

Università degli Studi di Trieste

PhD Course in

Earth Science, Fluid-Dynamics, and Mathematics. Interactions and Methods

Presentation Days: February 22-24, 2022

February 22

<i>Time schedule</i>	<i>Speaker</i>	<i>Title</i>	<i>Session chair</i>
9:00-9:05	Opening		S. Maset
9:05-9:30	Francesca Cairoli	Deep Learning for Abstraction, Control and Monitoring of Complex Cyber-Physical Systems	
9:35-9:50	Eleonora Denich	Numerical approaches to integral solutions for magnetic dipoles	
9:55-10:05	Stefano Russo Alberto	Anomaly detection in time series	
Break			
10:30-11:15	Plenary lecture: prof. Marta Cianferra	Numerical characterization of underwater noise sources	G. Pedrizzetti
11:25-11:40	Giovanni Biagioli	Explaining convective self-aggregation onset with a reaction-diffusion model of the Tropics	
11:45-12:00	Ginevra Carbone	Robustness and interpretability of neural networks' predictions under adversarial attacks	
12:05-12:30	Renè Gabriel Navarro	On the determination of the Pacific Ocean tropical heat budgets and role of the wind-driven shallow-overturning circulation	
Lunch break			
14:30-14:55	Simon Blondel	SALTGIANT ETN Drilling hazards: Mediterranean Salt Structures	C. Calligaris
15:00-15:15	Ilaria Santin	Integrated geophysical imaging and characterization of Antarctic and Alpine glacial environments	
15:20:15:30	Alice Busetti	Sinkhole inventory, characterization and related hazard in the Friuli Venezia Giulia region	
15:35-15:45	Simone Fornasari	A machine-learning approach for the reconstruction of ground shaking fields in real-time	
Break			

16:15-16:40	Enrico Pochini	Modelling ice-shelf basal melting and water masses variability in the Ross Sea (Antarctica)	E. Sincich
16:45-17:00	Andrea Savio	Analysis of performance of cavitation models with analytically calculated coefficients	
17:05-17:20	Mahsa Yousefi	Efficient Stochastic Quasi-Newton Methods for Training Deep Neural Networks	
17:25-17:35	Sonia Foschiatti	Stability for the Calderón's problem for a class of anisotropic conductivities via an ad-hoc misfit functional	
17:40-17:50	Saverio Fracaros	Multi-disciplinary analysis of past and present source-to-sink pathway in a coastal area	

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February 23

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9:05-9:30	Nessim Douss	Sedimentological investigation on the depositional sequences along the western margin of Svalbard, Arctic	F. Romanelli
9:35-9:50	Waed H.A. Abed	Detection and attribution of high precipitation convective events in climate change using advanced machine learning methods	
9:55-10:05	Francesco Bernardi	FTIR on detrital quartz as a provenance tool: application in SE Alps	
Break			
10:30-11:15	Plenary lecture: prof. Luca Ziberna	Redox processes beneath Mt. Etna recorded at the scale of mineral zoning	E. Forte
11:25-11:40	Nicolò Barago	Mine waste: problem or resource? Geochemical-mineralogical study on a lead-zinc mine site (Raibl, Eastern Alps)	
11:45-11:55	Gloria Pietropolli	Inpainting Method to model the Mediterranean Sea	
12:00-12:25	Heba M.M.I. Elkosiri	Geophysical and hydrochemical investigations for groundwater potentialities east to the Nile Delta, Egypt	
Lunch break			
14:30-14:55	Asma Farooq	How Perturbations propagate along the solutions of linear ordinary differential equation: a relative error analysis	A. Sfecci
15:00-15:15	Marco Bartola	Performance of empirical and model derived atmosphere corrections of INSAR time series	
15:20-15:45	Fabio Pezzolo	On some multilinear type integral systems	
Break			
16:15-16:40	Giulia Areggi	Surface deformation analysis in Northeast Italy by using PS-InSAR and GNSS data	L. Bonini
16:45-17:00	Nicolò Bertone	Tectonic evolution of the eastern Mediterranean basin	

17:05-17:20	Arianna Cuius	Rapid Estimate Of Rupture Directivity and Related Source Properties	
17:25-17:35	Alejandro Casallas Garcia	The role of cold pools and microphysics schemes in the organization of convection	
17:40-17:50	Andrea Geniram	Multiproxy analyses of late Quaternary sediments from the inner continental shelf of the Glomar Challenger Basin to the Ross Sea Slope (Eastern Ross Sea, Antarctica)	

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February 24

<i>Time schedule</i>	<i>Speaker</i>	<i>Title</i>	<i>Session chair</i>
9:05-9:30	Gabriele Sbaiz	The influence of gravity in the behaviour of geophysical flows	G. Pedrizzetti
9:35-9:50	Giovanni Petris	Marine propeller noise propagation within a shallow water environment	
9:55-10:05	Naira Hamid	Acoustic characterization of air-bubble films in a turbulent boundary layer	
Break			
10:30-11:15	Plenary lecture: prof. Angeles Martinez	Numerical simulation of fluid flow in fractured rocks	M. Tesauro
11:25-11:50	Donna Bourabee	Speleoseismology in the Dinaric Karst of Slovenia	
11:55-12:10	Melese T. Salilih	Separation of intrinsic and scattering attenuation quality factors in heterogeneous media	
12:15-12:25	Maria Aurora Natale Castillo	How does seismic attenuation correlate to rheology of crustal rocks?	
Lunch break			
14:30-14:55	Marco Venier	Textural and chemical characterization of mantle xenoliths	D. Lenaz
15:00-15:10	Giacomo Roncoroni	Integrating Deep Learning into FWI workflow	
15:15-15:40	Luigi Sante Zampa	Restoration of vintage gravity data and comparison with new satellite-derived models in two case studies: the Gulf of Manfredonia and the Friulian Plain/North Adriatic	
Break			
16:15-16:40	Alessandra Lanzoni	The Messinian salinity crisis in the Adriatic Sea	C. Braitenberg
16:45-17:00	Anna Maria Skloodowska	Innovative methodologies for soil-structure interaction assessment	
17:05-17:30	Andrea Facca	Experimental and numerical methods for metal thermometry in the steel field	

17:35-17:45	Muhammad Tahir Javed	Coseismic folding during ramp failure in the Sulaiman thrust belt	
Closing			