

ESA-MOST China Dragon 4 Cooperation

→ **ADVANCED TRAINING COURSE IN OCEAN
AND COASTAL REMOTE SENSING**



12 to 17 November 2018 | Shenzhen University | P.R. China



DAILY PROGRAMME

Overview programme

	MONDAY 12 Nov. 2018	TUESDAY 13 Nov. 2018	WEDNESDAY 14 Nov. 2018	THURSDAY 15 Nov. 2018	FRIDAY 16 Nov. 2018	SATURDAY 17 Nov. 2018
	EO missions & Sea Surface Salinity Retrievals (SSS)	Geophysical parameters from RAs	Ocean colour (OC), Sea Surface Temperature (SST) & synergy	Wind & Wave / Current Interaction	Polar regions & climate change	Applications Case Studies in Chinese Coastal Zones & Closing
	Registration	Lecture Radar altimetry principles and data processing Marie-Hélène Rio	Lecture 1. OC & Intro. to S3 OLCI Tom Jackson	Lecture Principles of SAR measurements of oceanic phenomena and atmospheric phenomena over the ocean from space Werner Alpers	Lecture Polar oceans and climate change from space Johnny Johannessen	09:00 to 09:45 Applications of active microwave data for CZ monitoring in China Zhang Xi
	Opening session	Lecture Introduction of HY-2 Radar altimeter and its data processing Jungang Yang	2. OC retrievals in Chinese CASE 2 waters Tang Danling	Lecture Principles of wind waves and wave current interaction from space Werner Alpers	Practical Monitoring the polar oceans from space Johnny Johannessen	09:45 to 10:30 Applications of EO optical and thermal data for CZ monitoring in China Shen Fang
AM	Photo-call & break	coffee break	coffee break	coffee break	coffee break	10:30 to 11:00 coffee break
	ESA & Copernicus EO Programmes E. Doyle	Prac. 1 RA data & processing BRAT & SARvatore Marco Restano	OC Prac. Tom Jackson & Tang Danling	Prac. 1 Wind waves and wave currents from space Lucile Gautier (ODL)	Practical Climate impact and the polar oceans Johnny Johannessen	11:00 to 11:45 Ship and UAV observations for coastal monitoring Zhu Jiesong
	ESA & Copernicus EO missions for ocean RS Marie-Hélène Rio					11:45 to 12:30 CERTIFICATES CEREMONY & CLOSE
	Chinese EO missions for ocean RS					
	lunch break	lunch break	lunch break	lunch break	lunch break	
	Lecture SSS from S3 OLCI Yin Xiaobin	Lecture From altimeter sea level anomalies to ocean surface currents Marie-Hélène Rio	Lecture SST & SLSTR Francesco Nencioli	Lecture Advanced SAR & doppler Johnny Johannessen	Lecture Estimating Ocean Acidification from Space Roberto Sabia	
	Practical SSS using SNAP & S3 OLCI data Yin Xiaobin	Lecture Applications of RA in China Seas Jungang Yang & Meng Junmin	SST Practical Francesco Nencioli	Lecture Apps. in China seas including waves & currents Yang Jingsong & Meng Junmin	Lecture Marine Inorganic Carbon from Space Bai Yan	
PM	coffee break	coffee break	coffee break	coffee break	coffee break	
	Lecture SSS from SMOS Roberto Sabia	Prac. 2 Advanced RA processing (SAVINvatore) Marco Restano	SST Practical cont. & synergy OC & SST Francesco Nencioli & Tang Danling	Prac. 2 Waves & currents interaction. Impact on ocean circulation Lucile Gautier (ODL)	Practical Estimating Marine CO2 Fluxes From Space Bai Yan	
	Practical SSS using SNAP & SMOS data Roberto Sabia					
	Social Event	Poster Session			Social Event	

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Day 1: MONDAY 12 November 2018 - AM

