Course Introduction

Espen Volden
Magdalena Fitrzyk

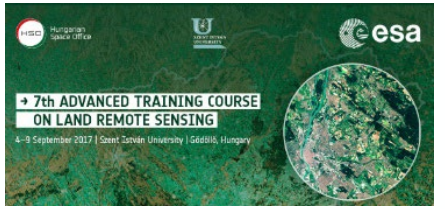
Why ESA Advanced Training Courses?

eo science for society

Action of ESA's Earth Observation Envelope Programme (EOEP)

Objectives:

- Training the next generation of scientists and professionals on remote sensing for land surfaces, with the focus on water and hazards
- Explaining the theoretical principles, processing algorithms, data products and their use for water applications
- Introducing tools and methods for the exploitation of EO satellite data, in particular the Sentinels
- Stimulating and supporting the exploitation of EO data for waterremote sensing science and operational applications.

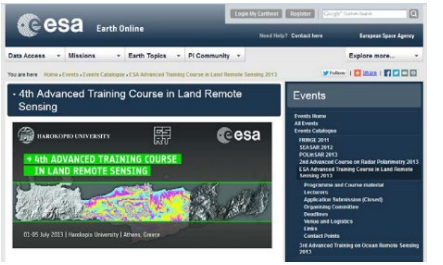


Previous Editions

Lisbon 2007

Prague 2009

Krakow 2011



Athens 2013

Valencia 2014

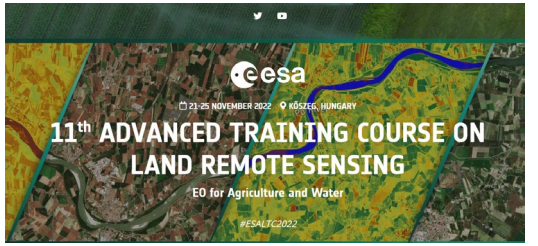
Bucharest 2015

Gödöllő 2017

Leicester 2018

Louvain 2019

Ljubljana 2021



Kőszeg 2022

Behind The Course

Organising Committee

European Space Agency (ESA)

- Espen Volden
- Magdalena Fitrzyk
- Irene Renis

Wroclaw University of Environmental and Life Sciences

- Witold Rohm
- Wiesław Fiałkiewicz
- Grzegorz Jóźków
- Kamila Pawłuszek-Filipiak
- Krzysztof Stasch

