DOCTORAL COLLOQUIUM

Monday

09:00–10:00	**Registration** Participant check-in
10:00–10:30	**Welcome** EU-Solaris - Diego Martínez General comments - Organization Team
10:30–11:15	**Coffee Break**
11:15–12:15	**Solar Optics** Chair: Loreto Valenzuela • 11:15–11:35: Advances on the design of linear Fresnel solar concentrators - André Santos • 11:35–11:55: Differentiable ray tracing for solar simulator Synlight - Cord Bleibaum • 11:55–12:15: Secondary concentrator design for point focus systems - Alan Giocoli
12:15–12:55	**Materials I** Chair: Loreto Valenzuela • 12:15–12:35: Molten carbonate salts doped with nanoparticles for corrosion mitigation in CSP / CST technologies - Mafalda Gil • 12:35–12:55: Fouling of silicone-based heat transfer fluid on heated surfaces - Ignacio Riveros
13:00–14:45	**Lunch**
14:45–15:45	**Solar Water Treatment** Chair: Isabel Oller /Patricia Palenzuela • 14:45–15:05: Techno-economic analysis of a membrane distillation system for brine concentration - Alejandro Bueso • 15:05–15:25: Sustainable brine management via solar multi-effect evaporation systems - Robinson J. Ramírez • 15:25–15:45: Control and optimisation techniques for efficient and sustainable integration of desalination technologies in CSP plants - Aarón Poyatos
15:45–15:50	**End of Day 1**

Tuesday

09:00–10:20	**Solar Systems I** Chair: Patricia Palenzuela • 09:00–09:20: Study of strategies to enhance the profitability of solar thermal power plants in the Spanish electricity market through the development of a parabolic-trough plant simulation model - Joaquín Vargas • 09:20–09:40: Towards flexible CSP power block - Eylül Gadik • 09:40–10:00: sCO2 and CO2 mixture cycles off-design operation in CSP plants - Vladimir Naumov • 10:00–10:20: Typical year atmospheric extinction of solar radiation of the Plataforma Solar de Almer ıa. Validation of extinction models and maps in areas of interest for thermoelectric solar tower plants - Noelia Simal
10:20–11:00	**Coffee Break**
11:00–11:40	**Solar Systems II** Chair: Diego C. Alarcón • 11:00–11:20: Modeling of a fluidized-bed heat exchanger for integration in a solar power plant - Kelana Bachir-Brahim • 11:20–11:40: Experimental characterisation of a drilling waste treatment plant by an indirect thermal desorption method - Felisberto J.D. Camuege
11:40–12:40	**Materials II** Chair: Diego C. Alarcón • 11:40–12:00: High temperature attrition and erosion due to particle impact at the CentRec® receiver - Ana Cleia González-Alves • 12:00–12:20: Comprehensive durability assessment of advanced solar reflector materials: Results from UV, CASS and outdoor exposure testing - Daniela Molina-Hernández • 12:20–12:40: Characterization of the soiling effect on PV and CST systems operating in arid environments - Rolando L. Cabrera-Dalés
13:00–14:45	**Lunch**
14:45–16:25	**Solar Receivers** Chair: Gilles Flamant • 14:45–15:05: Simulating convective losses from rotating cavity receivers - Onur Polat • 15:05–15:25: Optimization of a solar receiver with movable redox structures - Hanna Lina Pleteit • 15:25–15:45: Modeling and control of a next-generation, fluidized particle-based solar receiver at MW scale - Eduardo Oñate-Oyaneder • 15:45–16:05: Thermo-mechanical study of silicon carbide (SiC) for fluidized bed solar receivers - Oussama Amoud • 16:05–16:25: 3D CFD analysis of an open volumetric air receiver and comparison with 10 kWth solar tests - Laura Alonso-Pardo
16:25–19:00	**Free Time**
19:00–21:00	**Social activity**
21:00–21:30	**Free time**
21:30–23:55	**Gala dinner**
23:55–23:59	**End of Day 2**

Wednesday

09:30–10:30	**Solar Fuels I** Chair: Christian Sattler • 09:30–09:50: Development of a concentrator photovoltaic electrochemical system for water splitting with waste heat integration - Elisa Gruber • 09:50–10:10: Modeling of radiative heat transfer in redox material assemblies for solar fuel production - Louis Thomas • 10:10–10:30: Catalyst development for high temperature SO3 splitting in the solar-aided Sulfur thermochemical cycle - Georgia Skyfta
10:30–11:15	**Coffee Break**
11:15–12:15	**Solar Fuels II** Chair: Diego Martínez • 11:15–11:35: Development and properties of materials as Dispropor tionation Catalysts for Sulphur Dioxide - Daniel Albrandt • 11:35–11:55: Development of a solar-thermochemical reactor for sustainable production of high-purity nitrogen using concentrated solar power - Katrin Klingel • 11:55–12:15: Experimental investigation of the Sulphur Dioxide Depolarized Electrolysis with commercial components - Georgios Arvanitakis
12:15–12:50	**Closing of Doctoral Colloquium** EU-Solaris Awards • Diego Martínez Final remarks of the event Organization Team
13:00–14:30	**Lunch**
14:30–18:55	**PSA Visit** • Bus departure at 15:00 from "La Salle" Bus Stop (Av. Federico García Lorca, 60, 04005 Almería) • Bus arrival at 18:55 at the same location
18:55–19:00	**End of Day 3**

SUMMER SCHOOL

Thursday

08:30–09:00	**Registration** Participant check-in
09:00–09:05	**Welcome** Patricia Palenzuela / Loreto Valenzuela
09:05–10:45	**Lectures** • 09:05–09:55: Cleaning methods. Water saving efficiency - Johannes Wette - CIEMAT-PSA • 09:55–10:45: Characterization, monitoring and preventive measures to avoid clean-up - Florian Wiseinger - DLR
10:45–11:15	**Coffee Break**
11:15–12:55	**Lectures** • 11:15–12:05: Water saving in CSP by Alternative Cooling systems - Patricia Palenzuela - CIEMAT-PSA • 12:05–12:55: CSP+D (Concentrating Solar Power and Desalination) - Marios Giorgou - CYI
13:00–14:45	**Lunch**
14:45–14:50	**End of Day 1**

Friday

09:00–10:40	**Lecture** 09:00–09:50: Integration of Multi-effect Distillation for Water Recovery in parabolic trough CSP plants - Diego-César Alarcón - CIEMAT-PSA • 09:50–10:40: Wastewater recovery by alternative Water Treatment technologies in Industry - Isabel Oller - CIEMAT-PSA
10:40–11:10	**Coffee Break**
11:10–12:50	**Lecture** • 11:10–12:00: Systematizing innovation for Water Resilience: Pathways to Implementation and Policy - Hande Erylmaz - ODTU-GUNAM • 12:00–12:50: Principles of methodologies for Water Footprint calculation from a Life Cycle Assessment approach - Daniel Garraín - CIEMAT-Madrid
12:50–13:00	**Closing of Summer School**
13:00–14:45	**Lunch**
14:45–14:50	**End of Day 2**

Coffee break and lunchs and gala dinner offered by CIEMAT-Plataforma Solar de Almería