PROGRAM

MONDAY

Observations 1
chair: Annemarie Christophersen

8:50 – 9:00 Welcome
9:00 – 9:20 Morgan Page *« Aftershocks Preferentially Occur in Previously Active Areas »*
9:20 – 9:40 Warner Marzocchi *« The space-time variability of the Magnitude-Frequency distribution »*
9:40 – 10:00 Agnès Helmstetter *« Repeating low frequency icequakes at the base of cold glaciers in the Mont-Blanc massif triggered by snowfalls »*
10:00 – 10:20 Luigi Passarelli *« A unified scaling law of seismic to aseismic moment release from laboratory to nature »*

10:20 – 10:50 coffee break

10:50 – 11:10 Sirorattanakul Krittanon *« The 2020 Westmorland, California earthquake swarm as aftershocks of a slow slip event sustained by fluid flow »*
11:10 – 11:30 Louis Debarros *« Analysis of seismic migrations highlight that natural swarms and injection-induced seismicity are both driven by fluid-induced aseismic slip »*
11:30 – 12:00 : 2’ flash talks (posters)

12:00 – 13:00 Lunch

16:00 – 16:30 coffee break

chair: Zachary Ross

16:30 – 17:30 Keynote lecture by William Franck *« The symptomatic spatiotemporal clustering of low-frequency earthquakes and tectonic tremor »*

17:30 – 18:00 : 2’ flash talks (posters)
18:00 – 19:30 Poster session 1 + welcome drinks

TUESDAY

Observations 2
chair: Jiancang Zhuang

9:00 – 9:20 Patricia Martínez-Garzón *« Influence of sea level changes on seismicity rates from a hydrothermal system in the Marmara region, Turkey »*
9:20 – 9:40 Piero Poli *« Integrated monitoring of fault systems »*
9:40 – 10:00 Zachary Ross *« Geometrical Properties of Seismicity in California »*
10:00 – 10:20 Nicholas Van der Elst *« Mapping spatio-temporal changes in the magnitude frequency distribution of aftershocks with b-positive »*

10:20 – 10:50 coffee break

10:50 – 11:10 David Marsan *« Earthquake swarms along the Chilean subduction zone »*
11:10 – 11:30 Gert Zoller *« New findings on maximum magnitudes and future seismicity scenarios for the gas field in Groningen, The Netherlands »*

Advances in data processing

11:30 – 11:50 Jannes Münchmeyer *« SeisBench: Benchmarking and applying deep learning based phase pickers »*

12:00 – 13:00 Lunch

16:00 – 16:30 coffee break

chair: Max Werner

16:30 – 16:50 Quentin Bletery *« Instantaneous Tracking of Earthquake Growth With Elasto-Gravity Signals »*
16:50 – 17:10 Sacha Lapins *« Machine learning DAS signal denoising without clean ground-truth signals »*
17:10 – 17:30 Daniel Trugman *« Resolving Differences in the Rupture Properties of Prominent California Earthquakes Using Bayesian Source Spectral Analysis »*
17:30 – 18:00 Open discussion

18:00 – 19:00 Poster session 1

WEDNESDAY
chair: David Marsan

9:00 – 9:20 Men-Andrin Meier *« A deep catalogue of focal mechanisms for the 2016 Amatrice, Italy earthquake sequence »*
9:20 – 9:40 Léonard Seydoux « *Deep-learning-based single-station-array tremors detection* »

Mechanical and Seismicity Models 1

9:40 – 10:00 Jérôme Weiss *« Can we reproduce fault mechanics in the lab? »*
10:00 – 10:20 Chris Marone *« Lab Earthquake Prediction, Precursors, and the Evolution of Size-Frequency Distributions During the Lab Seismic Cycle »*

10:20 – 10:50 coffee break

10:50 – 11:10 Sebastian Hainzl *« A Coulomb Stress response model for time-dependent earthquake forecasts »*
11:10 – 11:30 Robert Shcherbakov *« Stochastic models for induced seismicity »*
11:30 – 12:20 : 2' flash talks (posters)

12:20 – 13:00 Lunch

Free afternoon

18:00 – 19:30 Poster session 2 + drinks

THURSDAY

Mechanical and Seismicity Models 2
chair: Agnès Helmstetter

9:00 – 9:20 Elisa Varini *« Bayesian analysis of temporal variations of seismicity based on non-extensive statistical mechanics »*
9:20 – 9:40 Leila Mizrahi *« Component-driven ensemble modelling with semi-parametric ETAS models »*
9:40 – 10:00 Camilla Cattania *« Spatio-temporal evolution of foreshock sequences in the damage zone »*
10:00 – 10:20 Elizabeth Cochran *« Linking fault roughness and earthquake behavior »*