Partners

Behind The Course

Bernhard Bauer-Marschallinger
TUWien, Austria

Jedrzej Bojanowski
CloudFerro, Poland

Luca Chini
LIST, Luxembourg

Jacopo Dari
CNR-IRPI, Italy

Wouter Dorigo
TUWien, Austria

Magdalena Fitrzyk
RSAC c/o ESA, Italy

Radoslaw Guzinski
DHI Group, Denmark

Michal Halicki
University of Wrocław, Poland

Maya Ilieva
UPWr, Poland

Krzysztof Lejcuś
UPWr, Poland

Jean-Philippe Malet
CNRS/EOST, France

Tomasz Niedzielski
University of Wrocław, Poland

Thierry Oppikofer
Terranum, Switzerland

Kamila Pawluszek-Filipiak
UPWr, Poland

Fabrizio Ramoino
Serco c/o ESA, Italy

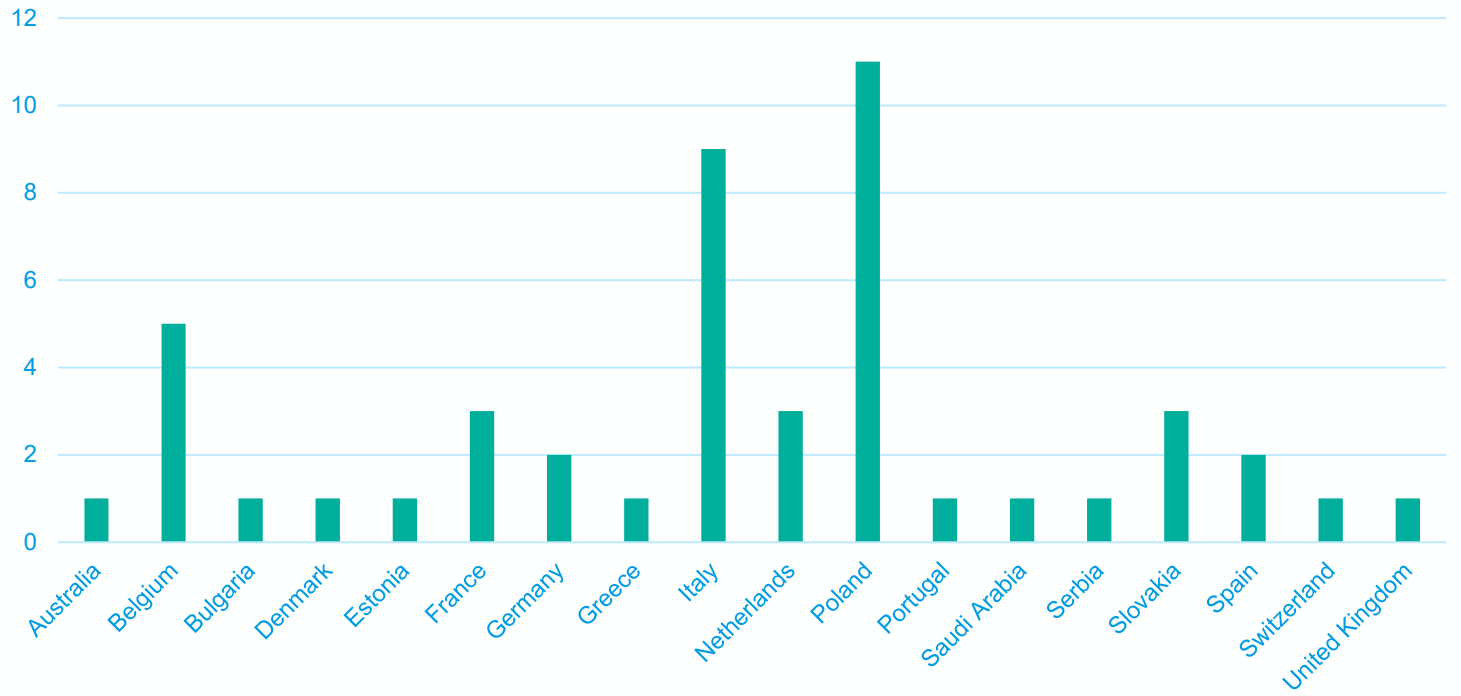
Ana B. Ruescas
Brockmann Consult GmbH, Germany &
University of Valencia, Spain