OPENING PLENARY SESSION Venue: Conference Room (3), 1st Floor, Science & Technology Building @Main Campus, SZU			
08:30-09:00	REGISTRATION: Lobby, outside of Conference room (3), 1st Floor, Science & Technology Building @Main Campus, SZU		
9:00-09:30	Introduction & opening		
	Prof. Li Qingquan		President SZU
	Eric Doyle		Dragon 4 coordinator ESA
	Dr. Wang Qi'an		Director General NRSCC
09:30-10:00	Course overview		Dr. Andrew Zmuda
10:00-10:30	Coffee break & group picture: Lobby, outside of Conference room (3), 1st Floor, Science & Technology Building @Main Campus, SZU		
		Ref.	Lecturer(s) / Tutor(s)
10:30-10:45	ESA & Copernicus EO Programmes	D1P-L1	Eric Doyle (ESA)
10:45-11:15	ESA & Copernicus EO Missions for Ocean Remote Sensing	D1P-L2	Dr. Marie-Hélène Rio (ESA)
11:15-12:00	Chinese EO Programmes for Ocean Remote Sensing	D1P-L3	Song Qingtao (NSOAS)
12:00-13:30	Lunch: TingLi Restaurant 听荔餐厅 (教职工餐厅) @Main Campus, SZU		

** Afternoon programme on next page

Day 1: MONDAY 12 November 2018 – PM

SEA SURFACE SALINITY RETRIEVALS VENUE: L2-512, Science Building @South Campus, SZU			
		Ref.	Lecturer(s) / Tutor(s)
13:30-14:30	Lecture Sea Surface Salinity from S3 OLCI	D1-L1	<i>Dr. Yin Xiaobin</i>
14:30-15:30	Practical Sea Surface Salinity from SNAP & S3 OLCI data	D1-P1	<i>Dr. Yin Xiaobin</i>
15:30-16:00	Coffee break: Tea Room beside L2-512, Science Building @South Campus, SZU		
16:00-17:00	Lecture Sea Surface Salinity from SMOS data	D1-L2	<i>Dr. Roberto Sabia</i>
17:00-18:00	Practical Sea Surface Salinity using SNAP, Pi-MEP & SMOS data	D1-P2	<i>Dr. Roberto Sabia</i>
18:30-20:30	Ice-breaker (welcome social event): 3RD FLOOR, ROYCE HOTEL, YUEXING 6TH ROAD.		

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Day 2: TUESDAY 13 November 2018

GEOPHYSICAL PARAMETERS FROM RADAR ALTIMETERS Venue: L2-512, Science Building @South Campus, SZU			
08:30 - 09:30	Lecture Radar altimetry principles and data processing	D2-L1	<i>Dr. Marie-Hélène Rio</i>
09:30 - 10:30	Lecture Introduction of HY-2 Radar altimeter and its data processing	D2-L2	<i>Prof. Yang Jungang</i>
10:30 - 11:00	Break		
11:00 - 12:30	Practical RA data & processing BRAT & SARvatore	D2-P1	<i>Dr. Marco Restano</i>
12:30 - 14:00	Lunch		
14:00 - 14:45	Lecture From altimeter sea level anomalies to ocean surface currents	D2-L3	<i>Dr. Marie-Hélène Rio</i>
14:45 - 15:30	Lecture Applications of RA in China Seas	D2-L4	<i>Profs. Yang Jungang & Meng Junmin</i>
15:30 - 16:00	Break		
16:00 - 17:30	Practical Advanced RA processing (SAVInvatore)	D2-P2	<i>Dr. Marco Restano</i>
18:30 - 20:00	Poster Session (refreshments available) Venue: 2nd Floor, L2, Science Building 理工楼L2 @south campus, SZU		

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Day 3: WEDESNDAY 14 November 2018

OCEAN COLOUR (OC), SEA SURFACE TEMPERATURE (SST) & SYNERGY Venue: L2-512, Science Building @South Campus, SZU			
08:30 - 09:30	Lecture OC & Intro. to S3 OLCI	D3-L1	<i>Dr. Tom Jackson</i>
09:30 - 10:30	Lecture OC Retrievals in Chinese CASE 2 Waters	D3-L2	<i>Prof. Tang Danling</i>
10:30 - 11:00	Break		
11:00 - 12:30	Practical Ocean Colour Retrievals SNAP & S3 OLCI Data	D3-P1	<i>Dr. Tom Jackson</i>
12:30 - 14:00	Lunch		
14:00 - 14:45	Lecture SST & Measurement Using S3 SLSTR Data	D3-L3	<i>Dr. Francesco Nencioli</i>
14:45 - 15:30	Practical SST & Measurement SNAP & S3 SLSTR Data	D3-P2	<i>Dr. Francesco Nencioli</i>
15:30 - 16:00	Break		
16:00 - 17:30	Practical (cont.) SST & OC synergy SNAP S3 OLCI & SLSTR Data	D3-P3	<i>Dr. Francesco Nencioli & Prof. Tang Danling</i>

