

LITHODEF25 workshop – Paris, 12-14 February 2025, detailed program

Time	Authors / Speaker	TITLE				
Wednesday 12 February, morning: Académie des Sciences						
9:30 - 10:00		Coffee, get your badge and documents				
10:00 - 10:30	Y. Klinger & V. Courtillot	Welcome and introductory talk				
10:30 - 11:00	M. Brunel	Tribute to my friend Paul Tapponnier : History of Franco-Chinese geological collaboration in Tibet,1980-2001.				
11:00 - 11:30	A. Replumaz	Understanding the formation of the Tibetan Plateau, from field evidence to global tomography, inspired by Paul Tapponnier pioneer work.				
11:30 - 12:00	R. Stein et al.	Why Do Great Continental Transform Earthquakes Nucleate on Branch Faults?				
12:00 - 13:30		Move to IPGP / Lunch at your discretion				
Wednesday 12 February, afternoon: IPGP						
13:45 - 14:00	M. Chaussidon	some words by IPGP director				
14:00 - 14:30	L. Jolivet	Continental deformation and mantle convection, from rifting to collision				
14:30 - 15:00	X. Xu	Discussion on the differential tectonic deformation and limited extrusion model of the Qinghai-Tibetan Plateau				
15:00 - 15:30	P.H. Leloup	Extrusion tectonics, where do we stand 40 years later?				
15:30 - 16:00	L. Jiao et al.	The shape of the Himalayan "Arc": an Ellipse pinned by syntaxial strike-slip fault tips				
16:00 - 16:30		Coffee and tea				
16:30 - 17:00	T. Wright et al.	How do the continents deform? Evidence from high-resolution geodetic imaging				
17:00 - 17:30	R. Van der Hilst	Continental (and institutional) collision and the evolution of the Tibetan Plateau				
17:30 - 18:00	G. Hetényi et al.	The lower crust: from Tibet to the Alps				
18:00 - 18:30	M. Sonnet et al.	What rock transformations can we detect in geophysical images? The case of the Alps				
18:30 - 19:00	N. Arnaud, S. Guillot, F. Lagroix	some words by INSU-CNRS				
19:00 - 20:30		Icebreaker party				
Thursday 13 February, morning: IPGP						
9:00 - 9:30	G.Peltzer	Fault interaction and post-seismic transient in northern Tibet				
9:30 - 10:00	J. Van Der Woerd et al.	The Qilian Shan large scale restraining bend of north Tibet: shortening rates along Danghenan Shan constrain strain transfer between Altyn Tagh and Haiyuan fa				
10:00 - 10:30	P. Meyer et al.	Current tectonic deformation in Potwar Plateau - Salt Range region in Pakistan western Himalaya				
10:30 - 11:00		Coffee and tea				
11:00 - 11:30	M. Rizza	Opportunities and challenges in the use of quaternary dating methods				
11:30 - 12:00	N. Pinzon Matapi et al.	Reconstructing paleoearthquakes from lacustrine sedimentary archives along the Bulnay fault system (Mongolia)				
12:00 - 12:30	R. Bilham	Transient lakes and catastrophic outburst floods in the Kashmir Valley and their relationship to mega-quakes in the western Himalaya				
12:30 - 14:00		Buffet lunch around POSTERS				

Time	Authors / Speaker	TITLE				
Thursday 13 February, afternoon: IPGP						
14:00 - 14:30	M.L. Chevalier	Constraining the Xianshuihe fault (eastern Tibet) activity at various timescales, from recent earthquakes, lacustrine paleoseismology, and tectonic-geomorphology				
14:30 - 15:00	M. Le Beon et al.	Aseismic deformation within fold-and-thrust belts: Example from the foothills of southwestern Taiwan along the Tsengwen River				
15:00 - 15:30	R. Vassallo et al.	Western Alps: do big paleo-earthquakes shake up the seismic picture?				
