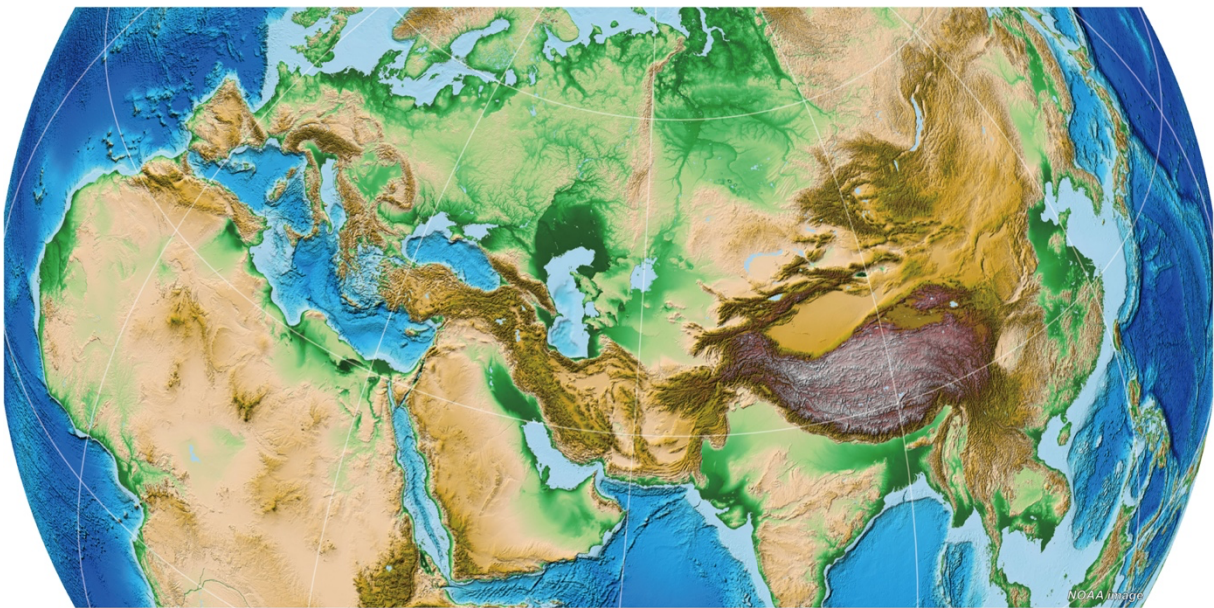




International Conference

Perigondwanian orogenies: from Variscan to Indosinian

Orléans, France, June 16, 2023



Second Circular

Institut des Sciences de la Terre d'Orléans

Société géologique de France

Specialized session

SCIENTIFIC BACKGROUND

Orogeny, witnessing of the activity of the Earth and documenting its evolution, is one of the key elements to understand how the Earth functions. For this reason, the study of mountain building is one of most ancient domains in geosciences. Among the well-known orogens, the perigondwanian ones that developed from the Neoproterozoic to Mesozoic gave rise to numerous belts such as Variscan, Indosinian, Cimmerian throughout Western Europe to Far East Asia are among the most important and studied ones.

The closure of the Rheic, Proto-Tethys, Central Asia, Paleo-Tethys Paleozoic oceans, accommodated oceanic subduction coeval with arc magmatism and back-arc basin opening, and mainly by the multiple collisions between Gondwana, Laurussia, Tarim, North China, South China, and Mongolia built up the Variscan, Central Asian Orogenic Belt, Tianshan, Kunlun Qinling-Qilian, Jinsha-Ailaoshan-Song Ma, and several other Asian belts, lead to the formation of the biggest landmass of Eurasian continent.

Their large spatial continuity and temporal distribution offer good opportunities to understand the Earth paleogeographic evolution, mechanisms of mountain building and geodynamic evolution. Therefore, these belts have attracted a great attention of the geoscientific community for more than one century.

In the last decades, fundamental understanding of the orogenic mechanisms has been achieved especially by multidisciplinary efforts through several important national research programs and international scientific collaborations. Major fundamental advances have been realized on the mechanisms of the lithosphere and paleogeographic evolution by the study of the tectonic events along these orogenic belts and their adjacent blocks.

However, numerous essential questions remain unanswered or hotly debated, such as the mechanisms of continental subduction and exhumation associated to multiple collisions between Gondwana, Laurussia and intervening microcontinents, the place of the Variscan belt in the Alpine-Himalayan basement, the development of oroclinal bending, the geodynamic evolution of Jinshajiang-Ailaoshan-Song Ma belt along the Indosinian orogenic belt, the closure time of the ancient Asian oceans such as Paleo-Asian, Proto-Tethys, the link between collision and development of intracontinental orogens, the role of intracontinental lithosphere delamination, and asthenospheric upwelling in magma genesis, the processes controlling the formation of large size ore deposits. The further studies in these domains will enhance fundamental understandings on the links of orogenesis with basin formation, metamorphism, magmatism, mantle convection, relief evolution, hydrothermal fluid circulation, and mineralization.

