

## "50 Years of Plate Tectonics: Then, Now, and Beyond"

Monday June 25th and Tuesday June 26th, 2018

Collège de France, Grand Amphithéâtre "Marguerite de Navarre", 11 Place Marcelin Berthelot, 75005 Paris

Organizers: Eric Calais (ENS, Paris); Anny Cazenave (CNES, Toulouse), Claude Jaupart (IPG, Paris), Serge Lallemand (Univ. de Montpellier), Barbara Romanowicz (Collège de France)

### Monday June 25, 2018

**9:00 - 9:15**

#### **Welcome**

9:15 - 10:00

Xavier Le Pichon (Collège de France), *"Afterthoughts of a witness: comparing the Plate Tectonic revolution to the sudden freezing of supercooled lake Ladoga in "Kaputt" of Curzio Malaparte"*

10:00 - 10:30

Jason Morgan (Princeton University, USA), *"My perspective on the origin of plate tectonics, and how space geodesy is changing it today"*

10:30 - 11:00

Dan McKenzie (Cambridge University, UK), *"The thermal structure of the oceanic lithosphere"*

**11:00 - 11:30**

#### **Coffee break**

11:30 - 12:00

Walter Roest (Ifremer, France), *"CNEXO and Ifremer: over fifty years of worldwide marine scientific research and exploration of the French EEZ"*

12:00 - 12:30

Francis Albarede (Ecole Normale Supérieure de Lyon, France), *"Where did geochemists hide during the plate tectonics revolution?"*

**12:30 - 14:00**

#### **Lunch break, Students and postdocs event sponsored by Total**

14:00 - 14:30

Laurent Jolivet (Université Pierre et Marie Curie, France), *"From mantle flow to crustal deformation, a geological perspective"*

14:30 - 15:00

Richard Gordon (Rice University, USA), *"The Plate Tectonic Approximation, Space Geodesy, Cenozoic True Polar Wander, and the Origin of the Hawaiian-Emperor Bend"*

**15:00 - 15:30**

#### **Coffee break**

15:30 - 16:00

Roland Bürgmann (University of California Berkeley, USA), *"Probing the Rheology of the Asthenosphere"*

16:00 - 16:30

Peter Molnar (University of Colorado, USA), *"Mantle earthquakes: keys to mantle dynamics and the strength of the lithosphere"*

16:30 - 17:00

Eric Calais (Ecole Normale Supérieure, France), *"Large earthquakes in stable plate interiors: a challenge to plate tectonics"*

**17:00 - 19:00**

#### **Poster session**

### Tuesday June 26, 2018

9:00 - 9:30

Luce Fleitout (CNRS, Ecole Normale Supérieure, France), *"Intraplate deformation: short versus long time-scales"*

9:30 - 10:00

Cesar Ranero (ICREA at CSIC, Barcelona, Spain), *"Imaging the subduction"*

10:00 - 10:30

Jean-Philippe Avouac (California Institute of Technology, USA), *"Megathrust earthquakes: How large? How destructive? How often?"*

**10:30 - 11:00**

#### **Coffee break**

11:00 - 11:30

Mathilde Cannat (Institut de Physique du Globe, France), *"Current understanding of plate divergence processes at mid-oceanic ridges"*

11:30 - 12:00

Roger Buck (Lamont-Doherty Earth Observatory, USA), *"The role of magma in continental breakup and seafloor spreading"*

12:00 - 12:30

Dietmar Müller (University of Sydney, Australia), *"How plate tectonics drives the geological carbon cycle"*

**12:30 - 14:00**

#### **Lunch break**

14:00 - 14:30

Gilles Ramstein (CNRS, LSCE, France), *"Plate tectonics and climate: what's new since Wegener and Koppen?"*

14:30 - 15:00

Barbara Romanowicz (Collège de France), *"Mantle plumes as presently imaged by global seismic tomography"*

**15:00 - 15:30**

#### **Coffee break**

15:30 - 16:00

Anne Davaille (CNRS, Université Paris-Sud, France), *"Structure of mantle convection: plumes and plates"*

16:00 - 16:30 David Bercovici (Yale University, USA), "*Generation of plate tectonics from grain to global scale*"  
16:30 - 17:00 Nicolas Coltice (Ecole Normale Supérieure, France), "*Will plate tectonics still be our paradigm in 50 years?*"  
**17:00 - 18:00 Panel Discussion**  
**18:00 - 19:00 Closing cocktail**