CURRICULUM VITAE

MONTAGNER Jean-Paul

Professeur Université Paris Diderot, Institut Universitaire de France

Laboratoire de Sismologie
Institut de Physique du Globe et
Université Paris Diderot
Sorbonne Paris Cité
1 rue Jussieu
75238 Paris cedex 05
France
Tel: +33 1 8395 7564
e-mail: jpm@ipgp.fr
website: http://www.ipgp.fr/∼jpm

PERSONAL INFORMATION

Citizenship: French
Home address: 7, rue de l'Industrie, Paris 75013.
Phone: 33 1 4581 4174 (H), 33 1 8395 7564 (O)
E-mail: jpm@ipgp.fr, jpmontagner@gmail.com
Present Position: Professor at University Paris-Diderot- Paris VII, Institut de Physique du Globe, Paris, France.

ACADEMIC CURSUS

2011-2021: Senior member of Institut Universitaire de France .
1994-1999: Junior member of Institut Universitaire de France.
1986-1988: Post-doctoral fellowship, Seismological Laboratory, California Institute of Technology (Pasadena- California) under the supervision of Professor Don Anderson.
1981-1986: State Thesis (Univ. Paris VI- CEA- 1986): "Deep Structure of the mantle from seismic surface waves".
1979-1981: 3rd cycle Thesis (Univ. Paris VI- oct. 1981): "Deep structure of the Pacific Ocean"
1974-1979: Masters in Physics in Orsay University (Univ. Paris XI) - D.E.A. of Solid Earth Geophysics - "Agrégation" of Physics. (highest academic- rank qualification after passing competitive national test- 1979)
1974-1979: Position in Ecole Normale Supérieure (Physics, Cachan).
1972-1974: Math-Sup, Math-Spe (Preparatory classes), Lycée Descartes, Tours (37, France).

AWARDS

- Nomination to IUF (University Institute of France) as senior member: 2016
- Nomination to IUF (University Institute of France) as senior member: 2011
- Beno Gutenberg Medal EGU (European Geosciences Union): 2010
- Fellow of the AGU (American Geophysical Union): 2004
- Bronze medal of CNRS: 1988 (given to the best young scientists)
- Nomination to IUF (University Institute of France) as junior member: 1994

EMPLOYMENT

06/2013-07/2013: Visiting professor at MIT, Cambridge, Massachusetts, U.S.A.

01/2008-04/2008, 03/2009-04/2009, 05/2010-06/2010, 10/2012-11/2012, 06/2017: Visiting Professor at ERI (Earthquake Research Institute, University of Tokyo, Japan)
01/2003-09/2006: Director of Dept. STUE (Earth, Astronomy and Environment Sciences) at MRNT (Ministry of Research and New Technologies) then MESR (Ministry of Higher Education and Research).
08/2001- 07/2002: Visiting professor at California Institute of Technology, Seismolab and J.P.L. (Pasadena, CA, U.S.A.)
01/1994- 09/1994: Visiting professor at A.N.U. (Canberra, Australia).
1991-1994: Consultant of the Ministry of Education and Research (Direction de la Recherche et des Etudes Doctorales: Research and Doctoral Studies Direction).
1989- present: Professor of Geophysics, University Paris VII- Denis Diderot.
1984- 1989: Research Assistant at C.N.R.S. (National Scientific Research Council)
1981- 1984: C.E.A. (Atomic Energy Council) fellowship.
1979- 1981: PhD fellowship DGRST.

RESEARCH INTERESTS

Mantle and Core (convection, dynamics and mineralogy)
Three-dimensional Structure of the Earth, Inversion of seismic data, Seismic Tomography of velocity and anisotropy.
Propagation of seismic waves in laterally heterogeneous, anisotropic, anelastic media (free oscillations, surface waves, body waves).
Seismic sources (tectonic earthquakes, monitoring, prompt gravity anomalies, glacial earthquakes, Earth hum)
Geophysical instrumentation (Seismometry, seismic networks, geophysical ocean bottom observatories and stations, planetary missions to Mars).

COURSES TAUGHT

Undergraduate level: Mathematics for Geophysics, Global Geodynamics, Gravimetry, Introduction to Seismology. The planet Earth, history and Environment.
Graduate level: Advanced Seismology, Seismology and Geodynamics, Seismic Imaging Techniques. For PhD students: Anisotropy in Earth sciences, Seismic noise.
- Coordinator of the European training site Seismo-IPG (2000-2004) (PhD students, Post-docs)
- French Coordinator of the European RTN (Research Training Network) SPICE (2003-2007) and ITN (Initial Training Network) QUEST (2009-2013)(PhD students, Post-docs)
- Coordinator of the Erasmus Mundus Programme 2- Doctorate GeoDES (Geosciences Doctoral European School), 2011.

STUDENT TRAINING

Undergraduate level: 27 students (Batchelor, 1st year of Mastère degree, "Maîtrise" training course),
Graduate level: 28 students in D.E.A. or Mastère Research (2nd year),
37 PhD students (3 unofficially before 89; 34 officially since I am professor) . (6 have positions in Universities, 2 in High school, 6 in CNRS (5 scientists, 1 research engineer), 13 in private companies or research institutions, 8 in post-doc, 2 still in PhD-thesis).

PROFESSIONAL SERVICES SINCE 1990

- 2014-2018: Vice-chair of the European COST action TIDES (TIme DEpendent Seismology).
- 2014-2018: Member of the Committee "Prix de Thèse- Le Monde", Paris.
- 2011-2019: Vice-Director for International Relations, I.P.G., Paris.