15:30 - 16:00	M. Ortuño et al.	Pyrenean landscape evolution controlled by postorogenic normal faults				
16:00 - 17:00		Coffee and tea around POSTERS				
17:00 - 17:30	K. Reicherter et al.	Intraplate paleoseismicity in low seismic settings of Central Europe (Germany)				
17:30 - 18:00	J. De Sigoyer et al.	The past seismicity of the western part of North Anatolian Fault (Turkey) combining historical earthquakes, paleoseismology in Lake Iznik and on land.				
18:00 - 18:30	W. Yao et al.	Earthquake rupture in serpentinite: Evidence from the 2023 Mw7.6, Elbistan event, Türkiye				
19:00 - 22:00		LITHODEF25 Dinner for registered participants				
Friday 14 February, morning: IPGP						
9:00 - 9:30	S. Singh	Marine Active Tectonics: Legacy of Paul Tapponnier				
9:30 - 10:00	A. Briaes et al.	Opening of the South China Sea: testing Paul Tapponnier's model from the ocean side.				
10:00 - 10:30	A. Affi	Crustal deformation along the Red Sea and Gulf of Aqaba				
10:30 - 11:30		Coffee and tea around POSTERS				
11:30 - 12:00	C. Karakas et al.	Bridging Worlds: From Natural Hazard Assessment to Energy Exploration - A Multi-Scale Data Integration Approach				
12:00 - 12:30	S. Wei	Recent advances in earthquake rupture imaging				
12:30 - 14:00		Buffet lunch around POSTERS				
Friday 14 February, afternoon: IPGP						
14:00 - 14:30	W. Behr	Using the exhumed rock record to understand the modes and mechanisms of deep-seated subduction shear zones				
14:30 - 15:00	E. Hill	Insights into the Sumatran subduction zone and its hazards since the 2004 Indian Ocean earthquake and tsunami				
15:00 - 15:30	N. Feuillet	Active Faulting, Megathrust Earthquakes and Seismic Hazard in The Lesser Antilles.				
15:30 - 16:00	E. Okal	Seismic Energy-to-Moment ratios: From tsunami Earthquakes to wild speculation tied to a forgotten episode with Paul Tapponnier in 1977				
16:00 - 16:30		Coffee and tea around POSTERS				
16:30 - 17:00	J.M. Nocquet et al.	Towards a full time dependent view of slip at faults				
17:00 - 17:30	A. Socquet et al.	Interactions between seismicity and slow slip events on the Chile subduction zone, focus on the Copiapo ridge				
17:30 - 18:00	J.P. Avouac	Active tectonics- recent progress and pending questions				
18:00 - 18:15	Y. Klinger	Few words of conclusion and thank you				

Authors	Presented by	Title
POSTERS session 1 – Active tectonics and deformation / seismotectonics / Imagery – Thursday 13 February		
L. Bollinger, M. Riesner et al.	L. Bollinger	Surface rupture of historical earthquake(s) at the front of the Chandra Bagh, eastern Nepal.
R. Cattin, G. Hetenyi et al.	R. Cattin	Dynamics of the Bhutan Himalaya
F. Jouanne, P. Meyer et al.	F. Jouanne	Post-seismic deformation following the earthquake of October 8, 2005 in Kashmir
S.M. Sapkota, L. Bollinger, Y. Klinger	S.M. Sapkota	Recent Advances in Paleoseismological Research in Nepal Himalaya
J.H. Choi	J.H. Choi	A short review on active tectonics and paleoseismology of South Korea
N.T. Nguyen, N.W. Huang et al.	N.T. Nguyen	Holocene Fault Activity and Mud Volcano Formation in Southwest Taiwan: Insights from Near-Surface Investigations
M. Simoes, C. Guilbaud et al.	M. Simoes	Assessing the potential for mega-earthquakes rupturing the largest known active thrust sheet: the Mazar Tagh (Western Kunlun, Xinjiang, China).
