INTERNATIONAL STAFF WEEK
Research and Technology Transfer at ASET (Algeciras School of Engineering and Technology): our experience and cooperation opportunities.

General information

Hosting Institution:	UCA
Staff Week Title	Research and Technology Transfer at ASET (Algeciras School of Engineering and Technology): our experience and cooperation opportunities.
Abstract: (few lines describing the staff week that SEA-EU partners can use for dissemination)	The SEA-EU Staff Week on Research and Technology Transfer at ASET is a five-day program hosted at the University of Cadiz (**A**lgeciras **S**chool of **E**ngineering and **T**echnology; Campus *Bahía de Algeciras*). The event aims to be a window to show the applied research facilities and work conducted by the School's research groups in different areas of Engineering and UCA-SEA innovation centre, as well as the opportunities for collaboration with these groups, through the development of joint doctoral theses, national and international projects, technology transfer projects with companies, etc.
Application details and deadline	KA131 applicants should fill out the *application form* by **15th March 2024.** After filling in your application form, you will be contacted in the days following to confirm your acceptance. If you need a Mobility Agreement signed by UCA in order to apply for an Erasmus mobility grant, please, get in contact with staffweek-intereurop.studies@gm.uca.es
Dates of the staff week	From the 27th to the 31th of May, 2024.
Number of participants	The minimum number of participants is 10, maximum is 30.
Mobility costs	Participation is free of charge. Travel expenses and accommodation can be covered through the ERASMUS+ Staff Mobility. SEA-EU Budget / KA1

Contact	Francisco Javier González Gallero – Coordinator of International Relations - ASET (etsi.algeciras@uca.es ; internacional.etsia@uca.es)

Contents

Target group / Expected profile of participants	Researchers and professors working on the topics our research groups are studying and interested in any kind of cooperation. Please check the list of research groups below.
Requirements	The program will be held in English and Spanish.
Tentative Agenda	**Monday 27/05/2024 (Location: ASET)** 10:00-10.30 Registration of participants 10:30-11:00 Coffee Break (provided) 11:00-11:30 Opening session 11:30-13:00 Getting to know each other / Speed dating 13:00-14:00 Administrative procedures for KA171 Participants. **Tuesday 28/05/2024 (Location: ASET)** 9:00 - 9:30 Presentation of ASET 9:30-10:30 Seminar 1: Research Group 1 10:30-11:00 Coffee Break (provided) 11:00-12:00 Seminar 2: Research Group 2 12:00-13:00 Seminar 3: Research Group 3 13:00-14:00 Seminar 4: Research Group 4 17:00-20:00 Visit to the Port of Algeciras / Boat trip around the Bay of Algeciras (1) **Wednesday 29/05/2024 (Location: UCA-SEA Building)** 9:00 - 9:30 Presentation of UCA-SEA 9:30 - 10:30 Seminar 5: Research Group 5 10:30-11:00 Coffee Break (provided) 11:00-12:00 Seminar 6: Research Group 6 12:00-13:00 Seminar 7: Research Group 7 **Thursday 30/05/2024 (Location: UCA-SEA Building)** 9:00 - 9:30 PhD Programme: Energy and Sustainable Engineering 9:30 - 10:30 Seminar 8: Research Group 8 10:30-11:00 Coffee Break (provided) 11:00-12:00 Seminar 9: Research Group 9 12:00-13:00 Seminar 10: Research Group 10 17:00-20:00 Visit to Bolonia's Archeological Site (2)

Friday 31/05/2024 (Location: ASET)