• 2009-2013: Chair of the Scientific Board of the European ITN (Initial Training Network) QUEST training.
• 2006-2010: Scientific Committee of IPEV (French Institute of Polar Research).
• 2007-2012: Scientific Committee of LIA-CNRS Montessus (Chilean-French laboratory).
• 2006-2010: Scientific Committee of CEFIPRA- IFCPAR (Indo-French Committee for the Promotion of Advanced Research).
• 2006-2010: Governing Board of Observatoire de Paris.
• 2005-2007: President of the Steering Committee of the ANR Programme "Catastrophes Telluriques".
• **2003- 2006: Director of Dept. STUE** (Earth, Astronomy and Environment Sciences) at MRNT (Ministry of Research and New Technologies) then MESR (Ministry of Higher Education and Research).
• **1997- 2003: Director of the Seismology Department**, UMR-CNRS7580, Institut de Physique du Globe de Paris.
• 1990- 2007: Director of the Global Seismological Group, Department of Seismology, Institut de Physique du Globe de Paris.
• **1990- 2000: Director of Programme GEOSCOPE**.
• 1993-1997: Chairman of F.D.S.N. (Federation of Digital Seismograph Networks):.
• **1991-1994: Consultant of the Ministry of Education and Research**.
• 1999-2003: Secretary of I.O.N. (International Oceanic Network).
• 1993- 1999: Vice- Chairman of I.O.N. (International Oceanic Network).
• 1993- 1999: Coordinator of the French Program OFM (Observatoire Fond de Mer: Ocean Bottom Observatory).
• 1993- 2002: Scientific Committee of ODP-France:.
• 1995- 2001: Scientific Committee of IFRTP (French Institute of Polar Territories Research).
• 1991-1994: Vice- Chairman of F.D.S.N. .
• 1991-1997: Member of the Steering Committee of Orfeus.

OTHER ACTIVITIES.
• October 2019: Co-organizer of the Joint workshop ERI-IPGP, Paris (60 participants).
• May 2019: Co-organizer of workshop "Machine, Deep Learning", IPGP-ENS (45 participants).
• December 2018: Co-organizer of the Joint workshop LANL-IPGP, Washington DC (30 participants).
• September 2015: Co-organizer of the Joint workshop ERI-IPGP, Paris (40 participants).
• July 2014: Co-organizer of the Joint workshop LANL- IPGP- Los Alamos, New Mexico, USA. (30 participants)
• May 2013: Organizer of the final school of European-ITN-QUEST, Benodet, France (120 participants).
• March 2013: Co-organizer of the Joint workshop ERI-IPGP, Tokyo (30 participants).
• July 2012: Organizer of the Joint workshop IPGP-LANL-IL, Paris (40 participants).
• October 2011: Co-organizer of the Joint workshop ERI-IPGP, Paris (60 participants).
• October 2011: Co-organizer of the Mid-Term Review Meeting of ITN-QUEST, Paris (50 participants).
• April 2011: Organizer of the Joint workshop LANL- IPGP- Los Alamos, New Mexico, USA. (30 participants)
• April 2011: Co-convenor Session "The Quest project: progress on inverting seismic waveforms...", E.G.U. General Assembly, Vienna.
• January 2011: Co-organizer of the Joint workshop CEFIPRA-IFCPAR IPGP-NGRI. Mahabalipuram, India. (30 participants)

• November 2010: Member of the Review committee of Institute of Geophysics, Academy of Sciences, Czech Republic.
• June-August 2010: Member of the Gutenberg Medal committee of E.G.U.
• June 2010: Co-organizer of the workshop IPG "Homage to Albert Tarantola" (100 participants)
• April 2010: Co-convenor Session 'Time Reversal', SSA meeting, Portland, USA.
• September 2009: Member of nomination of Fellow Committee for Seismology (AGU).
• July 2009: Co-Convenor (V. Masson-Delmotte) of the Session "Terre-Climat" at the Symposium of S.F.P. (Société Fran caise de Physique), Ecole Polytechnique, Palaiseau, France.
• June 2009: Member of the Review committee of Earthquake Research Institute, Univ. of Tokyo, Japan.
• April 2009: Co-organizer of the Joint workshop ERI-IPG. Tokyo University (40 participants)
• Jan. 2007-June 2009 : Editor of a special issue 'Earthquakes in subduction zones : a multidisciplinary approach', Phys. Earth Planet. Int., 175, 2009.
• October 2008: Organizer of the workshop, Ecole de Physique des Houches, France (70 people).
• May 2007: Organizer of the annual SPICE workshop, Ecole de Physique de Cargèse, Corsica, France (90 people).
• March 2007: Co-organizer of a workshop 'Une Terre Anisotrope', IPG Paris (50 people).
• Nov. 2006: Organizer of the International Conference "1906 Valparaiso Earthquake- the contribution of F. Montessus de Ballore", Santiago, Chili.
• March 2006: Member of Evaluation committee of European Programme ECORD.
• March 2006: Member of the Review committee of OHP Program (ERI, Tokyo, Japan).
• 2005-2007: President of the Steering Committee of ANR Program "Catastrophes Telluriques".
• April 2005, 2006: Convener of the Session "Core and deep mantle", EGU, Vienna.
• Nov. 15-16, 2004: Organizer of a colloquium in Ministry of Research "Observatories for environmental Research".
• 2004-2005: Member of Lehmann Committee (AGU), 2004-05
• April 2004: Convener Session "Deep Earth", EGU, Nice.
• Sept. 22-27, 2003: Co-organizer of interdisciplinary workshop "Imaging of complex media with acoustic and seismic waves" (90 people), Cargese, France.
• April 2002: Convener Session Geophysical Instrumentation, EGS, Nice.
• July 9-14, 2001: Co-organizer of interdisciplinary workshop "Imaging of complex media with acoustic and seismic waves" (90 people), Cargese, France.
• April 26- May 8, 1999: Co-organizer of interdisciplinary workshop "Imaging of complex media with acoustic and seismic waves" (90 people), Cargese, France.
• 28-30 Oct. 1997: Organizer of IUF workshop "Aux Frontieres des Geosciences" (400 people), ENS, Lyon.
• Aug. 1997: Convenor of Symposium "Geodynamics and Seismic Anisotropy", IASPEI meeting, Thessaloniki.
• 4-9 May, 1996: Convenor of Symposium "10th Anniversary of the FDSN", EGS meeting, The Hague.
• 11-13 January 1995: Co-organizer of workshop ODP-ION "Multidisciplinary Observatories on the deep sea floor", Marseille.
• September 1992: Organizer of Symposium "10 Years of GEOSCOPE - Broadband Seismology", Paris.
• August 1991: Convenor of Symposium S4 (Seismic Anisotropy) of I.U.G.G. meeting (International Union of Geophysics and Geodesy), Wien, Austria.
• October 1991: Co-organizer of workshop "Seismic Anisotropy and Geodynamics", Montpellier.