F. Xu, R. Lu et al.	F. Xu	The 3D Model and Growth Pattern of the Longquan Shan Fault Zone in Sichuan Basin, China: Implications for the Potential Earthquake Rupture Patterns
H. Li, J. Pan et al.	H. Li	Aftershock-Induced Surface Ruptures Overshadow the 2024 Mw7.0 Wushi Mainshock, China
Z. Liu, J.M. Nocquet et al.	Z. Liu	Postseismic Deformation Following the 2021 Mw7.4 Maduo Earthquake
F. Mokhtari, C. Lasserre, R. Jolivet	F. Mokhtari	Slip dynamics along the creeping segment of the haiyuan fault (GANSU, CHINA), from InSAR time series analysis
J. Pan, H. Li et al.	J. Pan	Co-seismic rupture of the 2021, Mw7. 4 Maduo earthquake (northern Tibet): Short-cutting of the Kunlun fault big bend
M. Ferry, I. Rocamora et al.	M. Ferry	Space paleoseismology of the Southern Yadong-Gulu Fault (Tibet-Himalaya)
S. Baize, L. Audin, J.F. Ritz	S. Baize	The geological record of active tectonics in Metropolitan France
M. Métois et al.	M. Métois	Slowly straining southeastern Europe as seen by spatial geodesy
M. Riesner	M. Riesner	From paleoearthquake trenching to long-term slip rate : the case example of the central Apennines, Italy
F. Caroir, P. Souloumiac et al.	F. Caroir	Role of inherited structures on the segmentation and orientation of the Al Idrissi fault zone, Alboran domain
M. Ollé-López, J. García Mayordomo et al.	M. Ollé-López Marc	Holocene deformation on the western margin of the Valencia Trough (NE Spain). Insights from geomorphology, geophysics, and paleoseismology
S. Dominguez, A. Viget et al.	S. Dominguez	Interseismic and long-term deformation of Eastern Sicily driven by the Ionian slab roll-back ... and break-off
J. Molins-Vigatà, J.M. Insúa Arévalo et al.	J. Molins-Vigatà	The Westernmost Tangential Fault Zone of the Arc of Àguilas: Insights from Crustal Scale to Paleoseismic Trench Analyses of the Palomares Fault (SE Iberia).
S. Palagonia, F. Leclerc et al.	S. Palagonia	The discovery of the 1956 Amorgos earthquake rupture (Greece) prompts a reevaluation of its tsunami
P. Dérand	P. Dérand	Strain localisation in the East Anatolian Fault Zone : geodetic insights from the 2023 Kahramanmaraş earthquakes
J. Liu et al.	J. Liu	Extensive off-fault damage around the 2023 Kahramanmaraş (Türkiye) earthquake surface ruptures
D. Fernandez Blanco, G. De Gelder et al.	G. De Gelder	Paradoxical tectonic activity in the “failed” rift of Suez, Egypt
A. Jourdon, L. Le Pourhiet et al.	A. Jourdon	Evolution of restraining bend strike-slip system in 3D
C. Homberg, E. Barrier et al.	C. Homberg et al.	Contrasted mesozoic tectonics in the Levant
L. Audin, L. Marconato	L. Audin	Palaeo, archaeo earthquakes and prehistorical surface ruptures: What perspectives for active faults and PSHA in Latin America ?
R. Le Roux Mallouf	R. Le Roux Mallouf	TRANCH'AI orthophotography segmentation for paleoseismological trenches using supervised deep learning algorithm
H. Reveneau et al.	H. Reveneau	Photo-geodesy: a new tool for monitoring slip at inland and off-shore faults
A. Hauck, R. Grandin, F. Costa	A. Hauck	Capella Space SAR amplitude imagery and LiDAR DEM: an unconventional recipe to map lava flows and measure volcanic deformation

Authors	Presented by	Title							
POSTERS session 2 – The seismic cycle / Rifting and tectono-volcanic deformation / Large-scale continental deformation – Friday 14 February									
N. Cubas, P. Agard, R. Tissandier	N. Cubas	Relationships between plate interface deformation and earthquake segmentation							
A. Gauthier, N. Cubas, L. Le Pourhiet	A. Gauthier	Numerical modeling of deformation associated with seamounts subduction. Implications for the seismic cycle.							
