

### "Climate change and the role of early-career geomorphologists"

X AlGeo Italian Young Geomorphologists' Day - III IAG International Young Geomorphologists' Meeting



#### March 1st, 2024

08:30 - Registration and welcome

09:00 - Welcome

09:10 - Mauro Soldati, Efthymios Karympalis, Anita Bernatek-Jakiel III IAG International Young Geomorphologists' Meeting

09:35 - **Keynote by P. Campostrini** (CORILA) - From problem to solution: Venice and sea level rise

## Session 1 - Coastal geomorphology

Convener: G. Scardino

09:50 - **Ilacqua**, **S**. et al. Geomorphic aspects of the beaches of the volcanic Island of Procida, southern Italy

10:00 - Lammle, L. et al. Coastal erosion and mitigation solutions for the coast of the Paraiba do Sul and Jequinhonha river delta (Brazil)

10:10 - **Terracciano, S.** et al. Validation of shoreline detection by applying semi-automatic algorithms based on multispectral satellite sensors on the beach with *Posidonia oceanica* banquettes; case study of Arborea beach (Sardinia, Italy)

# Session 2 Glacial and periglacial geomorphology

Convener: S. Ponti

10:20 - **Bussard, J.** Conservation of World Heritage glacial landscapes in a changing climate: The Swiss Alps Jungfrau-Aletsch case

10:30 - **Cerrato, R.** et al. Geomorphological approach to satellite data analysis: a case of study in deglaciated Alpine areas (Gran Paradiso Group, Italian Western Alps)

10:40 - **Tronti, G.** et al. Assessing water and sediment dynamic in high mountain catchments undergoing paraglacial evolution through hydrometric monitoring and Satellite images the Alpe Veglia case study (Central-Western Alps, Italy)

10:50 - **Reza, M.** and Joshi, R. C. Role of Geospatial Technology in fostering Alpine ecological Study: An observation from the Central Himalaya, India

### Poster session and coffee break

11:00 - 11.50

See posters list in the next page

# Session 3 Geomorphological tools and mapping

Convener: G. Raffa

11:50 - **Rossi, S.** et al. Integrated geomorphological mapping of terrestrial and submarine areas, Gulf of Corinth (Greece)

12:00 - **Ruscitto**, **V.** et al. A fluvial record of late Quaternary climate changes and tectonic uplift along the Marche Piedmont Zone of the Apennines

12:10 - **Domazetović**, **F.** et al. 3D mapping of karst caves using GeoSLAM technology: potentials and challenges

12:20 - **Burnelli, M.** et al. The geomorphodiversity index as a key parameter for the landscape management

# Session 4 Spatial methods and analysis in geomorphology

Convener: L. Contillo

12:30 - **Rettig, L.** et al. The Last Glacial Maximum in the Orobic Alps (Lombardy, Italy): Combining ELA modelling and landform analysis

12:40 - **Mohsen**, **A.** et al. Remote sensing-based suspended sediment discharge modelling: A support for investigating climate change impacts on sediment transport dynamics

12:50 - **Kedich**, **A**. et al. Towards the automatic identification of agricultural terraces in the Eastern Mediterranean using open access Earth observation data

13:00 - **Kushabaha**, **A.** et al. Mapping the impacts of Mediterranean Hurricanes by integrating relational geodatabase in Web-GIS platform

### Living on the water towards 2100

#### Dario Camuffo (ISAC-CNR)

13:10 - Introduction to the field trip

### Poster session and lunch break

13:30 - 14:30

See poster list in the next page

### **Equity, Diversity and Inclusion discussion**

Moderator: M. Pappalardo 14.30 - 15.45

**F. Turco** University of Turin and CIRSDe MINDtheGEPs project

**E. Crapolicchio** Università Cattolica del Sacro Cuore

**P. S. Ginestra** ARTeD, Association of fixed-term researchers

### Poster session and coffee break

15:45 - 16:00

See poster list in the next page

### IAG Southern Europe Webinar

16:00-18:00

Online, see list of speakers in the next page

## Session 5 Geomorphological hazards

Convener: C. Parenti

18:00 - **Forti, L.** et al. Reconstruction of the fluvial landscape of Erbil (Kurdistan Region of Iraq): the anthropogenic impact on landforms and present-day geomorphological hazard

18:10 - **Sevil-Aguareles**, **J.** and Francisco, G. Temporal variability of sinkhole hazard assessed by means of multi-temporal mapping in the western shore of the Dead Sea