Invited Seminars and Talks at Conferences, 2001-2019

2019
February: Workshop "Observatory Synergies oin astrophysics and geophysics", Paris, France
2018
December: Joint workshop LANL-IPGP, Washington D.C.
November: International Symposium, Acad. Sciences Uzbekistan, Tashkent, Uzbekistan
July: TIDES workshop, Prague, Tchek Republic
2017
June: Cargese Summer school, Corsica, France
2016
November: Symposium Collège de France, Paris, France.
September: Workshop RHUM-RUM, Observatoire du Piton de la Fournaise, La Réunion, France.
June-July: Cider Summer School, Santa Barbara, USA
June: Colloque I.U.F., Rennes
March: Workshop ITU, Istanbul, Turkey
January: University Ouverte, SaintGermain-en-laye
2015
November: NGRI, Hyderabad, India.
November: ESPCI, colloquium "The Magic of waves" (organized by Institut Langevin and Mathias Fink)
October: University Novosibirsk, International workshop, Novosibirsrk, Russia.
September: Workshop ERI-IPG, Paris, France.
July: IUGG, session Anisotropy, Prague, Czech republic.
June: Workshop TIDES, Bertinoro, Italy
March: NoMan conference, Japan.
February: International Conference on LAB, British Geophysical Association, London, UK
UCL, London, UK
2014
December: ETH Zurich, Switzerland
October: School LABEX, Firenze, Italy
July: LANL, Los Alamos, New Mexico, USA
May: University Lisbon, Portugal
April: Workshop Earth Science Europe, Paris.
March: University Oxford, England
2013
December: GeolNancy, France
November: Collège de France, Paris, France
November: NGRI, Hyderabad, India
September: ETH Zurich
July: Harvard University, Cambridge, USA
June: Massachusetts Institute of Technology, Cambridge, USA.
May: QUEST workshop, Benodet, France.
April: Ambient Noise Workshop, Cargese, France.
April: EGU general meeting in Session on Tomography, Vienna, Austria.
March: workshop IPGP-ERI, Tokyo.
2012
November: NIED, Tsukuba,
November: French embassy workshop, Tokyo, Japan.
October: OHRC-ERI, Tokyo.
July: Joint workshop IPGP-LANL-Institut Langevin, Paris
February: Virgo week, Pisa, Italy

2011
December: Ecole Télécom, Paris, France
October: Todai Forum, ENS Lyon.
September: Ecole des Mines, Douai, France.
August: ETH Zurich, Switzerland.
May: Cargese workshop on Passive Imaging, France.
April: LANL-IPG workshop, Los Alamos, U.S.A.
February: CEFIPRA Workshop, Chennai, India.
2010
September: School ICTP Trieste
June 21: Tarantola Homage, Paris.
June 10: Dept. Earth Sciences, University of Sapporo, Hokkaido, Japan.
May 27: JpGU meeting, Tokyo, Japan
May 17-20: International workshop "Continental Geodynamics", CUG Wuhan
April: EGU, Vienna (for the Beno Gutenberg medal ceremony).
February: I.P.G. Paris
January: Institut Henri Poincaré, Paris.
2009:
November: Geosciences, Université de Montpellier, France.
October: NGRI, Hyderabad, India
October: Franco-Japanese conference on Earthquake source, Orleans, France.
July: Orfeus workshop, Utrecht, Netherlands.
May: Collège de France, Paris
April: Workshop ERI-IPG, University of Tokyo, Japan.
January: Workshop Berkeley-IPGP
2008:
November: LMU, Munich, Germany.
October: Workshop Les Houches, France
September: ICTP, Trieste, Italy
June: Conférence grand public, Palais de la Découverte, Paris.
April: T.I.T., Tokyo, Japan.
March: University of Kyoto, Japan.
March: Workshop Seafloor observatories, Tokyo, Japan.
February: JAMSTEC, Yokohama, Japan.
January: Earthquake Research Institute, Tokyo, Japan.
January: DEPS, University of Tokyo, Tokyo, Japan.
2007:
October: Institute of Himalyan Geology, Dehra Dun, India.
October: Workshop "Acoustical Imaging of complex media", Cargese, France.
May: Annual SPICE meeting, Cargese, France
March: Colloque SEDIT, Lyon, France.
January: Conférence grand public sur les Panaches mantelliques, Museum National d'Histoire Naturelle.
January: GDR Ondes - IMCODE, Institut Henri Poincaré, Paris.
2006:
November: International Conference Montessus de Ballore, Santiago, Chili.
September: Colloque "La Réunion face aux risques naturels", CG de Saint-Denis, La Réunion.
September: ICTP, Trieste, Italy
July: Annual SPICE meeting, Kinsale, Ireland.
June: Russian - French cooperative research program Workshop, Paris.

March: Earthquake Research Institute, Tokyo University, Japan
2005:
March: Cefipra, New Delhi, India.
April: Dept. Geophysics and Geology, University of Santiago, Chile.
July: Workshop "Acoustical Imaging of complex media", Cargese, France.
August: International workshop "Utilization of seismograph networks within GEOSS", Washington DC, USA.
2004:
December: AGU fall meeting, invited talk.
October: ICTP, Trieste, Italy.
August: Ecole des Houches Géophysique, Exposé d'introduction.
May: Spring AGU, Montréal, Invited Talk.
2003:
November: MNHN, OCIM, Dept. des Galeries, Paris.
June: U. Gottingen, Germany.
March: U. Colorado, Boulder, USA.
January: Assemblée générale du CNFGG.
January: Grande Galerie de l'Evolution- Exposition "Himalaya- Tibet: le choc des continents".
January: Laboratoire d'Imagerie Parametrique, Faculté de Médecine, Université Paris VI.
2002:
October: ICTP, Trieste, Italy.
August: Erice, Ettore Majorana Physics School, Italy.
June: Martian program- JPL, Pasadena, USA.
May: Earth Sciences- Stanford university
May: EAPS- UCLA, Los Angeles.
April: USGS, Menlo Park, USA.
February: GPS- CALTECH, Pasadena, USA.
2001:
November: Seismolab- UC Berkeley, Berkeley, USA.
September: Seismolab- Caltech, USA.
June: Earth Sciences- ETH, Zurich, Switzerland.
January: ION-OHP Symposium, Mount Fuji, Japan.

PUBLICATIONS

Number of publications in peer-reviewed journals: 150
#citations: 7240, h-index: 46 (Source: Google Scholar)
13 books or chapters of books, 23 papers in no peer reviewed journals.