In order to exchange new results obtained from different disciplines, and in honor of his scientific contribution to the understanding of orogenesis during the last 40 years done by Michel Faure, the “Institut des Sciences de la Terre d’Orléans”, associated with the Société Géologique de France will organize an international conference on “Perigondwanian orogenies: from Variscan to Indosinian”. This meeting will provide the opportunity for geoscientists from numerous countries to discuss up-dated geological understanding, to establish new research objectives in this domain, and to reinforce international collaborations.

The meeting language will be English.

SCIENTIFIC COMMITTEE (IN ALPHABETICAL ORDER):

Jacques Charvet, Yan Chen, Stéphane Guillot, Jean-Marc Lardeaux, Caroline Martel, Jérémie Mellton, Lionel Mercury, Manuel Moreira, Hugues Raimbourg, Bruno Scaillet, Karel Schulmann

ORGANIZING COMMITTEE (IN ALPHABETICAL ORDER):

Yan Chen, Olivier Gaudefroy, Fabienne Gentillet, Virginie Lancelot, Caroline Martel, Lionel Mercury, Manuel Moreira, Nathalie Rolland, Nathalie Rouchon, Marie-France Rouillier

DATE:

JUNE 16, 2023

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Orléans, France, June 16, 2023

Opening: Yan Chen

09h00 – 09h20: Welcome addresses by

Luigi Agrofoglio, Vice-President of Orléans University in charge of international relationship
Bruno Scaillet, Institut des Sciences de la Terre d'Orléans (ISTO)

Chairman: Laurent Jolivet – Variscan Orogeny

09h20 - 09h40: Jean - Marc Lardeaux HP/UHP metamorphism in the French Variscan belt: Evolution of methods and concepts in the last five decades

09h40 - 10h00: Stéphane Guillot The signification of the External Crystalline Massifs of the Western Alps in the Variscan orogeny

10h00 - 10h20: Franz Neubauer Tracing Variscan and Cimmerian orogenies between Iran and Alps

10h20 - 10h40: Rodolfo Carosi Constraining the timing of evolution of transpressive shear zones in the Southern Variscan belt: fusing structural geology and geochronology

10:40 – 11:00 Yohan Denèle Late-orogenic deformation and structural reorganization of the Variscan orogen in the Upper Carboniferous

Coffee break

Chairman: Xianhua Li – Indosinian orogeny

11h20 -11h40: Aral Okay Variscan and Cimmeride orogenies in Anatolia

11h40 - 12h00: Wei Lin Temporal and spatial heterogeneity of the Ailaoshan-Song Ma-Song Chay ophiolitic mélange, and its significance on the evolution of Paleotethys

12h00 - 12h20: Chris Morley Structural styles and deformation events associated with Triassic-Early Jurassic ribbon continent collision in Thailand: Implications for palaeogeographic reconstructions

12h20 - 12h40: Van Vuong NGUYEN Interaction between subduction and mantle plume as a geodynamic mechanism for the Late Permian-Early Triassic Indosinian orogen: insights from Kontum massif in Vietnam

12h40 – 13h00 Yang Chu Coevolution of Paleotethys and Rheic: A geological comparison between Iran and Turkey

Lunch 13h00 – 14h30

Chairman: Marc Lardeaux – General features I

- 14h30 – 14h50: Xianhua Li Neoproterozoic magmatism in South China and its responses to assembly and breakup of Rodinia
- 14h50 – 15h10: Laurent Jolivet Mantle flow, a driver of orogeny and rifting
- 15h10 - 15h30: Taras Gerya Thermal-rheological structure of deforming continental lithosphere controls geometry, evolution and seismic behavior of mountain belts
- 15h30 - 15h50: Alain Chauvet Spatial link between magmatism and mineralization: examples across the continental crust and significant role of structural control

Coffee break

Chairman: Wei Lin – General features II

- 16h10-16h30 Karel Schulmann Growth of Mongolian collage and mechanisms of orocline formation
- 16h30-16h50 Pan Zhao Tectonic evolution of central-eastern Asia from Paleo-Asian Ocean to Mongol-Okhotsk Ocean s
- 16h50-17h10 Olivier Fabbri Macro- to micro-scale tectonic analysis of ophiolitic thrust sheets of Alpine Corsica: new results, implications and perspective
- 17h10-17h30 Hugues Raimbourg Tectonics of accretionary wedges: a comparative study of Kodiak (Alaska) and Shimanto Belt (Japan)

Coffee break

Chairman: Hugues Raimbourg

- 17h50 - 18h10: Michel Faure
- 18h10 - 18h30: Yan Chen Words of a friend
- 18h30 - 19h00: Conclusions and perspectives, free speech(s) of friends and colleagues
- 19h00 - 20h00: Photo of participants and Evening party