10:00 - 10:30 Summary and closing remarks

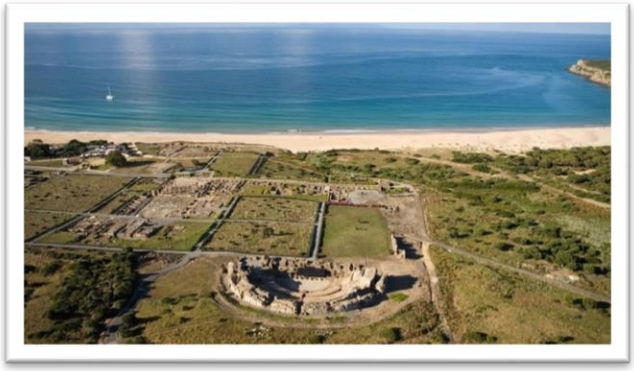
10:30 - 11:30 Roundtable

11:30 – 12:00 Closing ceremony

Schedule

Venue	ASET	ASET	UCA-SEA	UCA-SEA	ASET
Date	27 May	28 May	29 May	30 May	31 May
Time	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
9:00 – 9:30		Presentation of ASET	Presentation of UCA-SEA	PhD Programme: Energy and Sustainable Engineering	
9:30 - 10:00		Seminar 1: Research Group 1	Seminar 5: Research Group 5	Seminar 8: Research Group 8	
10:00 - 10:30	Registration of participants				Summary and closing remarks
10:30 - 11:00	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Roundtable
11:00 - 11:30	Opening sesion	Seminar 2: Research Group 2	Seminar 6: Research Group 6	Seminar 9: Research Group 9	
11:30 - 12:00	Getting to know each other / Speed dating				Closing ceremony
12:00 - 12:30		Seminar 3: Research Group 3	Seminar 7: Research Group 7	Seminar 10: Research Group 10	
12:30 - 13:00					
13:00 - 13:30	Administrative procedures for KA171 participants	Seminar 4: Research Group 4			
13:30 - 14:00					
14:00-15:00	Lunch Break				
17:00 - 20:00		Visit to the Port of Algeciras / Boat trip around the Bay of Algeciras		Visit to Bolonia's Archeological Site	

(1) Bay of Algeciras

	 (2) Bolonia's Roman Archaeological Site

N°	Researcher	Research Group	Research fields
1	Dr. Ismael González Yero	Combinatorics and Optimisation: Application of Discrete Mathematical Models (FQM-371)	▪ Metric Graph Theory: Metric Dimension, Variants, and applications. ▪ General position and mutual visibility problems in graphs. ▪ Dominating sets in graphs and their applications.
2	Dr. Verónica Ruiz Ortiz	Geosciences (RNM-373)	▪ Numerical models contribution to the analysis and conjunctive management of surface and groundwater. ▪ Multivariate analysis and interpolation methods to the definition and mapping of hydrological variables: application to the precipitation and other hydrological variables. ▪ Implication of induced evaporation losses in water resources management.
3	Dr. María Dolores Rubio Cintas	Utilisation of industrial, construction, and/or demolition waste for the production of structural and non-structural concrete (TEP-951)	▪ Conventional and ultra-high-strength concrete with industrial waste. ▪ Mix designs and behaviour of the new material obtained. ▪ Use and implementation in Civil Engineering.
4	Dr. Miguel Caparrós Espinosa	Structural Engineering and Geotechnics (TEP-976)	▪ Mechanical analysis and structural modelling of new sustainable materials for construction. ▪ Study of structure-soil interaction. Soil Mechanics, Rock Mechanics, mineral deposits, tectonics, and urban planning. ▪ Structural and geotechnical optimization of infrastructures for sustainability.
5	Dr. Antonio Contreras de Villar	Coastal Engineering (RNM-912)	▪ Sinking of sloped breakwaters in sandy bottoms. ▪ Digital elevation models on beaches, port and coastal structures using unmanned aerial vehicles. ▪ Coastal dunes.
6	Dr. Ismael Rodríguez Maestre	Thermal Engineering (iiTER) (TEP-221))	▪ Energy simulation of HVAC and DHW systems and buildings. ▪ Smart facades (Façade-based building integrated photovoltaic-thermal system with phase change material (BIPVT-PCM) for domestic hot water; Thermal insulation modular solution designed for integration into the opaque envelope of buildings with intelligent solar control and photovoltaic solar energy production. Photovoltaic Electrochromic (PV-EC) glazing). ▪ Low-temperature geothermal energy: systems modelling. ▪ Ventilation and indoor air quality in buildings.
7	Dr. Juan José González de la Rosa	Computational Instrumentation and Industrial Electronics (ICEI) (TIC-168)	▪ Power Quality (PQ) Analysis. ▪ Electronic instrumentation and virtual instrumentation. Industrial applications. ▪ Transient characterization for industrial surveillance and diagnostics and similar. ▪ Higher-order statistics (HOS).
8	Dr. Ignacio Turias Domínguez	Intelligent Modelling of Systems (MIS) (TEP-024)	▪ Air Pollution Estimation and Forecasting Using Machine Learning Techniques. ▪ Artificial neural networks in industrial and civil engineering. ▪ Data analytics in stainless steel factories. ▪ Modelling and Simulation in Transportation and Logistics.
9	Dr. Luis Fernández Ramírez	Sustainable and Renewable Electrical Technologies (TESYR) (TEP-023)	▪ SMART GRIDS/MICROGRIDS: Design, control and operation of smart grids/microgrids with renewable energy and energy storage for isolated and grid-connected applications in distribution networks, smart cities or smart ports. ▪ PHOTOVOLTAIC SOLAR ENERGY: Design, control and operation of isolated and grid-connected photovoltaic systems ▪ WIND ENERGY: Control and operation of wind turbines and wind farms, integrating energy storage and hydrogen production systems, and FACTS devices for improving power quality and the integration of wind turbines and wind farms into the network ▪ MARINE RENEWABLE ENERGY: Electricity generation from offshore wind energy, marine current energy and tidal energy, and their connection to the grid ▪ GREEN HYDROGEN: Design, control and operation of green hydrogen systems (fuel cell and/or electrolyser) for production of electric energy or hydrogen, and for electric transport. ▪ TRANSPORTATION ELECTRIFICATION: Design, control and operation of hybrid electric traction systems for transport (vehicles, buses, trams, port cranes, etc.), and electric charging stations.

