

Program

Monday, 15 July 2024 Palazzo Loredan https://maps.app.goo.gl/AbtJdtVtR96qryKs8	
17:00 – 19:00	Registration and icebreaker
Tuesday, 16 July 2024 Palazzo Franchetti https://maps.app.goo.gl/vwJ12C17iDLP13rA7	
08:30 – 08:45	Registration
08:45 – 09:15	Opening ceremony
09:15 – 10:00	Keynote Presentation ELENA VOLPI <i>Complete Time-series Analysis for hydrological design and risk assessment</i>
10:00 – 10:30	Coffee break Palazzo Loredan
10:30 – 11:00	Flash Presentations P01 - HANBEEN KIM, GABRIELE VILLARINI <i>On the projected changes in the frequency of flooding across the contiguous United States.</i> P03 - DAVID KEELLINGS <i>Heat Waves and Connections to Climate Variability and Change Across the United States</i> P04 - OCCITANE BARBAUX, PHILIPPE NAVEAU, NATHALIE BERTRAND, AURÉLIEN RIBES <i>Design of life levels of Extreme Temperature by 2100</i> P05 - LILIAN BALD, ALI BELMADANI, AGATHE GENTRIC, SAÏD QASMI, MARIE-DOMINIQUE LEROUX, OLIVIER PANNEKOUCKE <i>Heat waves Future risk of hyperthermia in French Guiana: assessing extreme humid heat with multi-model analysis</i> P06 - LIXUAN AN, BAoyING SHAN, BERNARD DE BAETS, STIJN LUCA <i>Analyzing extreme heat events over Europe by extreme value group model: A return level study using ERA5</i> P07 - ALEXANDER MICHALEK, GABRIELE VILLARINI <i>Towards the development of community-level projections of flood extremes: An Iowa case study</i> P08 - OMAR WANI, Omid EMAMJOMEHZADEH <i>Dynamics of extreme risk and resilience for distributed stormwater infrastructure: Insights from 8,000 large culverts in Northeastern USA</i> P09 - CHLOÉ SERRE-COMBE, NICOLAS MEYER, THOMAS OPITZ, GWLADYS TOULEMONDE <i>Modeling moderate and extreme urban rainfall at high spatio-temporal resolution</i>

	<p>P10 - ANNA BOTTO, GIOVANNI BRACA, BARBARA LASTORIA, ROBERTINO TROPEANO, MARTINA BUSSETTINI <i>Characterization of streams and rivers in terms of hydrological alteration and flow regime: a principal component approach</i></p> <p>P11 - FLAVIA MARCONI, GABRIELE VILLARINI, ELENA RIDOLFI, FRANCESCO NAPOLITANO <i>Bias-correction and downscaling of precipitation from global climate models across the Colorado River Basin</i></p> <p>P12 - GABRIELE VILLARINI, NANDITHA J. S., HANBEEN KIM, PHILIPPE NAVEAU <i>On the Attribution and Future Projections of Daily Precipitation Extremes across the United States</i></p> <p>P13 - NASRIN FATHOLLAHZADEH ATTAR, FRANCESCO MARRA, ANTONIO CANALE <i>On The Prediction of Extreme Sub-Hourly Precipitation via Temperature Variations: Case Study of Veneto Region, Italy</i></p>
11:00 – 12:30	<p>Session 1 Chair: MARCO MARANI</p> <p>FRANCESCO MARRA <i>Reconciling extreme precipitation-temperature scaling with extreme value analysis</i></p> <p>NATHALIE BERTRAND, <i>Future extreme wind speed assessment in France</i></p> <p>SIMON BROWN <i>Past to future changes in probabilities of very rare compound meteorological extremes</i></p> <p>DARIO TREPPIEDI <i>Precipitation extremes projected to increase and to occur in different times of the year</i></p> <p>CAROLIN FORSTER <i>Non-stationary models for extremal dependence with an application to heavy rainfall data</i></p>
12:30 – 13:45	<p>Lunch break Palazzo Loredan</p>
13:45 – 14:15	<p>Flash Presentations</p> <p>P14 - DÁIRE HEALY, ILARIA PROSDOCIMI, ISADORA ANTONIANO-VILLALOBOS <i>Non-stationarities in spatial extremal dependence of precipitation processes</i></p> <p>P15 - RASHID AKBARY, MARCO MARANI, ELEONORA DALLAN, MARCO BORGA <i>Comparing extreme sub-daily rainfall projections from temperature-scaling and convection-permitting climate models across an Alpine gradient</i></p> <p>P16 - SANTA ANDRIA, MARCO BORGA, MARCO MARANI <i>A Matter of Scale: Thermodynamic and Large-Scale Constraints in Extreme Rainfall Under a Changing Climate</i></p> <p>P17 - GUIDO RIANNA, ADRIANA GOMEZ, LISA NAPOLITANO, ROBERTA PADULANO <i>Updating IDF curves in the context of climate change: approaches, limitations, and uncertainty assessment</i></p> <p>P18 - MARIA FRANCESCA CARUSO, ELEONORA DALLAN, GIORGIA FOSSER, MARCO BORGA, MARCO MARANI <i>Stochastic temporal downscaling in Northeast Italy using convection-permitting climate models: from hourly to subhourly timescales</i></p>