In Peer-reviewed journals

1- Montagner, J.P. and N. Jobert, Investigation of upper mantle structure under young regions of the South-East Pacific using long-period Rayleigh waves, *Phys. Earth Planet. Int.,* **27***,* 206-222, 1981.
2- Montagner, J.P. and N. Jobert, Variation with age of the deep structure of the Pacific Ocean inferred from very log-period Rayleigh wave dispersion, *Geophys. Res. Lett.,* **10**, 273-276, 1983.
3- Dorbath L. and J.P. Montagner, Upper mantle heterogeneities in Africa deduced from Rayleigh wave dispersion, *Phys. Earth Planet. Int.,* **32**, 218-225, 1983.
4- Montagner, J.P., Seismic anisotropy of the Pacific Ocean inferred from long -period surface waves dispersion, *Phys. Earth Planet. Int.,* **38**, 28-50, 1985.

5- Bethoux, N., F. Petit, J.P. Rehault, B. Massinon, and J.P. Montagner, Several location methods for underwater shots in the Gulf of Genoa (Western Mediterranean): Structural implications, *Tectonophys.,* **128**, 357-379, 1986.
6- Montagner, J.P., Regional three-dimensional structures using long-period surface waves, *Ann. Geophys.,* **4**, B3, 283-294, 1986a.
7- Montagner, J.P., Three- dimensional structure of the Indian Ocean inferred from long- period surface waves, *Geophys. Res. Lett.*,**13,** 315-318, 1986b.
8- Montagner, J.P., and H.C. Nataf, A simple method for inverting the azimuthal anisotropy of surface waves, *J. Geophys. Res.,* **91**, 511-520, 1986.
9- Roult, G., D. Rouland, and J.P. Montagner, Phase velocity distribution in the Indian Ocean inferred from Geoscope records, *Geophys. Res. Lett.*, **14,** 343-346, 1987.
10- Montagner, J.P. and H.C. Nataf, Vectorial Tomography. I: Theory, *Geophys. J.R. astr. Soc.,* **94**, 295-307, 1988.
11- Montagner, J.P. and N. Jobert, Vectorial Tomography. II: Application to the Indian Ocean, *Geophys. J.R. astr. Soc.,* **94**, 309-344, 1988.
12- Montagner, J.P., D. Rouland and G. Roult, Structure profonde de l'Ocean Indien deduite des ondes sismiques, Actes du Colloque sur la Recherche Française dans les Terres Australes, 381-390, 1988.
13- Hadiouche, O., N. Jobert, and J.P. Montagner, Anisotropy of the African continent inferred from surface waves, *Phys. Earth Planet. Int.,* **58**, 61-81, 1989.
14- Ho-Liu, P., J.P. Montagner, and H. Kanamori, Comparison of Iterative Back-projection Inversion and Generalized Inversion without blocks: Case studies in Attenuation Tomography, *Geophys. J.,* **97,** 19-29, 1989.
15- Mocquet, A., B. Romanowicz, and J.P. Montagner, Three-dimensional structure of the upper mantle beneath the Atlantic Ocean inferred from long period Rayleigh waves. I: Group and phase velocity distributions *J. Geophys. Res.,* **94,** 7449- 7468, 1989.
16- Montagner, J.P., and Don L. Anderson, Petrological constraints on seismic anisotropy, *Phys. Earth Planet. Inter.,* **54**, 82-105, 1989a.
17- Montagner, J.P., and Don L. Anderson, Constrained reference Earth model, *Phys. Earth Planet. Int.,* **58**, 205- 227, 1989b.
18- Montagner, J.P., P. Ho-Liu, and H. Kanamori, Reply to ent by J. Trampert, *Geophys. J. Int.,* **103,** 757- 758, 1990.
19- Roult, G., B. Romanowicz and J.P. Montagner, 3D upper mantle shear velocity and attenuation from fundamental mode free oscillation data, *Geophys. J. Int.,* **101**, 61-80, 1990.
20- Montagner, J.P. and T. Tanimoto, Global anisotropy of the upper mantle inferred from the regionalization of phase velocities, *J. Geophys. Res.,* **95**, 4797- 4819, 1990.
21- Montagner, J.P., and T. Tanimoto, Global upper mantle tomography of seismic velocities and anisotropies, *J. Geophys. Res.,* **96**, 20,337- 20,351, 1991.
22- Ho-Liu P., Johnson C., Montagner J.P., Kanamori H., Clayton R.W., Three-Dimensional attenuation structure of Kilauea-East Rift zone, Hawaii, *J. Geophys. Res.,* Fate unknown, 1992.
23- Bussy, M., J.P. Montagner, and B. Romanowicz, Tomographic study of upper mantle attenuation in the Pacific Ocean, *Geophys. Res. Lett.,* **20**, 663-667, 1993.
24- Humler, E., J.L. Thirot, and J.P. Montagner, Global correlations of ocean ridge basalt chemistry with seismic tomographic images, *Nature*, **364**, 225-228, 1993.
25- Mainprice, D., A. Vauchez, and J.P. Montagner, Special Issue: Seismic Anisotropy in the Mantle and Geodynamics of Orogenic belts, Preface, Workshop La Grande Motte, France (Oct 1-3, 1991), *Phys. Earth Planet. Int.*, **78**, 1993.
26- Montagner, J.P., and B. Romanowicz, Degrees 2, 4, 6 inferred from seismic tomography, *Geophys. Res. Lett.,* **20**, 631-634, 1993.

