10th International Conference on
Global Security,
Safety and Sustainability
(ICGS3-2015)

Hosted by: GSM-London
Date: 15 - 17 September 2015
Venue: Meridian House, Royal Hill, Greenwich,
London SE10 8RD
Foreword by Lord Carlile of Berriew

‘Tomorrow’s Challenges of Cyber Security’

‘The World Wide Web is a wide-area hypermedia information retrieval initiative aiming to give universal access to a large universe of documents’. Since 6 August 1991 when these words headlined the first online website, the W3 as it was first labelled and what we today most associate with the internet has expanded at an astronomical rate. Today the internet exists with nearly 1 billion webpages, close to 3 billion users and global internet traffic per year of 966 Exabytes – the equivalent of 15 billion iPads.

Sir Tim Berners-Lee’s aim of a ‘large universe of documents’ is indeed well on the way. It is now integrated into almost all electronic systems, speaking to each other in real time, which we endeavour to develop as we push forward with the internet revolution.

This hyper-connectivity has brought with it opportunity and benefit, connectivity and freedoms. But this is not without its costs. We have also seen a rapid growth in cyber-crime, activism and espionage. The cyber threat is rapidly becoming ever more present, disruptive and destructive.

The growth of cyber-threats has plunged the World of today into a serious deliberation over how the threat can be overcome. How do we restore the necessary international sense of order whilst defending the freedoms and rights of individuals around the globe? It is an ongoing battle without an end in sight.

This year alone hacks have hooked headlines. To see their impact one must only look at the hack of the US Office of Personal Management in June 2015 which Joel Brenner, a former head of CIA counter-intelligence described as ‘not the end of American human intelligence, but a significant blow’.

Therefore it is excellent timing that the ICGS3-15 will this year provide a platform to debate ‘Tomorrow’s Challenges of Cyber Security’. As Governments, corporations, security firms, and individuals look to tomorrow’s challenges of cyber security this conference reminds us of the importance of this debate and discussion.

The ICGS3-15 enters its 10th year of bringing together international experts from all fields to examine the issues we face in the future. This year’s conference provides expert and forward thinking analysis at a time when the debate over how we plan for the cyber-security of the future has become a leading concern.

It is with great pleasure and appreciation that I thank ICGS3-15 for bringing us together to debate and formulate an effective strategy today. In doing so, ICGS3-15 guides us as we aim to defend and overcome the ever-present and ever growing cyber-threats of tomorrow.

Lord Carlile of Berriew CBE, QC
September 2015
### Tuesday 15th September 2015
#### Morning Session

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>Registration</td>
<td>From 8:30am and we would appreciate you registering as early as possible so we can start promptly at 9:30am</td>
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| Opening Session | **Overview and welcome**  
Professor Hamid Jahankhani, General Chair of ICGS3  
Head of Doctoral Studies, GSM-London |
| Keynote address 1 | **Alison Wheaton**  
Chief Executive Officer, GSM-London, UK |
| Chaired by Professor Chris Gale | **Title: Tomorrow’s Challenges of Cyber Security**  
Lord Carlile of Berriew, CBE, QC, FRSA |
| 9:30 - 11:00 | **Title: APTs: a review and some likely prospects**  
David Emm, Principal Security Researcher, Global Research & Analysis Team, Kaspersky Lab, UK |
| 10.50 - 11:15 | Morning Coffee Break |
| Opening Session | **Title: Processing Social Media Data for Crisis Management in Athena**  
Babak Akhgar and Helen Gibson, CENTRIC, Sheffield Hallam University, UK |
| Keynote address 2 | **Title: A Consideration of eDiscovery Technologies for Internal Investigations**  
Amie Taal\(^1\), Jenny Le\(^2\) and James A. Sherer\(^3\)  
\(^1\)Vice President at Deutsche Bank, NY, USA,  
\(^2\)Vice President at Evolve Discovery,  
\(^3\)Counsel in the New York office of Baker Hostetler LLP |
| Chaired by Professor Chris Gale | **Title: Online surveillance awareness as impact on data validity for open-source intelligence?**  
Petra Saskia Bayerl and Babak Akhgar, Erasmus School of Management, Erasmus University, Rotterdam, Netherlands |
| 11:15 - 13:00 | **Title: Some Security Perils of Smart Living (A day in the life of John Q Smith, a Citizen of Utopia, and his twin brother, who isn’t)**  
David Lilburn Watson, Business Compliance & Recovery Ltd, UK |
| 13:00pm – 14:00pm | Lunch |
**Tuesday 15th September 2015**

**Afternoon Session**

| Session 1 | Title: Responsive Cyber-physical Risk Management (RECYPHR): A Systems Framework  
A G Hessami, H Jahankhani, M Nkhoma, A Shankaranarayanan  
1Vega Systems, UK,  
2GSM-London, UK,  
3RMIT International University Vietnam |
| --- | --- |
| Chaired by | Dr Bobby L. Tait  
Security audit, risk and governance 1 |
| 14:00 - 15:30 | Title: Simulation of Cloud Data Security Processes and Performance  
Krishan Chand, Muthu Ramachandran, Ah-Lian Kor, , Leeds Beckett University, UK |
|  | Title: A Framework for Cloud Security Audit  
Umar Mukhtar Ismail, Shareeful Islam, Haralambus Mouratidis  
1University of East London, UK  
2University of Brighton, UK |
|  | Title: Human Factors of Social Engineering Attacks (SEAs) in Hybrid Cloud Environment: Threats and Risks  
Reza Alavi, Shareeful Islam, Haris Mouratidis, University of East London, London, UK, University of Brighton, UK |
| 15:30 - 16:00 | Afternoon Tea Break |