	<p>P19 - PIETRO DEVÒ, MARIA FRANCESCA CARUSO, MARCO BORGHA, MARCO MARANI <i>A regionalized framework for the Metastatistical Extreme Value Distribution applied to sub-daily rainfall</i></p> <p>P20 - SÖNKE DANGENDORF, SUN QIANG, WAHL THOMAS, MADUWANTHA PRAVIN <i>Disentangling Natural and Anthropogenic Drivers of Changes in Extreme Sea Levels since 1900</i></p> <p>P21 - LILY L. KRAFT, GABRIELE VILLARINI, JEFFREY CZAJKOWSKI, DALE ZIMMERMAN, RENATO AMORIM <i>Developing a spatial regression modeling framework for insured flood losses in Houston, Texas structures in a changing climate</i></p> <p>P22 - HUAZHI LI, ALEJANDRA R. ENRÍQUEZ, DIRK EILANDER, TOON HAER, PHILIP J. WARD <i>Assessing the future spatial dependence of extreme sea level events along the global coastline</i></p> <p>P23 - NICOLAS RAILLARD, COLINE POPPESCHI <i>Non-stationary GEV models for the design of offshore structures in a changing climate</i></p> <p>P25 - FAIDON DIAKOMPOULOS, ELISA RAGNO, ALESSANDRO ANTONINI, ALEXANDER BAKKER, LAURA MARIA STANCANELLI, MARKUS HRACHOWITZ <i>Modelling Extreme Water Level and its Components for Infrastructure Design: the case of Hoek van Holland</i></p> <p>P26 - ANDREA BONOMETTO, D. BALDAN, F. CROSATO, D. CANESSO, E. CORACI, M. CORNELLO, P. GYSSELS, R. MEL, M. FERLA, L. CARNIELLO, S. MORUCCI <i>Spatial patterns in Extreme Sea Level return period in the Northern Adriatic Sea</i></p>
14:15 – 15:45	<p>Session 2 Chair: ILARIA PROSDOCIMI</p> <p>PAOLA MAZZOGGIO <i>Signal of change in ordinary and extraordinary precipitation extremes over Italy</i></p> <p>BENEDETTA MOCCIA <i>Extreme daily rainfall events in Italy: should we update the probability of failure of existing hydraulic infrastructures?</i></p> <p>TIM TOOMEY <i>Future wave climate in the Mediterranean Sea from a large ensemble of GCM-RCMs</i></p> <p>RICHARD SMITH <i>Heat Stress, Climate Change and Mortality</i></p> <p>SYLVIE PAREY <i>How the last hot summers in France led to rethink future extremes estimation</i></p>
15:45 – 16:15	<p>Coffee break Palazzo Loredan</p>
16:15 – 16:45	<p>Flash Presentations</p> <p>P27 - MIGUEL AGULLES, MARTA MARCOS, ÁNGEL AMORES, TIM TOOMEY <i>The impact of spatio-temporal resolution in simulating storm surges along European coasts</i></p> <p>P28 – D. CANESSO, E. CORACI, M. CORNELLO, F. CROSATO, P. GYSSELS, R. MEL, S. MORUCCI, M. CASAIOLI, S. MARIANI, A. PAPA, A. PRIMIERO, A. BONOMETTO <i>The extreme marine events of October and November 2023 in the North Adriatic Sea</i></p>