Krzysztof Sośnica
UPWr, Poland

Pietro Stradiotti
TUWien, Austria

Espen Volden
ESA, Italy

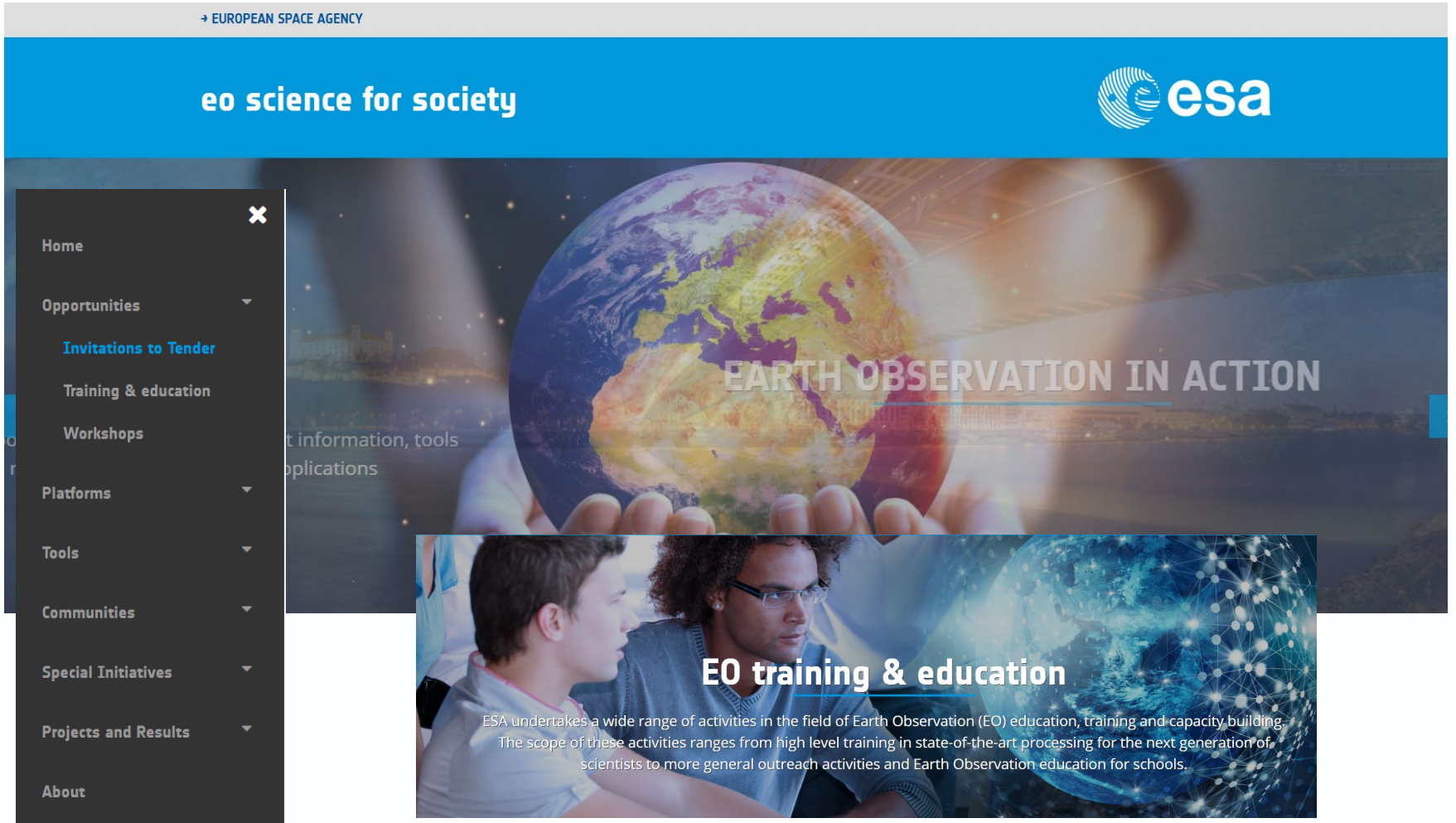
Some statistics



Total number – 48

18 countries
24 nationalities

eo4society.esa.int



Upcoming events

SEP 16 — Advanced training course on Land remote sensing with the focus on Agriculture
Training/Education

