



**NORTH ATLANTIC TREATY ORGANIZATION  
SCIENCE AND TECHNOLOGY  
ORGANIZATION**



**3<sup>rd</sup> TECHNICAL COURSE**

**SAS-149**

# **BASICS OF COMPLEX MODERN URBAN FUNCTIONS AND CHARACTERISTICS**



**ORGANIZED BY THE  
SYSTEMS ANALYSIS AND STUDIES (SAS) PANEL**  
to be held  
**7-9 June 2022, NATO Defence College, Rome, Italy**

**THIS TECHNICAL COURSE IS OPEN  
TO CITIZENS FROM NATO NATIONS, PARTNERSHIP FOR  
PEACE NATIONS, ENHANCED OPPORTUNITY PARTNERS  
AND NEW ZEALAND**



# **NORTH ATLANTIC TREATY ORGANIZATION SCIENCE AND TECHNOLOGY ORGANIZATION**



## **TECHNICAL COURSE PROGRAMME**

### **DAY ONE (ALL TIMES Central European Summer Time) Weapon Effects in Dense Urban Environments**

- 09:00 Opening
- 09:15 NATO STO Overview
- 10:00 Fundamentals of Urban Weapon Effects I – Robert Ripley
- 11:00 Break
- 11:15 Fundamentals of Urban Weapon Effects II – Robert Ripley
- 11:45 Technology for Weapon Effects Estimation I – Robert Ripley
- 12:45 Break
- 13:45 Technology for Weapon Effects Estimation II – Robert Ripley
- 14:45 Break
- 15:00 Application to real cities and World Events – Robert Ripley
- 16:00 Q & A
- 16:15 Closure Day 1

### **DAY TWO (ALL TIMES Central European Summer Time) Forecasting Conflicts in Urban Environments on a Global Scale**

- 09:00 Opening
- 09:15 Anticipatory Intelligence: Introduction and a Few Remarks – Patrick Maupin
- 10:00 Introduction – Håvard Hegre
- 11:00 Break



## **NORTH ATLANTIC TREATY ORGANIZATION SCIENCE AND TECHNOLOGY ORGANIZATION**



11:15 Methods – Håvard Hegre

11:45 Hands-on Session Using the ViEWS Software and Data I – Håvard Hegre

12:45 Break

13:45 Hands-on Session Using the ViEWS Software and Data II – Håvard Hegre

14:45 Break

15:00 The Foreseeable Future and Conclusions – Håvard Hegre

16:00 Q & A

16:15 Closure Day 2

### **DAY THREE (ALL TIMES Central European Summer Time) Understanding Complex Urban Environments Using Systems Thinking**

09:00 Opening

09:15 Urban Metaphors – Patrick Maupin

10:00 Introduction – Guido Velduis and Bas Keijser

11:00 Break

11:15 Methods – Guido Velduis and Bas Keijser

11:45 Hands-on Session Using the MARVEL Software I – Guido Velduis and Bas Keijser

12:45 Break

13:45 Hands-on Session Using the MARVEL Software II – Guido Velduis and Bas Keijser

14:45 Break

15:00 Conclusion – Guido Velduis and Bas Keijser

16:00 Q & A

16:15 Closure Day 3



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