	<p>P29 - RENATO AMORIM, GABRIELE VILLARINI, HANBEEN KIM, ROBERT JANE, THOMAS WAHL <i>Process-Driven Modeling of Compound Rainfall and Storm</i></p> <p>P30 - SARA SANTAMARIA-AGUILAR, PRAVIN MADUWANTHA, THOMAS WAHL <i>Uncertainties in compound flooding: Event vs Response based approaches</i></p> <p>P31 - ALEJANDRO PINTO, DAFNI SIFNIOTI <i>The application of the Cramer-von Mises test for the estimation of extreme high-water levels</i></p> <p>P32 - BASTIAN POULSEN, CHRISTOFFER GRUBE, CARLO SASS SØRENSEN <i>Issues concerning application of extreme value analysis on an authoritative level</i></p> <p>P33 - BERTRAND NATHALIE, SABRE M., LI. L. <i>Assessment extreme wind hazards in France</i></p> <p>P34 - IRENE BENITO, JEROEN C.J.H. AERTS, PHILIP J. WARD, DIRK EILANDER, SANNE MUIS <i>10,000 years of extratropical cyclone events at global scale – a dataset of extreme water levels</i></p> <p>P35 - LAURIE VAN GIJZEN, A.M. BAKKER <i>Including pump reliability: introducing extremes during non-extreme conditions</i></p> <p>P36 - YICHENG TAN, XIANGBO FENG, MARTA MARCOS, WEI ZHANG <i>Evaluating long-term variations of global storm surge energy</i></p> <p>P37 - THOMAS P. COLLINGS, NIAL D. QUINN, IVAN D. HAIGH, JOSHUA GREEN , IZZY PROBYN , HAMISH WILKINSON, SANNE MUIS, WILLIAM V. SWEET, PAUL D. BATES <i>Global application of a regional frequency analysis on extreme sea levels</i></p> <p>P38 - THOMAS RODDING KJELDSSEN, RAMTIN SABETI, IOANNA STAMATAKI <i>Revisiting the flood frequency in the River Avon catchment using reconstructed historical events</i></p> <p>P02 - PIERO LIONELLO, AQSA MUHAMMADI <i>Validation of an analytical expression of tornadoes probability against observed events</i></p>
16:45 – 18:15	<p>Session 3 Chair: THOMAS WAHL</p> <p>GABRIELE VILLARINI <i>Climate Change and Flooding Across the United States</i></p> <p>TAEREEM KIM <i>Dominant sources of uncertainty for downscaled climate: a military installation perspective</i></p> <p>ELEONORA DALLAN <i>How projected changes in storm properties shape changes in the statistics of sub-daily precipitation extremes?</i></p> <p>BIRGIR HRAFNKELSSON <i>Approximate Bayesian inference for analysis of spatiotemporal flood frequency data</i></p> <p>GIUSEPPE MASCARO <i>Challenges and Opportunities in the Detection of Trends in Subdaily Heavy Precipitation in the United States</i></p>
19:00 – 21:00	Young Scientist Networking Event

Wednesday, 17 July 2024	
09:00 – 09:45	Keynote Presentation MARC WALRAVEN <i>Storm surge barriers, the unknown challenges and the impact of climate change on their management and maintenance</i>
09:45 – 11:15	Poster Session (all Posters)
11:15 – 11:45	Coffee break Palazzo Loredan
11:45 – 13:15	Session 4 Chair: IVAN HAIGH COLINE POPPESCHI <i>Extreme sea levels in a context of climate change applied to French offshore wind farms</i> THOMAS WAHL <i>Storm surge return levels and trends along the U.S. coastline</i> ARIADNA MARTÍN <i>Temporal clustering of storm surges</i> FRANCESCO DE LEO <i>Regional Frequency Analysis of extreme waves in the Mediterranean Sea</i> MD. SHAMSUDDUHA SAMI <i>Assessing the Influence of Storm Surge Duration and Intensity on Extreme Coastal Water Level Impact</i>
13:15 – 14:30	Lunch break Palazzo Loredan
14:30 – 16:00	Session 5 Chair: FRANCESCO DE LEO IVAN HAIGH <i>Estimating the number of closures of storm surge barriers in the future</i> ALEJANDRA ENRIQUEZ <i>Analysing non-stationary damage risks from spatially correlated coastal extreme events</i> MATTHEW SPEERS <i>Estimating Metocean Environments Associated with Extreme Structural Response</i> AYOOLA APOLOLA <i>Global estimation of storm surge seasonality and the effect of interannual variability</i> SUNKE TRACE-KLEEBERG <i>Impact of changes in extreme water levels on storm surge barrier maintenance</i>
16:00 – 16:30	Coffee break Palazzo Loredan