G. Bénâtre, N. Feuillet et al.	G. Bénâtre	Plate-scale strike-slip fault system in the Barbados accretionary wedge of the Lesser Antilles subduction zone							
W.L. Hu	W.L. Hu	Stress heterogeneity and mantle faulting in thinned continental lithosphere revealed by an intraslab earthquake doublet in the northern Manila subduction zone							
Y. Li, N. Ribe	Y. Li	Geodynamic modeling of earthquakes in Izu-Bonin-Mariana subduction zones							
M. Perry, L. Feng et al.	M. Perry	Updating megathrust coupling models for the southern Sumatran subduction zone							
R. Jolivet	R. Jolivet	Aseismic slip as the signature of mantle fluid upwelling through the crust							
S. Michel	S. Michel	Probability of earthquake fault jumps from physics based criterion							
L. Demange, B. Maillot et al.	L. Demange	Seismic cycle modeling in a strike-slip experiment							
M. Thomas	M. Thomas	Signature of rupture dynamics in off-fault damage							
S. Rohilla, H. Carton, S. Singh	S. Rohilla	Marine Geophysical investigation reveals the geometry and slip history of an ESE-WNW trending fault involved in the Mw 8.6 2012 Wharton Basin earthquake							
A. Allemand, Y. Klinger, L. Scholtès	A. Allemand	A 3-D numerical model to bridge long- and short-term approaches of deformation on a strike-slip fault							
J. Chen, M. Tominaga, J. Escartín	J. Chen	Dike-controlled axial faulting at magmatic slow-spreading ridges							
E. Jacques, R. Hoste-Colomer et al.	E. Jacques	Mantle seismicity reveals ring faulting and piston collapse sustaining the largest documented submarine eruption							
J.B. De Chabalier, C. Doubre et al.	J.B. De Chabalier	The Afar triple junction : a natural laboratory to decipher the rifting cycle and the magmatic accretion processes							
J. Dymant	J. Dymant	The Continent-Ocean Boundary conundrum: how abundant sediments and salt may hide the onset of seafloor spreading							
F. Zhou	F. Zhou	Impact of structural inheritance and mantle potential temperature on wide asymmetric rifts							
B. Montaron, H. Leloup, A. Briais	B. Montaron	A model reconstruction of the last 50-Ma of South-East Asia's plate-tectonic history: a tribute to Paul Tapponnier's bold creativity							
J. Fang, T. Wright et al.	J. Fang	Strain Partitioning in the Southeastern Tibetan Plateau From Kinematic Modeling of High -Resolution Sentinel-1 InSAR and GNSS							
C. Lasserre, M.-P. Doin et al.	C. Lasserre	Intracontinental deformation measured at large scale by InSAR : from the eastern tibetan plateau to the Balkans with Sentinel-1							
J. Liu-Zeng, Y. Ge et al.	J. Liu-Zeng	Post-orogenic drainage integration drives river incision in SE Tibet							
Q. Zhu, N. Fuji, L. Zhao	Q. Zhu	Full-waveform Box Tomography for Lithospheric Structure in South-central Tibetan Plateau							
S. Dong	S. Dong	Brief introduction of SinoProbe Lab and projects							
T. Habel, A. Replumaz et al.	R. Lacassin	Upper-plate shortening and Andean-type mountain-building in the context of mantle-driven oceanic subduction							
M. Simoes, R. Lacassin et al.	M. Simoes	Kinematics of mountain-building of the Central Andes, from structural geology to analogue modeling.							
T. Larvet, A. Jourdon, L. Le Pourhiet	T. Larvet	3D numerical simulation of the Taiwan collision							
L. Le Pourhiet, M. Pubellier, A. Jourdon	L. Le Pourhiet	Source of obliquity in tectonics: the relative roles of thermal inheritance, kinematics, and mechanical coupling							