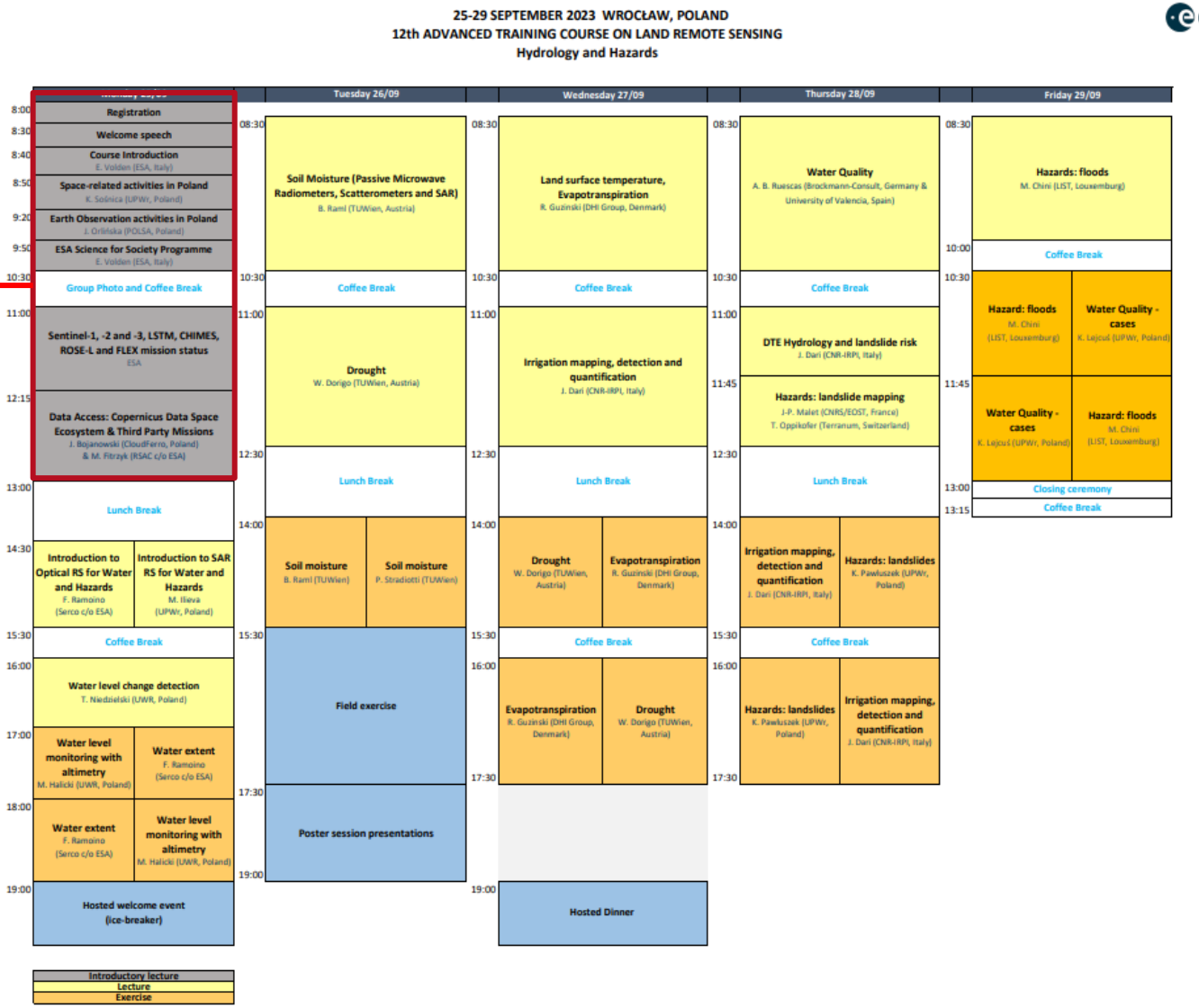
SEP 16 — U-TEP webinars | Bring your own processors to the platform
Training/Education

SEP 30 — IV ESA EARSEL CNR School: Remote Sensing for Forest Fires
Training/Education

