# 19th European Conference on Cyber Warfare and Security  
**ECCWS 2020**  
A virtual Conference supported by the University of Chester, UK

**Thursday 25th June 2020**

**08:45**  
Zoom Room Opens

**09:00**  
**Welcome to the Conference**  
Thaddeus Eze and Lee Speakman, University of Chester, UK

**09:15**  
**Keynote Address:** Dr. Cyril Onwubilko, Cyber Security Intelligence at Research Series Limited  
*A Comprehensive Cyber Recovery Operational Framework*

**10:00**  
Conference splits into two Zoom Rooms

| Stream A: Mini track on Big Data for Cybersecurity  
Chair: Nasser Abouzakhar | Stream B: Cybersecurity education and chip security  
Chair: Pardis Moslemzadeh Tehrani |
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<td><strong>10:15</strong></td>
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| A View Point on Management Practices for Cybersecurity in an Industry 4.0 Environment  
Zia Najam Ul and Victor Kwarteng Owusu, Tomas Bata University in Zlin, Czech Republic | Fostering Cyber-Security Awareness among Computer Science Undergraduate Students: Motivating by Example  
Cruz Tiago and Paulo Simões, University of Coimbra, Portugal |
| **10:45** | **10:45** |
| Blockchain Based Voting Systems  
Son I Yash, Leandros Maglaras, De Montfort University, Leicester, UK and Mohamed Amine Ferrag, Guelma University, Algeria | Cyber Security Capacity Building : Cyber Security Education in Finnish Universities  
Lehto Martti, University of Jyväskylä, Finland |
| **11:15** | **11:15** |
| An Approach Towards a Hybrid Fault Tolerance Framework Within a Distributed Computer Architecture.  
O’Flaherty Christopher, Malcolm Hodgson, Louis Hyman and Dewald Blaauw, Stellenbosch University, South Africa | On the Security of the EMV Authentication Methods of Contactless Cards  
Al-Maliki Ossama and Hisham Al Assam, The University of Buckingham, UK |
| **11:45** | **11:45** |
| Smart City IoT: Co-Designing Trustworthy Public Safety Drones for Indoor Flight Missions  
Wingo Harry, National Defense University, Washington, D.C., USA | Security of Systems on Chip  
Tumer Eda and Leandros Maglaras, De Montfort University, Leicester, UK |

**12:15**  
**Lunch Break**

**12:45**  
**Panel**  
*The legality and ethics of cyber self-defence [hack back]*  
*Led by Dr Thaddeus Eze with Char Sample, Brett van Nierkerk, Tim Grant, Thorsten Kodalle,*

