towson University, USA EWS-155 | How Cybersecurity Playbooks increase Awareness of Industrial Control System Threats<br>Leigh **Armistead**, Peregrine Technical Solutions, LLC., Juneau, Alaska, USA (Presentation only) EWS-004 |
| 12:40 | ***Short break*** | ***Short break*** | ***Short break*** |
| 12:50 | Testing ML-KEM Implementations for Side-channel Vulnerability: The Airtight Framework<br>Isaiah **Seals**, Douglas **Hodson** and Mark **Reith**, Air Force Institute of Technology, Dayton, USA EWS-184 | A Hybrid Cyber Defense Framework for Indonesia's Military Integration into National Cyber Resilience: A Counter Factual Stress Test<br>Fibriansyah **Fatahillah** and Timothy **Shives**, Naval Postgraduate School, Monterey, USA EWS-174 | Comparing Maritime Cybersecurity Regimes between North America and Europe<br>Leigh **Armistead**, Peregrine Technical Solutions, LLC., Juneau, Alaska, USA (Presentation only) EWS-003 |
| 13:10 | Reviewing Machine Learning Algorithms for Threat Detection in Cybersecurity<br>Aidan **Gatenbee**, Mark **Reith**, Anthony **Rose,** Air Force Institute of Technology, Dayton, USA EWS-182 | Information Ethics and Social Context as Drivers of Cybersecurity Resilience in South Africa's Uneven Digital Landscape<br>Elekanyani **Mukondeleli**, Nokuthaba **Siphambili** and Lele **Molema**, CSIR, Pretoria,South Africa EWS-141 | Implementation and Analysis of SS7 Signaling Firewall Research Laboratory<br>Ahmet Mithat **Demirkol**, Aselsan, Ankara, Turkey EWS-057 |
| 13:30 | Analysis of the Use of Lattice-Based Key-Encapsulation Mechanism in Delay Tolerant Networks: A Survey<br>Fabio dos **Santos**, Mark **Reith** and Daniel **Koranek**, Air Force Institute of Technology, Dayton - OH, USA EWS-187 | Forever Days, Silicon Immutability and the Crisis of Unpatchable BootROM Vulnerabilities in Cyberwarfare: Ethical and Anticipated Ethical Issues<br>Richard **Wilson** and Noah **Donnelly**, Towson University, USA EWS-154 | |
| 13:50 | Securing the Decentralized Edge: An integrated Approach to Zero Trust and Endpoint Security Monitoring<br>Victor Kipchirchir **Bungei**, Sara **Sutton**, Johnfia **Frank** and Esther **Djan**, Grand Valley State University, Allendale, USA EWS-168 | Cyber Warfare, Cyberbullying and Psychological Warfare: Ethical and Anticipated Ethical Issues<br>Richard **Wilson** and Noah **Donnelly**, Towson University, USA T-IWS-165 | |
| 14:10 | ***Close of Conference*** | ***Close of Conference*** | ***Close of Conference*** |