27- Stutzmann, E., and J.P. Montagner, An inverse technique for retrieving higher mode phase velocity and mantle structure, *Geophys. J. Int., 113,* 669-683, 1993.
28- Montagner, J.P., Can Seismology tell us anything about convection in the mantle? *Rev. Geophys. Space Phys.*, **32**, 115-137, 1994.
29- Montagner, J.P., J.F. Karczewski, B. Romanowicz, S. Bouaricha, P. Lognonné, G. Roult, E. Stutzmann, J.L. Thirot, D. Fouassier, J.C. Koenig, J. Savary, L. Floury, J. Dupond, A. Echardour, H. Floc'h, The French Pilot experiment OFM/SISMOBS: First scientific results on noise and event detection, *Phys. Earth Planet. Int.*, **84**, 321-336, 1994.
30- Montagner, J.P., B. Romanowicz, and J.F. Karczewski, The French Pilot experiment OFM/SISMOBS: A first step towards a permanent geophysical observatory, *EOS,* **75**, 150-154, 1994.
31- Roult, G., D. Rouland, and J.P. Montagner, Antarctica II: upper mantle structure from seismic velocities and anisotropy, *Phys. Earth Planet. Int.,* **84**, 33-57, 1994.
32- Stutzmann, E., and J.P. Montagner, Tomography of the transition Zone from the inversion of higher mode surface waves, *Phys. Earth Planet. Int.,* **86**, 99-115, 1994.
33- Montagner, J.-P., E. Stutzmann, and Y. Capdeville, Hotspot detection from Seismological data. In D. Anderson, S. Hart and A. Hofmann (Eds) *Plume 2, Terra Nova*, **3**, 103-106, 1995.
34- Montagner, J.P., Surface waves on a global scale - Influence of anisotropy and anelasticity, Summer School of Erice, "Seismic Modeling of the Earth's Structure", Eds. Boschi, Ekstrom, Morelli, pp. 81-148, 1996.
35- Beauduin, R., P. Lognonné, J.-P. Montagner, S. Cacho, J.-F. Karczewski, M. Morand, The effects of the atmospheric pressure changes on seismic signals or how to improve the quality of a station, *Bull. Seismol. Soc. Am.*, **86**, 1760-1769, 1996.
36- Beauduin, R., J.-P. Montagner, J.-F. Karczewski, Time evolution of broadband seismic noise during the French Pilot experiment OFM/SISMOBS, *Geophys. Res. Lett.*, **23**, 2995-2998, 1996.
37- Lavé, J., J.-P. Avouac, R. Lacassin, J.-P. Montagner, and P. Tapponnier, Seismic anisotropy beneath Tibet: Evidence for eastward extrusion of the Tibetan lithosphere, *Earth Planet. Sci. Lett.,*, **140**, 83-96, 1996.
38- Montagner, J.P., and B.L.N. Kennett, How to reconcile body-wave and normal-mode reference Earth models? *Geophys. J. Int.*, **125**, 229-248, 1996.
39- Ricard, Y., H.C. Nataf, and J.P. Montagner, The 3S-MAC model: Confrontation with seismic data, *J. Geophys. Res.*, **101**, 8457-8472, 1996.
40- Vinnik, L.P., and J.-P. Montagner, Shear wave splitting in the mantle Ps phases, *Geophys. Res. Lett.*, **23**, 2449-2452, 1996.
41- Gouget, K., P. Lognonné, and J.-P. Montagner, CMT determination by inversion of long period waveform inversion in a laterally heterogeneous Earth, *Geophys. Res. Lett.*, 1997.
42- Vinnik, L.P., S. Chevrot, and J.-P. Montagner, Evidence for a stagnant plume in the transition zone, *Geophys. Res. Lett.*, **24**, 1007-1010, 1997.
43- Babuska, V., J.-P. Montagner, J. Plomerova, and N. Girardin, Age-dependent large scale fabric of the mantle lithosphere as derived from surface-wave velocity anisotropy, *P. Appl. Geophys.*, **151**, 257-280, 1998.
44- Chevrot, S., J.-P. Montagner, and R. Snieder, The spectrum of tomographic Earth models, *Geophys. J. Int.*, **133**, 783-788, 1998.
45- Gouget, K., P.F. Ihmle, J. Campos, and J.-P. Montagner, Self-consistent retrieval of source parameters using mantle waves, *Bull. Seismol. Soc. Am.*, **88**, 995-1002, 1998.
46- Griot, D.-A., J.-P. Montagner, and P. Tapponnier, Surface wave phase velocity and azimuthal anisotropy in Central Asia, *J. Geophys. Res.*, **103**, 21215-21232, 1998a.
47- Griot, D.-A., J.-P. Montagner, and P. Tapponnier, Heterogeneous versus homogeneous strain in Central Asia, *Geophys. Res. Lett.*, **25**, 1447-1450, 1998b.