16:30 – 18:00	<p>Session 6 Chair: THOMAS WAHL</p> <p>SHUBHRA MISRA <i>Extreme Natural Hazards and National Security – A U.S. Department of Defense Perspective</i></p> <p>GABRIEL X. DITZINGER <i>Sea level rise drives increase in water level extremes in the German Bight</i></p> <p>PASCAL ALAIN DKENGNE SIELENOU <i>Geometric mixture of generalized extreme value distributions: Application to the estimation of return levels of river flows and wind speeds</i></p> <p>MARCO MARANI <i>Advantages and limitations of non-asymptotic extreme value modelling methods</i></p> <p>VIVIANA CARCAISO <i>Bayesian mixture models for heterogeneous extremes</i></p>
19:30	<p>Concert and Gala Dinner Conservatorio di Musica Benedetto Marcello (https://maps.app.goo.gl/moddtvx58FpcmXcE7)</p>
<p>Thursday, 18 July 2024</p>	
09:00 – 09:45	<p>Keynote Presentation</p> <p>RAPHAËL HUSER <i>Amortized neural Bayes estimators with application to the spatial modeling of environmental extreme events</i></p>
09:45 – 11:15	<p>Session 7 Chair: ILARIA PROSDOCIMI</p> <p>JAMES H. STAGGE <i>Extreme Exceedances for Moving Average Drought Indices</i></p> <p>IGOR RODIONOV <i>Estimation of extremes of long precipitation series via the block quantile method</i></p> <p>DANIELA CASTRO-CAMILO <i>Spatio-temporal data fusion of threshold exceedances</i></p> <p>MEHWISH ZAMAN <i>Flexible models for coherent estimation of rainfall extremes</i></p> <p>CLAUDIA NEVES <i>Unified reduced bias estimation of the residual dependence index: Pareto meets Fréchet</i></p>
11:15 – 11:45	<p>Coffee break Palazzo Loredan</p>
11:45 – 13:15	<p>Session 8 Chair: FRANCESCO DE LEO</p> <p>DAVID N. BRESCH <i>CLIMADA - the open-source and -access global platform for globally consistent probabilistic multi-hazard risk modelling and options appraisal</i></p> <p>FRANCK MAZAS <i>Accounting for eustatic sea level rise in joint analyses of waves and sea levels for the design of maritime structures</i></p>

	<p>CHENGLI HU <i>A Bayesian multivariate extreme value mixture model</i></p> <p>JUDITH N. CLAASSEN <i>A European Perspective on Joint Probabilities Within MultiHazards</i></p> <p>BRIANNA TOMKO <i>Comparing Joint Design Events from Event-Based and Response-Based Approaches for Approximating Return Levels Along Atlantic and Gulf Coast River Flood Transition Zones</i></p>
13:15 – 14:30	<p>Lunch break Palazzo Loredan</p>
14:30 – 16:00	<p>Session 9 Chair: MARCO MARANI</p> <p>MENGRAN LI <i>Extreme quantile treatment effect estimation using extreme value theory and power transformation</i></p> <p>KRISTINA BRATKOVA <i>Structured multivariate and spatial extreme value models for environmental science</i></p> <p>CALLUM MURPHY-BARLTROP <i>Inference for multivariate extremes via a semi-parametric angular-radial model</i></p> <p>ANNA MARIA BARLOW <i>Fast return-level estimates for flood insurance via an improved Bennett inequality for random variables with differing upper bounds</i></p> <p>KAREN PALMER <i>Jump tails and high tide flooding in estuaries</i></p>
16:00 – 18:00	<p>Coffee, Beer, and Posters (all posters)</p>

Friday, 19 July 2024 9:00-15:00 Fieldtrip to the Venice Lagoon and the MoSE surge barrier (optional with additional fee required).

SPONSORS

EVAN2024 is supported by

The RETURN Extended Partnership, funded by European Union Next-GenerationEU Program (National Recovery and Resilience Plan – NRRP, Mission 4, Component 2, Investment 1.3 – D.D. 1243 2/8/2022, PE0000005).



<https://www.fondazionereturn.it/>

RESILIENCE Project: Extreme Storms in the Italian North-East: Frequency, Impacts and Projected Changes. Funded by the CARIPARO Foundation (Rovigo) through the Excellence Grant 2021 Program.

<http://resilience.stat.unipd.it/>

Department of Environmental Sciences, Informatics, and Statistics,
University of Venice – Ca' Foscari