			▪ DC ELECTRICAL GRIDS: Design, control and operation of DC electrical grids (LVDC, MVDC, HVDC) with renewable energies and energy storage systems ▪ ELECTRONIC POWER CONVERTERS: Design and control of electronic power converters applied to renewable energies and energy storage systems. ▪ MULTI-ENERGY/INTEGRATED ENERGY SYSTEMS: Design, control and operation of multi-energy/integrated energy systems for integrated production of electricity, hydrogen, energy for transport, heating/cooling, etc. ▪ SMART ENERGY: Design of digital twins, and intelligent control and management systems for energy systems.
10	Dr. David Sales Lérida	Materials and Nanotechnology for Innovation (TEP-946)	▪ The additive manufacturing of metals through wire deposition methods using plasma arc. ▪ Materials for Additive Manufacturing and Additive Manufacturing Technologies. ▪ Materials and Additive Manufacturing for the Circular Economy.

Practical information

Accommodation		A welcome pack will be sent to the registered participants.
Address of the course	*Escuela Técnica Superior de Ingeniería de Algeciras* (ETSIA) - Edificio UCA-SEA **A**lgeciras **S**chool of **E**ngineering and **T**echnology (**ASET**) - **UCA-SEA** Building	**ETSIA/ASET:** Avenida Ramón Puyol, S/N 11202, Algeciras  36.13657556204097°, -5.45317766078421° **UCA-SEA Building:**  36.13703193715594°, -5.444730704966543°
Airports, Trains, Buses	Airports	Málaga Airport (130 km from Algeciras)
		Jerez Airport (100 km from Algeciras)
		Sevilla Airport (190 km from Algeciras)
		Madrid Airport (670 km from Algeciras)
	Buses-Ridesharing platforms	Buses-Ridesharing platforms from/to Algeciras
	Trains	RENFE (for passengers from Madrid to

		Algeciras)
CONTACT	etsi.algeciras@uca.es internacional.etsia@uca.es	If you have any questions related to this staff week, accommodation, transport, etc. please contact us.

How to join the staff week:
The organisers of the staff week invite you to fill in the following form if you are interested in joining: application form After filling in your application form, you will be contacted in the days following to confirm your acceptance. Please contact the people responsible for mobility within your institution to apply for an Erasmus mobility grant.