48- Montagner, J.-P., Where is located seismic anisotropy in the Earth mantle? In boundary layers..., *Pure appl. geophys.*, **151**, 223-256, 1998.
49- Montagner, J.-P., P. Lognonné, J.-F. Karczewski, G. Roult, E. Stutzmann, and R. Beauduin, Towards a multiscalar and multiparameter network for the next century, the French efforts, *Phys. Earth Planet. Int.*, **108**, 155-174, 1998.
50- Romanowicz, B., Stakes, D.S., J.-P. Montagner, P. Tarits, R. Urhammer, M. Begnaud, E. Stutzmann, M. Pasyanos, J.-F. Karczewski, S. Etchemendy, D. Neuhauser, MOISE: A Pilot experiment towards long-term sea-floor geophysical observatories, *J. Phys. Earth*, **50**, 927-937, 1998.
51- Silveira, G., E. Stutzmann, J.-P. Montagner, and L. Mendes-Victor, Anisotropic tomography of the Atlantic Ocean from Rayleigh surface waves, *Phys. Earth Planet. Int.*, **106**, 259-275, 1998.
52- Stakes, D.S., B. Romanowicz, J.-P. Montagner, P. Tarits, J.-F. Karczewski, S. Etchemendy, C. Dawe, D. Neuhauser, P. McGill, J.-C. Koenig, J. Savary, M. Begnaud, and M. Pasyanos, Seismic experiment paves way for long-term seafloor observatories, *E.O.S.*, **79**, 303-309, 1998.
53- Thirot, J.L., J.P. Montagner, and L. Vinnik, Upper mantle discontinuities in a subduction zone: evidences for large lateral variations, *Phys. Earth Planet. Int.*, **108**, 61-80, 1998.
54- Vinnik, L.P., S. Chevrot, and J.-P. Montagner, Seismic evidence of flow at the base of the upper mantle, *Geophys. Res. Lett.*, **25**, 1995-1998, 1998.
55- Beucler, E., S. Chevrot, and J.-P. Montagner, The Snake River Plain experiment revisited. Relationships between a Farallon plate segment and the transition zone, *Geophys. Res. Lett.*, **26**, 2673-2676, 1999.
56- Chevrot, S., L. Vinnik, and J.-P. Montagner, Global patterns of upper mantle from Ps converted waves, *J. Geophys. Res.*, **104**, 20203-20219, 1999.
57- Harri, A.-M., O. Marsal, P. Lognonné, ... Netlander Science Team (J.-P. Montagner), Network Science Landers for mars, *Adv. Space Res.*, **23**, 1915-1924, 1999.
58- Lognonné, P., D. Giardini, B. Banerdt, J. Gagnepain-Beyneix, A. Mocquet, T. Spohn, J.-F. Karczewski, P. Schibler, S. CAcho, W.T. Pike, C. Cavoit, A. Desautez, J. Pinassaud, D. Breuer, M. Campillo, P. Defraigne, V. Dehant, A. Deschamps, J. Hinderer, J.-J. Lévêque, J.-P. Montagner, J. Oberst, The NetLander Very Broadband Seismometer, *Planet. Space Sc.*, **48**, 1289-1302, 2000.
59- Montagner, J.-P., Plume detection from seismological data, *Electronic Geosciences*, 1999.
60- Roult, G., J.-P. Montagner, E. Stutzmann, S. Barbier, G. Guiveneux, The GEOSCOPE program: its data center, *Phys. Earth Planet. Int.*, **113**, 25-43, 1999.
61- Singh, S.C., and J.-P. Montagner, Anisotropy of iron in the Earth's inner core, *Nature*, *400*, 629, 1999.
62- Vinnik, L., S. Chevrot, J.-P. Montagner, and F. Guyot, Teleseismic travel time in North America and anelasticity in the asthenosphere, *Phys. Earth Planet. Int.*, **116**, 93-103, 1999.
63- Battaglia, J., K. Aki, and J.-P. Montagner, Tilt variations observed at a GEOSCOPE VBB station on the Piton de la Fournaise volcano, *Geophys. Res. Lett.*, **27**, 605-608, 2000.
64- Capdeville, Y., E. Stutzmann, and J.-P. Montagner, Effect of a plume on long-period surface waves computed with normal modes coupling, *Phys. Earth planet. Int.*, **119**, 57-74, 2000.
65- Montagner, J.-P., and L. Guillot, Seismic Anisotropy Tomography, "Problems in Geophysics for the Next millenium", Eds. Enzo Boschi, Göran Ekström and Andrea Morelli, 217-254, 2000.
66- Montagner, J.-P., D.-A. Griot, and J. Lavé, How to relate body wave and surface wave anisotropy?, *J. Geophys. Res.*, **105**, 19,015-19,028, 2000.
67- Singh, S.C., M.A. Taylor, and J.-P. Montagner, On the presence of fluids in the Earth 's inner core, *Science*, **287**, 2471-2474, 2000.
68- Montagner, J.-P., and J. Ritsema, Interactions between Ridges and Plumes, *Science*, **294**, 1472-1473, 2001.

69- Stutzmann, E., J.-P. Montagner, W.C. Crawford, J.-L. Thirot, P. Tarits, A. Sebai, D. Stakes, B. Romanowicz, J.-F. Karczewski, D. Neuhauser, and S. Etchemendy, MOISE: A prototype multiparameter ocean bottom station, *Bull. Soc. Seism. Am.*, **91**, 885-892, 2001.
70- Capdeville, Y., C. Larmat, J.-P. Vilotte, and J.-P. Montagner, Direct numerical simulation of the scattering induced by a localized plume using a coupled spectral element and modal solution, *Geophys. Res. Lett.*, **29**, 10,1029, 2002.
71- Montagner, J.-P., Upper mantle Low Anisotropy Channels below the Pacific plate, *Earth Planet. Sci. lett.*,**202**, 263-274, 2002.
72- Montagner, J.-P., Seismic Anisotropy Tomography, Workshop on Imaging of Complex Media with Acoustic and Seismic Waves, Cargèse, Eds M. Fink, W. Kuperman, J.-P. Montagner, *Topics Appl. Phys.*, **84**, 191-231, 2002.
73- Montagner, J.-P., J.-F. Karczewski, E. Stutzmann, G. Roult, W.C. Crawford, P. Lognonné, L. Béguery, S. Cacho, G. Coste, J.-C. Koenig, J. Savary, B. Romamowicz, and D. Stakes, Geophysical Ocean Bottom Observatories or temporary portable networks? Erice workshop Proc., Developments in Marine Technology, **12**, 59-82, 2002.
74- Simons, F.J., R.D. van der Hilst, J.-P. Montagner, and A. Zielhuis, Multimode Rayleigh wave inversion for shear wave speed heterogeneity and azimuthal anisotropy of the Australian upper mantle, *Geophys. J. Int.*, **151**, 738-754, 2002.
75- Stakes D., B. Romanowicz, M.L. Begnaud, K. McNally, J.-P. Montagner, E. Stutzmann, and M. Pasyanos, The MBARI Margin Seismology Experiment: A Prototype Seafloor Observatory, Erice workshop Proc., Developments in Marine Technology, **12**, 93-110, 2002.
76- Beucler, E., E. Stutzmann, and J.-P. Montagner, Measuring surface wave higher mode velocities by the Roller Coaster Algorithm, *Geophys. J. Int.*, **155**, 289-307, 2003.
77- Capdeville, Y., E. Chaljub, J.-P. Vilotte, and J.-P. Montagner, Coupling Spectral Elements and Modal solution: A new efficient tool for numerical wave propagation in laterally Heterogeneous Earth models, *Geophys. J. Int.*, **152**, 34-66, 2003.
78- Gaboret, C., A. Forte, and J.-P. Montagner, The Unique Dynamics of the Pacific Hemisphere Mantle and its Signature on Seismic Anisotropy, *Earth Planet. Sci. Lett.*, **208**, 219-233, 2003.
79- Montagner, J.-P., and L. Guillot, Seismic Anisotropy and global geodynamics, *Min. Soc.Am.*, **51**, 353-385, 2003.
80- Vinnik L., J.-P. Montagner, N. Girardin, I. Dricker, and J. Saul, First measurements of SKS splitting on the oceanic floor at station H2O: A ent, *Geophys. Res. Lett.*, **30(13)**, 1675, 2003.
81- Beucler, E., and J.-P. Montagner, Computation of large anisotropic seismic heterogeneities, *Geophys. J. Int.*, **165**, 447-468, 2006.
82- Bukchin, B., T. Yanovskaya, J.-P. Montagner, A. Mostinskiy, and E. Beucler, Surface wave focusing effect: numerical modeling and observations, *Phys. Earth Planet. Int.* **155** , 191–200, 2006.
83- Larmat C., J.P. Montagner, M. Fink, E. Clévédé, and A. Tourin, Time-reversal Imaging of Seismic Sources- Application to the Sumatra earthquake, *Geophys. Res. Lett.*, **33**, L19312, doi:10.1029/2006GL026336, 2006.
84- Qin, Y., Y. Capdeville, V. Maupin, and J.-P. Montagner, A SPICE blind test to benchmark global tomographic methods, *EOS*, **87**, 46, 512–513, 2006.
85- Sebai, A., E. Stutzmann and J.-P. Montagner, Anisotropic structure of the African upper mantle structure from Rayleigh and Love wave tomography, *Phys. Earth Planet. Int.*, **155**, 48–62, 2006.
86- Silveira, G., E. Stutzmann, A. Davaille, J.-P. Montagner, and L. Mendes-Victor, Azores hotspot signature in the upper mantle, *J. Volc. Geotherm Res.*, **156**, 23-24,2006.
87- Suyehiro, K., J.-P. Montagner, R. Stephen, E. Araki, T. Kanazawa, J. Orcutt, B. Romanowicz, S. Sacks, and M. Shinohara, Ocean Seismic Observatories, *Oceanography*, **19**, 4, 2006.