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Day 4: THURSDAY 15 November 2018

WIND & WAVE / CURRENT INTERACTION Venue: L2-512, Science Building @South Campus, SZU			
08:30 - 09:30	Lecture Principles of SAR Measurements of Oceanic Phenomena and Atmospheric Phenomena Over the Ocean from Space	D4-L1	Prof. Werner Alpers
09:30 - 10:30	Lecture Principles of Wave / Current Interaction from Space	D4-L2	Prof. Werner Alpers
10:30 - 11:00	Break		
11:00 - 12:30	Practical Wind Waves and Wave / Currents from Space Ocean Virtual Laboratory	D4-P1	Lucile Gaultier (ODL)
12:30 - 14:00	Lunch		
14:00 - 14:45	Lecture Advanced SAR & Doppler	D4-L3	Prof. Johnny Johannessen
14:45 - 15:30	Lecture Applications in China Seas Including Waves & Currents	D4-L4	Profs. Yang Jingsong & Meng Junming
15:30 - 16:00	Break		
16:00 - 17:30	Practical (cont.) Waves & Currents Interaction - Impact on Ocean Circulation Ocean Virtual Laboratory	D4-P2	Lucile Gaultier (ODL)

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Day 5: FRIDAY 16 November 2018

POLAR REGIONS & CLIMATE CHANGE Venue: L2-512, Science Building @South Campus, SZU			
08:30 - 09:30	Lecture Polar Oceans and Climate Change from Space	D5-L1	Prof. Johnny Johannessen
09:30 - 10:30	Practical Monitoring the Polar Oceans from Space Polar Syntool	D5-P1	Prof. Johnny Johannessen & ODL
10:30 - 11:00	Break		
11:00 - 12:30	Practical (cont.) Monitoring the Polar Oceans from Space Polar Syntool	D5-P1	Prof. Johnny Johannessen & ODL
12:30 - 14:00	Lunch		
14:00 - 14:45	Lecture Estimating Ocean Acidification from Space	D5-L2	Dr. Roberto Sabia
14:45 - 15:30	Lecture Marine Inorganic Carbon from Space	D5-L3	Dr. Bai Yan
15:30 - 16:00	Break		
16:00 - 17:30	Practical Estimating Marine CO ₂ Fluxes From Space	D5-P2	Dr. Bai Yan
18:30 - 20:00	Social event: venue- Qianhaiyugang Restaurant		

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Day 6: SATURDAY 17 November 2018

APPLICATIONS CASE STUDIES IN CHINESE COASTAL ZONES Plenary Venue: Conference room (3), 1st Floor, Science & Technology Building @Main Campus, SZU			
09:00 - 09:45	Applications of Active Microwave Data for CZ Monitoring in China	D6-L1	<i>Dr. Zhang Xi</i>
09:35 - 10:30	Applications of EO Optical and Thermal Data for CZ Monitoring in China	D6-L2	<i>Prof. Shen Fang</i>
10:30 - 11:00	Break		
11:00 - 11:45	Ship and UAV Observations for Coastal Monitoring	D6-L3	<i>Dr. Zhu Jiasong</i>
CLOSING CEREMONY			
11:45 – 12:00	Training Course Summary	<i>Eric Doyle (ESA)</i>	
12:00 – 12:15	Award of Certificates of Attendance	<i>By Lecturers, Support team & Organisers</i>	
12:15 – 12:25	Award of Best Poster Certificates	<i>By NRSCC, SZU & ESA representatives</i>	
12:25 – 12:30	Closing	<i>SZU representative</i>	

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