**13:35**  
Comfort break and Conference splits into two streams

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**Zoom Room details**  
Password to all Rooms: ECCWS20  
Stream A/Room 1  
https://us02web.zoom.us/j/89763024362  
Meeting ID: 897 6302 4362  
Stream B/Room2  
https://us02web.zoom.us/j/82016714001  
Meeting ID: 820 1671 4001  
Panel link  
https://us02web.zoom.us/j/88901069304  
Meeting ID: 889 0106 9304  
Stream C – PhD  
https://us02web.zoom.us/j/84430793626  
Meeting ID: 844 3079 3626
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<tr>
<th>Time</th>
<th>Stream A: Mini track on Cyber Security and Privacy for IoT and other Emerging Technologies Chairs: Tago Cruz</th>
<th>Stream B: Cyber Issues Chair: Martti Lehto</th>
<th>Stream C: PhD &amp; Masters Colloquium Chair: Dan Remenyi</th>
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<td>13:45</td>
<td>Towards a Methodology for the Classification of IoT Devices Sarris Dimitrios, Digital14, Dubai, UAE, Huw Read, Norwich University, Northfield, USA, Konstantinos Xynos and Iain Sutherland, Noroff University College, Kristinsand, Norway</td>
<td>Towards Cyber Sensing: Venturing Beyond Traditional Security Events Lavreanovs Arturs, Kimmo Heinaaro and Erwin Orye, NATO, Tallinn, Estonia</td>
<td>13:45-13:55 The Roots of Restraint in Cyber Conflict Variola Federico, Fudan University, Shanghai, China 14:00-14:10 Cyberattacks and the Prohibition of Use of Force in the Regulations of Humanitarian Laws with an Approach to Tallinn Manual Akbariavaz Khalil, Pardis Moslemzaei Tehrani and Johan Shamsuddin bin hj Sabaruddin, University Malaya, Malaysia 14:15-14:25 “The three “Cyber Logics” and their Implications to Cyber Conflicts: Germany, France and UK as Case Studies Tosso de Alcântara Bruna, Federal University of Rio Grande do Sul (UFRGS), Porto Alegre, Brazil 14:30-14:40 Comparing Personality Traits Between Penetration Tester, Information Security and ITS Professionals from two Cohorts Pedal Olav, Capella University, Minneapolis, USA 14:45-14:55 Enabling Rapid Response and Service Restoration with Machine Learning Techniques Hutchison Andrew and Andre Lopes, University of Cape Town, South Africa (Masters) 15:00-15:15 - discussion and feedback</td>
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<td>14:15</td>
<td>How to Secure the Communication and Authentication in the IIoT: A SRAM-based Hybrid Cryptosystem Lipps Christoph, Pascal Ahr and Hans Dieter, German Research Center for Artificial Intelligence, Kaiserslautern, Germany</td>
<td>A Change Management Perspective to Implementing a Cyber Security Culture Ramluckan Trishana, Isabel Martins and Brett van Niekerk, University of KwaZulu-Natal, South Africa (Presentation only)</td>
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<td>14:45</td>
<td>The Evolution of Ransomware Variants Wood Ashley and Thaddeus Eze University of Chester, UK</td>
<td>Artificial Intelligence and its’ Legal Risk to Cybersecurity Watney Murdoch, University of Johannesburg, Gauteng, South Africa</td>
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<td>15:15</td>
<td>Break</td>
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<td>16:00</td>
<td>An approach to objective and replicable Risk Appetites Ian Bryant and Tim Watson, Cyber Security Centre, WMG, University of Warwick, UK</td>
<td>Artificial Intelligence in Megaprojects: The Next Frontier Greiman Virginia, Boston University Boston, MA, USA</td>
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<td>16:30</td>
<td>Networking in Small Groups to Catch up with Colleagues and build New Connections for Future Collaboration</td>
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<td>15:30-15:40 - discussion and feedback</td>
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<td>17:00</td>
<td>Close of Conference Day</td>
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<td>09:00</td>
<td><strong>Room:</strong> Opening Messages</td>
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| 09:05  | **Keynote Address:** Detective Sergeant Damian Ward, Metropolitan Police, UK  
**Experiences of Policing Cybercrime in the UK: Challenges and Successes** |              |
| 09:50  | **Introduction to ECCWS 2021**                                                                                 |              |
| 10:00  | **Break**                                                                                                     |              |
| 10:15  | **Assessment of the French and Dutch Perspectives on International Law and Cyber-Operations**  
van Niekerk Brett, Trishana Ramluckan, University of KwaZulu-Natal, Durban, South Africa and Daniel Ventre, CESDIP, CNRS, France |              |
| 10:45  | **Cyber as Hybrid Threat to Energy Security**  
Dupuy Arnold Virginia Polytechnic Institute and State University, USA,  
Ión Ifrimie, NATO Defense College, Rome, Italy, Daniel Nussbaum,  
Naval Postgraduate School, Monterey, USA and Stephan Pickl,  
University of Bundeswehr, Germany |              |
| 11:15  | **Decision Tree for National Responses to a Cyber-attack: An International Law Perspective**  
Ramluckan Trishana and Brett van Niekerk, University of KwaZulu-Natal, Durban, South Africa |              |
| 11:45  | **Turning the Asymmetry around - Tactical Principles of Warfare in the Cyber Domain**  
Kiviharju Mikko and Mika Huttunen, Finnish Defence Research Agency, Riihimaki, Finland |              |
| 12:15  | **Lunch Break**                                                                                                 |              |
| 12:45  | **Cyber Security Systems of FPGA Platform for a Wireless Sensor Network**  
Tulemissova Gulfarida and Olimzhon Baimuratov, Suleyman Demirel University, Almaty, Kazakhstan |              |
| 13:15  | **What LEGAD needs to know? Analysis of AARs from Locked Shields** (2012-2018)  
Harasta Jakub, Masaryk University, Brno, Czech Republic |              |
| 13:45  | **Vulnerabilities Analysis of Software Solutions for Critical Activity Sectors**  
Zamfirou Alin and Paul Pocatliu, Bucharest University of Economic Studies, Bucharest, Victor Emmanuel Badea, National Institute for Research and Development in Informatics, Romania |              |
| 14:15  | **Award to the winner of the best PhD paper and Close of Conference**                                          |              |
|        | **Posters have been uploaded to the facebook group where we invite participants to view them and comment/discuss the work** |              |
|        | **Poster with a WIP Paper**  
SHAPES Secure Cloud Platform for Health Care Solutions and Services  
Rajamäki Jyri and Aarne Hummelholm, University of Jyväskylä, Finland |              |
|        | **Poster Only**                                                                                                 |              |
|        | Domestici Terrorism, Racism, and White: An Anticipatory Ethical Analysis  
Wilson Richard L., Towson University, Towson, USA (presentation only) |              |
|        | The PUF Commitment: SRAM-based Trust Anchors for the IIoT  
Lipps Christoph, Pascal Ahr and Hans Dieter Schotten, German Research Center for Artificial Intelligence, Kaiserslautern, Germany |              |