| Session 2 | Title: Risk and Privacy Issues of Digital Oil Fields in the Cloud  
Hamid Jahankhani, Najib Altawell, A G Hessami  
1GSM-London UK,  
1Vega Systems, UK |
| --- | --- |
| Chaired by | Dr Mathews Z. Nkhoma  
Security audit, risk and governance 2 |
| 16:00 – 17:15 | Title: A Survey on Financial Botnets threat  
Giovanni Bottazzi, Gianluigi Me  
1University of Rome, Italy,  
2CeRSI, LUISS Guido Carli University, Rome |
|  | Title: The Enemy Within: the Challenge for Business from Cyber-attack  
Michael Reynolds, GSM-London, UK |

Reception 18:00 - 20:00
**Wednesday 16th September 2015**

**Morning sessions**

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<th>Time</th>
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<th>Title</th>
<th>Speaker(s)</th>
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<tr>
<td><strong>Registration</strong></td>
<td>From 9:00am and we would appreciate you</td>
<td>Title: Dark 5G networks</td>
<td>Shahin Gheitanchi, technical staff, Altera corporation</td>
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<td>9:30-10:00</td>
<td>Title: An analysis of honeypot programs and</td>
<td>Title: An Immunity Based Configuration for Multilayer Single</td>
<td>Chris Moore¹ and Ameer Al-Nemrat²,</td>
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<td><strong>Keynote address</strong></td>
<td>the attack data collected</td>
<td>Featured Biometric Authentication Algorithms</td>
<td>¹University of St Mark &amp; St John, Plymouth, UK</td>
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<td>11:00 - 11:30</td>
<td>Keynote address</td>
<td>Title: Software Security Requirements Engineering: State of the Art</td>
<td>Muthu Ramachandran, Leeds Beckett University, Leeds, UK</td>
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<td>11:30-11:50</td>
<td>Title: Conflicts between Security and Privacy</td>
<td>Title: Securing the Blind User Visualization and Interaction in</td>
<td>Daniel Ganji, Haralambos Mouratidis, Saeed Malekshahi Gheytassi, Miltos Petridis, University</td>
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<td><strong>Keynote address</strong></td>
<td>Measures in Software Requirements Engineering</td>
<td>Touch Screen</td>
<td>of Brighton, UK</td>
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<td>Title: Towards a Common Security and Privacy</td>
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<td>Mohammed Fakrudeen, Sufian Yousef, Anglia Ruskin University, UK</td>
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**Wednesday 16\textsuperscript{th} September 2015**  
**Afternoon sessions**

| Session 5 | Title: Cloud Forensics Challenges Faced by Forensic Investigators  
Wakas Mahmood, Hamid Jahankhani, Aykut Ozkaya, GSM-London, UK  
Chaired by Dr Avinash Shankaranarayanan  
14.00 – 15:15 |  
| --- | --- |

| 15:15 - 15:45 | Afternoon Tea Break |

| Session 6 | Title: Improving Cyber Situational Awareness through Data Mining and Predictive analytic Techniques  
Sina Pournouri, Babak Akhgar, Sheffield Hallam University, UK  
IT and Cyber Crime 1  
Dr George Weir  
Chaired by  
15:45 – 17:15 |  
| --- | --- |

| Title: Detecting Deceit – Guessing or Assessing? Study on the Applicability of Veracity Assessment Methods in Human Intelligence  
Marko Uotinen, National Defence University, Department of Leadership and Military Pedagogy, Helsinki, Finland  
1 |  
| Title: Searching the web for illegal content: the anatomy of a semantic search engine  
Luigi Laura and Gianluigi Me, Sapienza" University of Rome, Italy and LUISS Guido Carli University Roma, Italy  
2 |  
| Title: Behavioural biometrics: Utilizing eye-tracking to generate a behavioural pin using the Eyewriter  
Bobby L. Tait, University of South Africa, Pretoria, South Africa  
3 |  

Banquet 19:00 - 22:00
## Thursday 17th September 2015
### Morning sessions

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<th>Time</th>
<th>Session</th>
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<td>Session 7</td>
<td>Title: Understanding Privacy Concerns in Online Courses: A Case Study of Proctortrack</td>
<td>Anwar ul Haq, Arshad Jamal, Usman Butt, Asim Majeeed, Aykut Ozkaya, GSM London, UK, 1QABS, London</td>
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<td>IT and Cyber Crime 2</td>
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<td>Dr Bobby L. Tait</td>
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<td>10:00 - 11:15</td>
<td>Title: Understanding Android Security</td>
<td>Gregor Robinson, George R S Weir, University of Strathclyde, Glasgow, UK</td>
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<td>11:15 - 11:30</td>
<td>Morning Coffee Break</td>
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<td>IT and Cyber Crime 3</td>
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<td>Asim Majid</td>
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<td>11:30 - 13:00</td>
<td>Title: Wavelet based image enlargement technique</td>
<td>Akbar Sheikh Akbari, Pooneh Bagheri Zadeh, Leeds Beckett University, Leeds, UK, 1De Montfort University, U.K.</td>
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<td>13:00pm – 13:15pm</td>
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<td>Closing Session</td>
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<td>13:15 – 14:00</td>
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