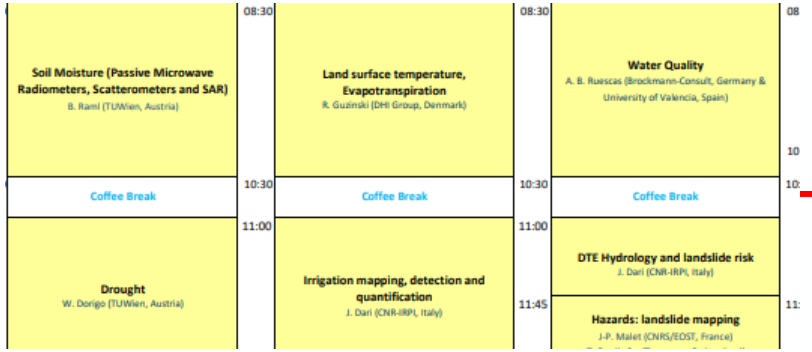
NOV 04 — Advanced Ocean Synergy training course 2019
Training/Education

More events

Course overview



Course overview

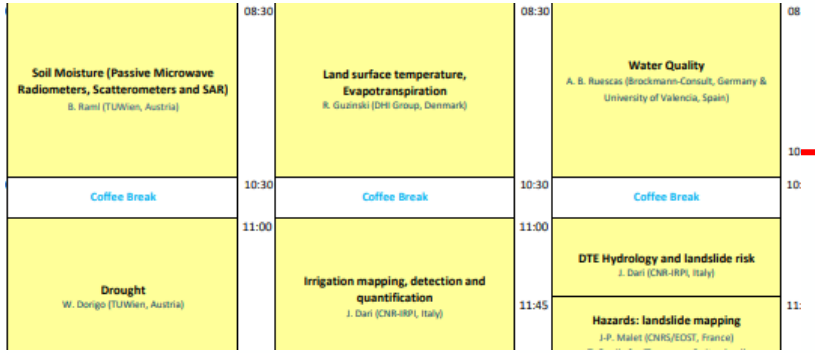


25-29 SEPTEMBER 2023 WROCŁAW, POLAND
12th ADVANCED TRAINING COURSE ON LAND REMOTE SENSING
Hydrology and Hazards

	Monday 25/09	Tuesday 26/09	Wednesday 27/09	Thursday 28/09	Friday 29/09
8:00	Registration				
8:30	Welcome speech				
8:40	Course Introduction E. Volden (ESA, Italy)				
8:50	Space-related activities in Poland K. Sośnica (UPWr, Poland)				
9:20	Earth Observation activities in Poland J. Orlińska (POLSA, Poland)				
9:50	ESA Science for Society Programme E. Volden (ESA, Italy)				
10:30	Group Photo and Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
11:00	Sentinel-1, -2 and -3, LSTM, CHIMES, ROSE-L and FLEX mission status ESA	Drought W. Dorigo (TUWien, Austria)	Irrigation mapping, detection and quantification J. Dari (CNR-IRPI, Italy)	DTE Hydrology and landslide risk J. Dari (CNR-IRPI, Italy)	Hazard: floods M. Chini (LIST, Louxemburg) / Water Quality - cases K. Lejcuś (UPWr, Poland)
11:45				Hazards: landslide mapping J-P. Malet (CNRS/EOST, France) T. Oppikofer (Terranum, Switzerland)	Water Quality - cases K. Lejcuś (UPWr, Poland) / Hazard: floods M. Chini (LIST, Louxemburg)
12:30	Data Access: Copernicus Data Space Ecosystem & Third Party Missions J. Bojanowski (CloudFerro, Poland) & M. Fibrzyk (RSAC c/o ESA)	Lunch Break	Lunch Break	Lunch Break	
13:00	Lunch Break				Closing ceremony
13:15					Coffee Break
14:00		Soil moisture B. Raml (TUWien) / Soil moisture P. Stradiotti (TUWien)	Drought W. Dorigo (TUWien, Austria) / Evapotranspiration R. Guzinski (DHI Group, Denmark)	Irrigation mapping, detection and quantification J. Dari (CNR-IRPI, Italy) / Hazards: landslides K. Pawluszek (UPWr, Poland)	
14:30	Introduction to Optical RS for Water and Hazards F. Ramoino (Serco c/o ESA) / Introduction to SAR RS for Water and Hazards M. Ilieva (UPWr, Poland)				
15:30	Coffee Break	Field exercise	Coffee Break	Coffee Break	
16:00	Water level change detection T. Niedzielski (UWr, Poland)		Evapotranspiration R. Guzinski (DHI Group, Denmark) / Drought W. Dorigo (TUWien, Austria)	Hazards: landslides K. Pawluszek (UPWr, Poland) / Irrigation mapping, detection and quantification J. Dari (CNR-IRPI, Italy)	
17:00	Water level monitoring with altimetry M. Halicki (UWr, Poland) / Water extent F. Ramoino (Serco c/o ESA)				
17:30		Poster session presentations			
18:00	Water extent F. Ramoino (Serco c/o ESA) / Water level monitoring with altimetry M. Halicki (UWr, Poland)				
19:00	Hosted welcome event (ice-breaker)		Hosted Dinner		