10:20 – 10:50 coffee break

10:50 – 11:10 Jean-Paul Ampuero *« Physics-based estimates of the maximum magnitude of induced earthquakes in the Groningen gas field »*

Forecasting earthquakes and seismicity 1

11:10 – 12:10 Keynote lecture by Annemarie Christophersen *« Insights and lessons from more than a decade of public earthquake forecasting in New Zealand »*

12:10 – 13:00 Lunch

16:00 – 16:30 coffee break

chair: Jean-Paul Ampuero

16:30 – 16:50 Yin Yifan *«The role of three-dimensional fault interactions in creating complex seismic sequences »*

16:50 – 17:10 Bruce Shaw *« Magnitude and Slip Scaling Relations for Fault-Based Seismic Hazard »*
17:10 – 17:30 Yohai Bar-Sinai *« Neural-network based models for earthquake prediction »*
17:30 – 18:00 Open discussion

18:00 – 19:00 Poster session 2

FRIDAY

Forecasting earthquakes and seismicity 2
chair: Sebastian Hainzl

9:00 – 9:20 David Jackson *« Testing subduction-zone earthquake models »*
9:20 – 9:40 Mark Naylor *« A new Bayesian approach to modelling of short and long term earthquake forecasting using inlabru »*
9:40 – 10:00 Jiancang Zhuang *« Evaluating earthquake forecasts with likelihood based marginal and conditional scores »*
10:00 – 10:20 Kelian Dascher-Cousineau *« Flexible and Scalable Earthquake Forecasting »*

10:20 – 10:50 coffee break

10:50 – 11:10 Matteo Taroni *« Using Hidden Earthquakes to Forecast Future Events in Southern California »*
11:10 – 11:30 Marta Han *« Towards an Operational Earthquake Forecasting Model for Europe »*
11:30 – 11:50 José Bayona *« The predictive skill of global and regional earthquake forecasting models for California, New Zealand, and Italy »*

12:00 – 13:00 Lunch

16:00 – 16:30 coffee break

16:30 – 18:30 Plenary session : Discussion, perspectives, conclusions

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POSTER SESSION 1 (Monday & Tuesday)

Azad Khan Russell *« Modelling the probabilities of anomalous seismicity rate increases prior to mainshocks »*

Beauce Eric *« Monitoring the criticality of the crust over a decade near Ridgecrest, CA, with temporal clustering and tidal triggering of microearthquakes »*

Bletery Quentin *« Source characterization with 3 seconds of records on a single station »*

Chouli Audrey *« Potential correlation between intraslab intermediate-depth and shallow earthquakes in Japan and Chile »*

Churchill Robert *« Exploring Afterslip and Aftershock Co-migration, Following no Evidence Afterslip Drives Aftershock productivity »*

Colquhoun Rebecca *« Statistical relations between global earthquake magnitudes and parameters of seismograms »*

Costantino Giuseppe *« Detection of small slow slip events by means of deep learning »*
Daniel Guillaume « Declustering an earthquake catalogue in moderate seismicity context : strengths and weaknesses of existing methods »

Danre Philippe *« What injection-induced earthquake sequences tell us about natural earthquake swarms ? »*

Durand Stephanie *« The asymmetric seismic moment tensor in micropolar media »*

Du Toit Cornel *« Hierarchical Bayesian Network for Multiple Candidate Phase Arrivals Recorded at Many Seismic Sensors »*

Firode Lise *« Seismicity under a dormant volcano: identification of an active crustal fault below Piton des Neiges »*

Fischer Tomas *« Seismic Clusters Growth and Underlying Triggering Mechanisms »*

Gardonio Blandine *« From the Izu-Bonin to the north of Hokkaido : how did the M9.0 Tohoku earthquake affect the Pacific plate seismicity ? »*

Gentili Stefania *« The machine learning-based algorithm NESTORE for strong aftershocks forecasting in seismic clusters becomes a free available software: application to Italy »*

Hsu Yu-Fang *« Informative modes in the nearest-neighbor earthquake diagram »*

Im Kyungjae *« Numerical Investigation of Cascading Foreshock and Aftershock in Discrete Fault Network »*