88- Houlié, N., and J.-P. Montagner, Ultra - Long Period (ULP) precursors events detected at the Piton de la Fournaise volcano (Reunion Island, France), *Earth Planet. Sci. Lett.*, **261**, 1-8, 2007.
89- Montagner, J.-P., Upper mantle Structure: Global isotropic and anisotropic tomography, Treatise on Geophysics, Vol 1 : Seismology and Structure of the Earth (Eds. A.M. Dziewonski, B. Romanowicz), 559-589, 2007.
90- Montagner, J.-P., B. Marty, D. Sicilia, M. Cara, R. Pik, E. Stutzmann, A. Sebai, J.-J. Leveque, G. Roult, E. Beucler, E. Debayle, Mantle upwellings and convective instabilities revealed by seismic tomography and helium isotope geochemistry beneath eastern Africa, *Geophys. Res. Lett.*, **34**, L21303, doi:10.1029/2007GL031098, 2007.
91- Guillot, L., J.-P. Montagner, and F. Guyot, Intrinsic temperature properties and elastic constants of cubic minerals at HP-HT conditions: case of MgO, *Phys. Earth Planet. Int.*, in press, 2007.
92- Kawakatsu, H. and J.-P. Montagner, Time-reversal seismic source imaging and moment tensor inversion, *Geophys. J. Int.*, **175** , 686–688, doi: 10.1111/j1.365-246X.2008.03926.x, 2008.
93- Larmat C., J.P. Montagner, B. Banerdt, P. Lognonné and J.P. Vilotte, Numerical assessment of the effects of topography and crustal thickness on Martian seismograms by using Spectral Elements and Modal solution, *Icarus*, **196**, 78–89, 2008.
94- Larmat, C., J. Tromp, Q. Liu and J.-P. Montagner, Time reversal location of glacial earthquakes, *J. Geophys.Res.*, **113**, B09314, doi:10.1029/2008JB005607, 2008.
95- Montagner J.-P., and G. Roult, Normal Modes of the Earth- Observations from the Giant Sumatra-Andaman Earthquake of 2004, Conference Series, *J. Phys.*, **118**, doi:10.1088/1742-6596/118/1/012004, 2008.
96- Qin, Y., Y. Capdeville, V. Maupin, J.-P. Montagner, S. Lebedev, and E. Beucler, SPICE Benchmark for global tomographic methods, *Geophys. J. Int.*, **175** , 598–616, doi: 10.1111/j1.365-246X.2008.03904.x, 2008.
97- Sicilia, D., J.-P. Montagner, M. Cara, E. Stutzmann, E. Debayle, J.C. Lepine, J.J. Lévêque, E. Beucler, A. Sebai, G. Roult, A. Ayele, J.M. Sholan, Upper Mantle Structure of Shear-wave velocities and Stratification of Anisotropy in the Afar Hotspot region, *Tectonophys.*, doi: 10.1016/j.tecto.2008.02.016, 2008.
98- Montagner, J.-P., V. Clouard, J. Campos, A. Cisternas, M. Gerbault, B. Romanowicz, Earthquakes in subduction zones: a multidisciplinary approach, Special Issue, *Phys. Earth Planet. Int.*, doi: 10.1016/j.pepi.2009.03.001, 2009.
99- Houlié, N., and J.-P. Montagner, Reply to: A comment on 'Hidden dykes detected on Ultra Long Period seismic signals at Piton de la Fournaise volcano ?' by N. Houlié and J.-P. Montagner, EPSL 261, (2007) By Battaglia and Cayol, *Earth Planet. Sci. Lett.*, **287**, 288-291, doi:10.1016/j.epsl.2009.06.023., 2009.
100- Nishida, K., J.-P. Montagner, and H. Kawakatsu, Global Surface wave tomography Using Seismic Hum, *Science*, **326**, 5949, 112, doi:10.1126/science1176389, 2009.
101- Qin, Y., Y. Capdeville, J.-P. Montagner, L. Boschi, and T.W. Becker, Reliability of mantle tomography models assessed by spectral-element simulation, *Geophys. J. Int.*,**177**, 125-144, doi: 10.1111/j1.365-246X.2008.04032.x, 2009.
102- Wüstefeld, A., G. Bokelmann, G. Barruol, and J.-P. Montagner, Identifying global seismic anisotropy patterns by correlating shear-wave splitting and surface wave data, *Phys. Earth Planet. Int.*, **176**, 198-212, doi:10.1016j.pepi.2009.05.006, 2009.
103- Isse, T., H. Shiobara, J.-P. Montagner, H. Sugioka, A. Ito, A. Shito, T. Kanazawa, and K. Yoshizawa, Anisotropic structures of the upper mantle beneath the northern Philippine sea region from Rayleigh and Love wave tomography, *Phys. Earth Planet. Int.*, 183, 33–43, 2010.
104- Obrebski, M., S. Kiselev, L. Vinnik, and J.-P. Montagner, Stratification of seismic anisotropy in the crust and upper mantle beneath Africa from joint inversion of SKS and P