Introductory lecture
Lecture
Exercise

Course overview



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12:30		Lunch Break	Lunch Break	Lunch Break	
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13:15					Coffee Break
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Introductory lecture
Lecture
Exercise

We split into 2 groups
- Optical
- SAR

Course overview

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Hydrology and Hazards

Field trip

Water level monitoring with altimetry M. Halicki (UWR, Poland)	**Water extent** F. Ramoino (Serco c/o ESA)
Water extent F. Ramoino (Serco c/o ESA)	**Water level monitoring with altimetry** M. Halicki (UWR, Poland)

Monday 25/09	Tuesday 26/09	Wednesday 27/09	Thursday 28/09	Friday 29/09
8:00 Registration	08:30 Soil Moisture (Passive Microwave Radiometers, Scatterometers and SAR) B. Raml (TUWien, Austria)	08:30 Land surface temperature, Evapotranspiration R. Guzinski (DHI Group, Denmark)	08:30 Water Quality A. B. Ruescas (Brockmann-Consult, Germany & University of Valencia, Spain)	08:30 Hazards: floods M. Chini (LIST, Louxemburg)
8:30 Welcome speech				
8:40 Course Introduction E. Volden (ESA, Italy)				
8:50 Space-related activities in Poland K. Sośnica (UPWr, Poland)				
9:20 Earth Observation activities in Poland J. Orlińska (POLSA, Poland)				
9:50 ESA Science for Society Programme E. Volden (ESA, Italy)				10:00 Coffee Break
10:30 Group Photo and Coffee Break	10:30 Coffee Break	10:30 Coffee Break	10:30 Coffee Break	10:30 Hazard: floods M. Chini (LIST, Louxemburg) / Water Quality - cases K. Lejcuś (UPWr, Poland)