Iwata Takaki *« A size distribution of deep low-frequency tremors in the Nankai Trough zone: Modeling with a mixture distribution »*

Kartseva Tatiana *« Coda-Based Estimation of Source Parameters of Laboratory Acoustic-Emission Events »*

Kwiatek Grzegorz *« Limited earthquake interaction during a geothermal hydraulic stimulation in Helsinki, Finland »*

Martínez-Garzón Patricia *« Beyond cascade and pre-slip: complexities involved in the generation of earthquake sequences »*

Minetto Riccardo *« Evolution of the seismicity rate during and after hydraulic fracturing operations in Preston New Road, UK »*

Moutote Luc *« Seismic evidence of an aseismic slip event preceding and following the 2017, Valparaiso, Mw 6.9 earthquake »*

Murru Maura *« Understanding the seismic behavior of a complex fault structure through the use of a novel 3D stochastic declustering algorithm »*

Neves Miguel *« Imaging a Complex Earthquake Sequence in Sparta, North Carolina, Eastern United States »*

Pastoressa Anna Eliana *« Temporal variations of seismicity rates and Gutenberg-Richter b-values: an example from a high-definition Italian catalog »*

Pei Weilai *« An automatic polarity determining method of the seismic recordings based on Information theory »*

Septier Antoine *« Unsupervised Artificial Intelligence and Seismicity Declustering : Application to the Corinth Rift area (central Greece) »*

Ueda Taku *« Spatial correlation of strain rate and crustal seismicity in Japan »*

Von Specht Sebastian *« Spatial distribution of the b-value in Southern California based on Gauss process inference with a geologically defined prior »*

Xiang Louise *« Analysis of the 2016 Central Italy earthquake sequence by using a refined earthquake catalog »*

POSTER SESSION 2 (Wednesday & Thursday)

Benali Amel *« Change point analysis to fit time variable parameters of the ETAS model »*

Bodin Thomas *« A Bayesian model selection approach to estimate the distribution of earthquake magnitudes (including below completeness) »*

Christophersen Annemarie *« Regressions of moment magnitude on local magnitude in the New Zealand earthquake catalogue for the revision of the National Seismic Hazard model »*

Durand Stephanie *« Joint Bayesian estimation of b-values and Mc : application to spatio-temporal variations »*

González Álvaro *« The statistical distribution of time intervals between consecutive earthquakes worldwide »*

Graham Kenny *« Building an Earthquake Forecasting Tool »*

Graham Kenny *« State of the Art of Time-Dependent Probabilistic Seismic Hazard Assessment »*

Gualandi Adriano *« Stochastic Chaos and Predictability in Laboratory Earthquakes »*

Iturrieta Pablo *« Accounting for earthquake rates' temporal and spatial uncertainties through least-information forecasts. Applications to the New Zealand Seismic Hazard Model »*

Khawaja M. Asim *« Statistical Power of Tests for Evaluation of Earthquake Forecast Models »*

Lim Cindy *« Comparing multiple deep learning models to detect hydraulic-fracturing induced seismicity »*

Malekiasayesh Behnam *« An extension of the ETAS model to 3-D »*

Molkenthin Christian *« Bayesian time-dependent earthquake forecasting »*

Muir Jack *« A Deep Gaussian Process Model for Seismicity Background Rates »*

Petrillo Giuseppe *« Defining and testing the predictive efficacy of a realistic spring block model »*

Rollins Chris *« The rates of hazardous earthquakes in the New Zealand region, and their uncertainties and variabilities »*

Schneider Max *« Bayesian ETAS for Improved Earthquake Rate Models for the Pacific Northwest »*

Selva Jacopo *« A Testable Worldwide Earthquake Faulting Mechanism Model »*

Serafini Francesco *« Bayesian time-independent and time-dependent modelling of seismicity with Inlabru »*

Serafini Francesco *« Ranking earthquake forecasts using proper scoring rules: binary events in a low probability environment »*

Shcherbakov Robert *« A Bayesian Framework for Earthquake/Aftershock Forecasting and Testing »*

Spassiani Ilaria *« Statistical analysis to assess the skill of the Operational Earthquake Forecasting system in Italy »*

Stockman Sam *« Targeting Temporal Seismicity with a Neural Point Process »*

Varini Elisa *« Earthquake productivity within general ETAS models »*

Vazquez Luis *« Bayesian Assimilation of Multicycle Earthquake Simulations into Probabilistic Forecasting Models »*

Xiong Ziyao *« The research on the spherical space-time ETAS model »*