



NATO PROGRAMME SECURITY THROUGH SCIENCE

ADVANCED RESEARCH WORKSHOP COMPLEXITY AND SECURITY

26–30 March 2007, Tbilisi, Georgia

Co-Directors: Jeremy Ramsden (UK) & Paata Kervalishvili (Georgia)

Programme

Day 1: Monday 26 March

Morning: arrival and accommodation (participants arriving at Tbilisi airport will be met by Organizing Committee members upon their arrival)

13.00 – 15.00 Registration and collation

15.00 – 18.00 **Opening Session** (Aula Magna of the Georgian Technical University)
Chairmen: Prof. Jeremy Ramsden (Cranfield University, UK) &
Prof. Paata Kervalishvili (Georgian Technical University (GTU), Tbilisi)

Welcome addresses: President of Georgia, Chairman of the Georgian Parliament, Georgian Minister of Education and Science, Georgian Minister of Defence, representatives of foreign states, academia, and the public

Prof. Jeremy Ramsden: "The Scope of the Workshop. Definitions and Challenges" **

Prof. Thomas Ratchford (George Mason University (GMU), USA): "Problems of Complexity and Global Security"

18:00 – 18:20 Meeting for all Chairmen and Rapporteurs

19.30 – **Welcome Reception** (Hall of Mirrors, Palace of Youth, Rustaveli Avenue)

Day 2: Tuesday 27 March

10.00 – 18.00 **Session II: Setting the Scene***

Chairman (a.m.): Prof. Paata Kervalishvili (GTU)

Rapporteur (a.m.): Dr Claude Potelle, (Leuven University, Belgium)

Prof. Peter Allen (Cranfield University, UK): "The Evolution of Complexity—from Stationary to Adaptive Models"

11.15 – 11.45 Coffee Break

Dr Serge Galam (Ecole Polytechnique & Université de Paris): "Percolation and Terrorism"

13.00 – 14.30 Lunch Break

Chairman (p.m.): Dr David Gabunia (Georgian Patent Office)

Rapporteur (p.m.): Prof. Dimosthenis Asimakopoulos (University of Athens, Greece)

Prof. Czeslaw Mesjasz (Cracow University of Economics, Poland): “Security and Complexity in the Contemporary World: Epistemological Assumptions”

Dr Oleg Udovyk (National Institute for Strategic Studies, Kyiv, Ukraine): “Complexity and Security of Coupled Critical Infrastructures”

16.00 – 16.30 Coffee Break & Poster Session

Prof. Jeremy Ramsden: “Formal Notions of Complexity”

Dr Badri Meparishvili (Modern Technologies of Development (MTD), Georgia): “Social Entropy, Synergy and Security”

19.30 – Dinner with guests*

Day 3: Wednesday 28 March

10.00 – 18.00 **Session III: Contemporary Paradigms of Complexity: Biology, Physics, Information and Sociology***

Chairman (a.m.): Prof. Alexey Gvishiani (Geophysical Centre, RAS)

Rapporteur (a.m.): Dr Gianfranco Guerra (Noema, Italy)

Prof. Karl Ritz (Cranfield University): “The Tangled Underground: Soil as a Paradigm of a Complex System”

Prof. George Kvesitadze (Institute of Biotechnology, Georgian Academy of Sciences): “Eco Security and Ecopotential of Higher Plants”

11.30 – 12.00 Coffee Break & Poster Session

Prof. Paata Kervalishvili: “Complexity in Materials Science and Semiconductor Physics”

13.00 – 14.30 Lunch Break & Poster Session

Chairman (p.m.): Mark Hauf (Multihazard Mitigation Council (MMC), USA)

Rapporteur (p.m.): Prof. Susie Michailidis (University of Indiana in Athens, Greece)

Prof. Alexey Gvishiani: “Complexity in Geophysical Data Mining”

Prof. Dimosthenis Asimakopoulos: “Complex Problems of Environmental and Meteorological Research”

16.30 – 17.00 Coffee Break & Poster Session

Prof. Valery Petrenko (Auburn University, USA): “Combinatorial Nanobiotechnology—a New Concept in Biosecurity”

Prof. Guguli Magradze (Tbilisi State University): “Social Aspects of Global Security”

19.30 – Cultural event (Opera performance “Buffone”, followed by wine tasting*)

Day 4: Thursday, 29 March

10.00 – 13.00 **Session IV: The Impact of Energy and Economics on Security***

Chairman: Prof. David Mikeladze (Tbilisi State University, Georgia)

Rapporteur: Prof. Jeremy Ramsden

Dr Fulcieri Maltini (FM Consultants Associates, France): "Energy Complexity and Security"

Dr Claude Potelle: “Diversity of Managerial Profiles in Corporate Management and Project Implementation”

11.30 – 12.00 Coffee Break & Poster Session

Dr Fulcieri Maltini: "The Complexity of Financing the Reconstruction of Eastern Europe"

13.00 – 14.30 Lunch Break & Poster Session

14:30 – 18:00 **Session V: Discussion***

Chairman: Prof. Stepan Petrosyan (Russian-Armenian State University (RASU), Erevan)

Rapporteur: Prof. Paraskevi Euthymiou (University of Athens, Greece)

16.00 – 16.30 Coffee Break & Poster Session

19.30 – **Gala Dinner** (at the traditional restaurant “Phaetoni”, Digomi district)

Day 5: Friday 30 March

10.00 – 13.15 **Session V (continued): Discussion***

Chairman: Dr Batu Kutelia (Georgian Ministry of Defence)

Rapporteur: Prof. Peter Allen

11.30 – 12.00 Coffee Break

13.15 – 14.00 Closing Remarks and Press Conference.

14.00 – 15.00 Lunch*

15:00 – 15:30 Discussion with authors concerning the Workshop Book

Free time, including the possibility of an excursion to the ancient city of Mtskheta, a former capital of Georgia, followed by dinner in Mtskheta

Saturday 31 March

Departure (for those departing in the middle of the night, an evening/night discussion will be arranged)

COMMUNICATIONS ***

Dr Lela Bakanidze (Georgian National Centre for Disease Control and Medical Statistics):
" Nonproliferation Policy of the Georgian Government: Aspects of International Cooperation"

Prof. George Chakhunashvili (TSMU, Georgia), "Complexity, Security and Children's Rights"

Dr Nick Chikradze (IMM GAS, Georgia): "Problems of Protecting People in Underground Structures from Terrorist Explosions"

Dr Karine Kotoyants (Institute of Telecommunications, Kazakhstan): "Modern Trends in Integrated Information Systems Development"

Dr Mzia Kutateladze (G. Eliava Institute of Bacteriophage, Microbiology and Virology, Georgia): "Biosecurity Issues and Programmes in Georgia"

Prof. Tamar Makharoblidze (Tbilisi State University): "Social Problems in Complex Environments"

Prof. Alexei Novikov (National Technical University of Ukraine & Kyiv Polytechnic Institute): "The synthesis of information protection systems with optimal properties"

Prof. Otar Zumburidze (Telecom Georgia): "Complexity Problems in Information-Communication Systems Development"

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NOTES

* Hotel Georgia, 49a Kipshidze St, Vake District, Tbilisi (accommodation for participants not resident in Tbilisi, and working sessions where not otherwise stated).

** The titles of Keynote Lectures are underlined.

*** May be presented as oral communications if time allows.