18:20 - **Sarkar, N.** et al. Coastal vulnerability assessment in north-western Malta: A Mediterranean climate-change hotspot

#### **Bacaro Tour**

19:30 - 22:30

#### **Posters**

**Azzoni**, **R**. et al. Glacial and periglacial landscape in Turkey: from the flood to anthropic geomorphology

Casella, E. et al. 3D reconstruction of coastal sea floor morphology through two-media Structure from Motion-Multi-View Stereo using low altitude aerial photographs

**Contillo, L.** et al. Codifying a database framework of climate change geomorphological markers: a first effort for a case-study from southern Italy

**Dean, S.** et al. Ongoing Multi-method Investigations of Last Interglacial Sea Level

**Delchiaro**, **M**. et al. Identification of river channel bankfull geometry from topographic indicators extracted from high-resolution digital elevation datasets

**Gregorio**, **F**. et al. Methodology for the drafting of a submerged relictdeposits plain in the Sicilian Region: work in progress

Longhi, A. et al. Reconstructing the History of Rock Avalanches in Val Viola, Upper Valtellina, Italian Central Alps: Insights from 10Be Exposure Ages, Schmidt Hammer R Values, and Surface Roughness

**Parenti, C.** et al. Integration of Remote and Proximal Sensing techniques in slow-moving landslide investigation in the Scoltenna basin, Northern Apennines (Italy)

Pietrogrande, S. et al. Geomorphological map and morphodynamic analysis of rock glaciers in Val di Spluga (SO) from field and remote sensing surveys

**Ponti, S.** et al. Thermal photogrammetry on a permafrost rock wall for the active layer monitoring

Raffa, G. et al. Geomorphological evidence of palaeo-coastlines on the continental shelf and implication for the prehistoric communities in the Liguro-Provençal area: an integrated study through multibeam, core data and high-resolution seismic data

**Sabato, G.** et al. Developing an Automated Tide and Surge Measurement System in Coastal Regions Using Deep Learning Techniques Sannino A. et al. Analyzing anthropogenic impact on river morphodynamics in the Upper Orcia Valley (central Italy) through multitemporal NDVlassessment

**Scardino, G.** et al. Tackling Mediterranean Hurricanes through artificial intelligence in a near-future climate projection

**Tamburadzhiev, I.** Estimation of erosion in mountain streams in Sredna Gora Mountain, Bulgaria

Trogu, D. et al. On the banquette dynamics in an urban microtidal Mediterranean beach (Poetto beach, southern Sardinia, Italy) by a four-years coastal videomonitoring images database analysis

**Tursi, M.F.** et al. Rocky coastal evolution linked to climate change processes

Zocchi, M. et al. Detecting landslide system dynamics with PS-InSAR postprocessing: the case study of the DeBeque Canyon Landslide (Colorado, USA)

### IAG Southern Europe Webinar

#### List of speakers

16:00 - **Perez, G.** Active uplift in the Cardona salt diapir, NE Spain

16:15 - **Porto Gouveia, M.** Coastal uplift in Westernmost Iberia: geomorphology and chronology of the Peniche marine terraces (Portugal)

16:30 - **Mandarino, A.** Metrics to investigate riverbed planform changes: insights from recent studies on some Italian rivers

16:45 - **Karditsa A.** Assessing the risk of sea level rise on the beach tourism environments

17:00 - **Novak A.** Centennial, annual, and seasonal activity of sedimentary processes on alpine alluvial fans in the Planica Valley, NW Slovenia

17:15 - **Srejić**, **T**. Agricultural land use changes as a driving force of soil erosion in the Velika Morava river basin, Serbia

17:30 - **Mićunović**, **M.** Evolution of pocket beaches on the island of Hvar over last two centuries (Central Adriatic, Croatia)

#### March 2nd, 2024

#### Field trip

09:30 - Meeting point in front of Venice train station Santa Lucia

10:00 - Field trip "Living on the water towards 2100"

13:00- Free time in Venice and departure of attendees

### Scientific Organising Committee

- M. Bonasera 🚺
- C. Caporizzo
- E. Casella [1]
- C. Cerrone
- F. Domazetovic
- C. Martinello
- A. Moraru 🎏
- N. Georgiou [1]
- A. Rovere 🚺
- J. Sevil Aguareles 🜌
- K. Tsanakas 🗺

#### **Acknowledgments**

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Department of Environmental Sciences, Informatics and Statistics