

11th European Conference on Information Warfare and Security 2012

(ECIW 2012)

**Laval, France
5-6 July 2012**

Editors:

**Eric Filiol
Robert Erra**

ISBN: 978-1-62276-537-9

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© The Authors, (2012). All Rights Reserved.

No reproduction, copy or transmission may be made without written permission from the individual authors.

Papers have been double-blind peer reviewed before final submission to the conference. Initially, paper abstracts were read and selected by the conference panel for submission as possible papers for the conference.

Many thanks to the reviewers who helped ensure the quality of the full papers.

Printed by Curran Associates, Inc. (2012)

Published by Academic Conferences Ltd.
Curtis Farm Kidmore End
Reading RG4 9AY UK

Phone: 441 189 724 148

Fax: 441 189 724 691

info@academic-conferences.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

Contents

Paper Title	Author(s)	Guide Page	Page No.
Preface		vi	iv
Conference committee		vii	v
Biographies		x	vi
A Non-Militarised Approach to Cyber-Security	<i>Andrew Adams, Pauline Reich and Stuart Weinstein</i>	1	1
Matching Attack Patterns to Security Patterns Using Neural Networks	<i>Adetunji Adebiyi, Johnnes Arreymbi and Chris Imafidon</i>	2	9
An Exceptional war That Ended in Victory for Estonia or an Ordinary e-Disturbance? Estonian Narratives of the Cyber-Attacks in 2007	<i>Kari Alenius</i>	3	18
Who are you Today? Profiling the ID Theft Fraudster	<i>Olga Angelopoulou, Stilianos Vidalis and Ian Robinson</i>	4	25
The Islamic Republic of Iran's Strategy Against Soft Warfare	<i>Ebrahim Anoosheh</i>	5	35
Recent Cyberwar Spectrum and its Analysis	<i>Rabia Aslanoglu and Selma Tekir</i>	6	45
Metrics Framework of Cyber Operations on Command and Control	<i>Melanie Bernier, Sylvain Leblanc and Ben Morton</i>	7	53
Attribution in the Future Internet: The Second Summer of the Sisterhood	<i>Matt Bishop, Mina Doroud, Carrie Gates and Jeffrey Hunker</i>	8	63
Cloud Computing and Security	<i>Abílio Cardoso and Paulo Simões</i>	9	70
EU law and Internet Traffic Control Lost Between Privacy Rights and Freedom of Individual and Corporate Enterprise	<i>Filipe Domingues Cerqueira Alves</i>	10	78
Identification of Topics Targeted by Attackers	<i>Manoj Cherukuri and Srinivas Mukkamala</i>	11	84
Evaluation of Nation-State Level Botnet Mitigation Strategies Using DEMATEL	<i>Christian Czosseck</i>	12	94
Telefonica – Potential Victim of American Espionage	<i>Joey Dreijer, Matthew Robert, Neera Jeymohan, Jeremy Julien, Tommy Karlsson, Raquel Cuesta, Nils Monning and Elif Duru</i>	13	104
From Perception Management to Communication Strategy	<i>Arto Hirvelä</i>	14	113
What Does the Concept of “Ambidexterity” Mean in the Current Military Planning Process?	<i>Aki-Mauri Huhtinen</i>	15	119
The Susceptibility of the South African Media to be Used as a Tool for Information Warfare	<i>Anna-Marie Jansen van Vuuren, Joey Jansen van Vuuren and Suna Venter</i>	16	127
Governance of CyberSecurity in South Africa	<i>Joey Jansen van Vuuren, Jackie Phahlamohlaka and Louise Leenen</i>	17	135

Paper Title	Author(s)	Guide Page	Page No.
Security and Safety Education in the Czech Republic and eSEC-Portal User Requirements	<i>Roman Jasek, Radek Vala and David Malanik</i>	17	145
Explaining Politico-Strategic Cyber Security: The Feasibility of Applying Arms Race Theory	<i>Eli Jellenc</i>	19	151
Towards an Automated Security Awareness System in a Virtualized Environment	<i>William Aubrey Labuschagne and Mariki Eloff</i>	20	163
Information Security Model to Military Organizations in Environment of Information Warfare	<i>José Martins, Henrique Santos, Paulo Nunes and Rui Silva</i>	21	172
Simulation Approach for Military Cyber Operations	<i>Ben Morton, Sylvain Leblanc and Melanie Bernier</i>	22	180
A Taxonomy of Technical Attribution Techniques for Cyber Attacks	<i>Andrew Nicholson, Tim Watson, Peter Norris, Alistair Duffy and Roy Isbell</i>	23	188
A Vulnerability-Based Model of Cyber Weapons and its Implications for Cyber Conflict	<i>Karlis Podins and Christian Czosseck</i>	24	198
Modelling Emergency Response Communication Systems	<i>Graeme Pye and Matthew Warren</i>	25	206
Digital Finland: Life at the Screen	<i>Jari Rantapelkonen and Saara Jantunen</i>	25	214
Finding Suspicious Activity on Computer Systems	<i>Neil Rowe and Simson Garfinkel</i>	26	221
The Comprehensive Approach as a Strategic Design to run the Military-Industrial Complex in Operations	<i>Mirva Salminen and Aki-Mauri Huhtinen</i>	27	230
User-Side Password Authentication: A Study	<i>Libor Sarga and Roman Jašek</i>	28	237
Multi-Level Security Cannot Realise NEC Objectives	<i>Harm Schotanus, Tim Hartog and Cor Verkoelen</i>	29	244
From Kinetic Warfare to Strategic Communications as a Proactive and Mind-Centric Paradigm of the art of war	<i>Torsti Sirén</i>	30	250
Cablegate Analysis of Likely Espionage of Nokia by the United States	<i>Daniel Strmecki, Wilke Schwiedop, Emmanuel Oyo-Ita, Brigitte Kaagman, Pierre Leandre, Enrique Santos-Brihuega, Lateef Kadiri and Jessica Dufmats</i>	31	258
Practical Application of Open Source Frameworks to Achieve Anti-Virus Avoidance	<i>Ignus Swart</i>	32	265
Overt Information Operations During Peacetime	<i>Selma Tekirl</i>	33	272
Novel Tracking of Rogue Network Packets Using Danger Theory Approach	<i>Solomon Uwagbole, William Buchanan and Lu Fan</i>	34	277
Building an Ontology for Cyberterrorism	<i>Namosha Veerasamy, Marthie Grobler and Basie Von Solms</i>	36	286

Paper Title	Author(s)	Guide Page	Page No.
Swarm UAV attack: how to protect sensitive data?	<i>Robert. Erra, Vincent. Guyot, Loica. Avanthey, Antoine. Gademer, and Laurent Beaudoin</i>	37	296
<i>PHD Papers</i>		39	
Proposal for a new Equation System Modelling of Block Ciphers and Application to AES 128	<i>Michel Dubois and Eric Filiol</i>	41	303
Law of Armed Conflicts Applied to i-Warfare and Information Operations: How and Under What Legal Framework Should Surgical NATO and U.S. Military Drone Strikes be Conducted?	<i>Berg Hyacinthe</i>	42	313
Cyber Threat Management in Cognitive Networks	<i>Anssi Kärkkäinen</i>	43	320
A Framework for the Detection and Prevention of SQL Injection Attacks	<i>Emad Shafie and Antonio Cau</i>	43	329
<i>WIP Papers</i>		45	337
Information Systems Security Management (ISSM) Success Factor: Retrospection From the Scholars	<i>Azah Anir Norman and Norizan Mohd Yasin</i>	47	339