11:00 Sentinel-1, -2 and -3, LSTM, CHIMES, ROSE-L and FLEX mission status ESA	11:00 Drought W. Dorigo (TUWien, Austria)	11:00 Irrigation mapping, detection and quantification J. Dari (CNR-IRPI, Italy)	11:00 DTE Hydrology and landslide risk J. Dari (CNR-IRPI, Italy)	
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17:00 Water level monitoring with altimetry M. Halicki (UWR, Poland) / Water extent F. Ramoino (Serco c/o ESA)	17:30 Poster session presentations	17:30	17:30	
18:00 Water extent F. Ramoino (Serco c/o ESA) / Water level monitoring with altimetry M. Halicki (UWR, Poland)				
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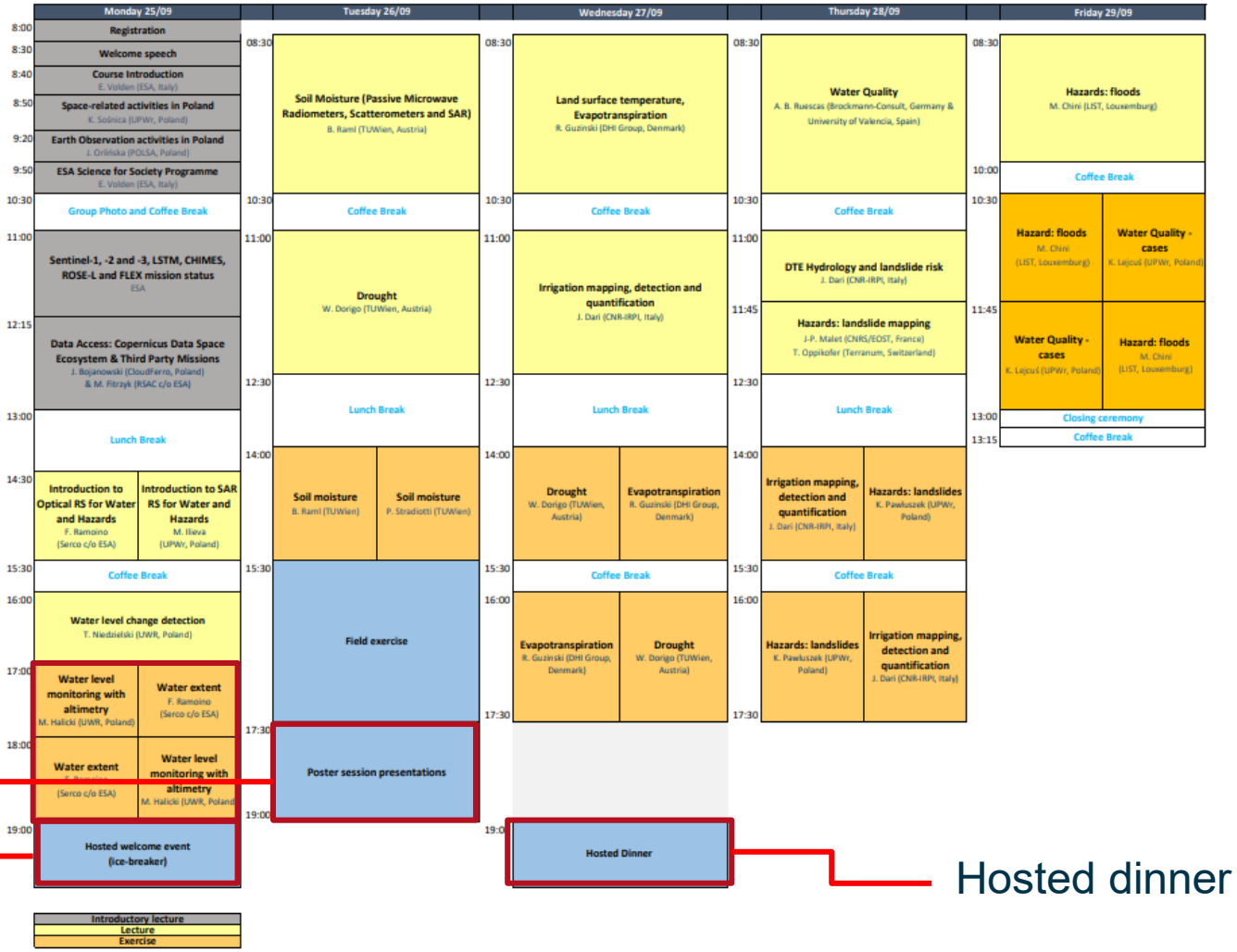

Poster session

Icebreaker

Hosted dinner

Good to know

Certificate of Attendance

To get a certificate, attendance is *mandatory* for all lectures and practical classes
Not enough to attend one or two lectures or to pick and choose from the programme
Attendance lists will be in circulation during the week
Certificates will be awarded during the closing ceremony on Friday

ECTS Credits

Will be awarded on request
Please contact organisers if interested

Online Course Evaluation

To provide feedback to improve for future courses
10 minutes to complete
The questionnaire is anonymous
Link to website will be provided by email (by the end of the course)

Course material will be made available on eo4society.esa.int


WROCLOVE