receiver functions, *J. Geophys. Res.*, **115**, B09313, doi:10.1029/2009JB006923, 2010.
105- Roult, G., J.-P. Montagner, B. Romanowicz, M. Cara, D. Rouland, R. Pillet, J.-F. Karczewski, L. Rivera, E. Stutzmann, and A. Maggi,The GEOSCOPE Program: Progress and Challenges during the last 25 years, *Seism. Res. Lett.*, **81, 3**, doi:10.1785/gssrl.81.3.428, 2010.
106- Yao, H., R. van der Hilst, J.-P. Montagner, Heterogeneity and Anisotropy of the Lithosphere of SE Tibet from ambient noise and surface wave array tomography, *J. Geophys. Res.*, **115**, B12307, doi:10.1029/2009JB007142, 2010.
107- Bécel A., M. Laigle, J. Diaz, J.-P. Montagner, A. Hirn, and the 'Thales Was Right' working group, Earth's free oscillations recorded by free–fall OBS ocean–bottom seismometers at the Lesser Antilles subduction zone, *Geophys. Res. Lett.*, **38**, L24305, doi:10.1029/2011GL049533, 2011.
108- Durand S., J.-P. Montagner, P. Roux, F. Brenguier, Y. Ricard and B. Nadeau, Passive monitoring of anisotropy change for the 2004 Parkfield earthquake, *Geophys. Res. Lett.*, **38**, L13303, doi:10.1029/2011GL047875, 2011.
109- Cupillard, P., G. Burgos, G. Festa, E. Delavaud, Y. Capdeville, J.-P. Vilotte, and J.-P. Montagner, RegSEM: a versatile code based on the Spectral Element Method to compute seismic wave propagation at the regional scale, *Geophys. J. Int.*, **188**, 1203-1220, doi: 10.1111/j.1365-246X.2011.05311.x, 2012.
110- Montagner J.-P., P. Roux, F. Brenguier, M. Saade, P. Cupillard, S. Durand, L., Zaccarelli, Monitoring of fractured media by temporal changes of anisotropy using ambient seismic noise, 74th EAGE Conference, Copenhagen, Denmark, extended abstract, 2012.
111- Montagner, J.-P., C. Larmat, M. Fink, Y. Capdeville, H. Nguyen, B. Romanowicz, E. Clévédé, and H. Kawakatsu, Time-reversal Method and cross-correlation techniques by normal-mode theory, *Geophys. J. Int.*, 191, 637-652, 2012.
112-Capdeville Y., E. Stutzmann, N. Wang, J.-P. Montagner, Residual homogenisation for forward and inverse problem for Seismology in layered media, *Geophys. J. Int.*, 194, 1, 470–487, 2013.
113- Drilleau, M., E. Beucler, A. Mocquet, O. Verhoeven, G. Moebs, G. Burgos, J.-P. Montagner, A Bayesian approach to infer radial models of temperature and anisotropy in the transition zone from surface wave dispersion curves, *Geophys. J. Int.*, 195, 2, 1165–1183, 2013.
114-Durand, S., J. Matas, S. Ford, Y. Ricard, B. Romanowicz, J-P. Montagner, Insights from ScS-S measurements on deep mantle attenuation, *Earth Planet. Sci. Lett.*, 374, 101-110, 2013.
115- Mordret, A., N.M. Shapiro, S.C. Singh, P. Roux, J.-P. Montagner, O. I. Barkved, Azimuthal Anisotropy at Valhall: the Helmholtz Equation Approach, *Geophys. Res. Lett.*, doi: 10.1002/grl.50447, 2013. **40, 11**, 2636-2641, doi: 10.1002/grl.50447, 2013.
116- Wang, N., J.-P. Montagner, A. Fichtner, Y. Capdeville, Y., Intrinsic versus extrinsic seismic anisotropy-The 1D-case of the Preliminary Reference Earth Model (PREM), *Geophys. Res. Lett.*, 40, 16, 4284–4288, 2013.
117- Burgos, G., J.-P. Montagner, E. Beucler, Y. Capdeville, M. Drilleau, LAB: Lithosphere - Asthenosphere Boundary, a global map, *J. Geophys. Res.*, 119, 2, 1079–1093, 2014.
118- Ricard, Y., S. Durand, J.-P. Montagner, F. Chambat, Is there attenuation in the mantle? *Earth Planet. Sci. Lett.*, 388, 257–264, 2014.
119- Harms, J., J.-P. Ampuero, M. Barsuglia, E. Chassande-Mottin, J.-P. Montagner, S.N. Somala, B. F. Whiting, Transient gravity perturbations induced by earthquake rupture, *Geophys.J. Int.*, **201, 3**, 1416-1425, 2015.
120- Kawakatsu H., T.-R. Song, J.-P. Montagner, On DLA's η, Special tribute to D.L. Anderson, G.S.A., 514, SPE514-03, 2015.
121- Mansouri, R., A. Maggi, J.-P. Montagner, The aftershock sequence of the Mw 6.3 2010 Rigan earthquake in southeast Iran: further evidence of a hidden fault in the southern Lut Block. *Bull. Seis. Soc. Am.*, 105, 6, 3114–3120, doi: 10.1785/0120150027, 2015.

122- Montagner, J.-P., D.L. Anderson, The megagash in the Pacific Plate, *G.S.A.*, Special tribute Don Anderson, 514, SPE514-10, 2015.
123- Saade M., J.-P. Montagner , P. Roux, P. Cupillard, S. Durand, F. Brenguier, Influence of seismic anisotropy on the cross correlation tensor: numerical tests, *Geophys. J. Int.*, **201**, 595-604, 2015.
124- Wang N., J.-P. Montagner, Y. Capdeville, Intrinsic versus extrinsic seismic anisotropy: Surface wave phase velocity inversion, *C.R. Geoscience*, 347, 2, 66-76, 2015.
125- Zaccarelli, L., P. Cupillard, F. Bianco, J.-P. Montagner, Shear-Wave Splitting on synthetics: 1 measurements interpretation, *Geophys. J. Int.*, submitted, 2014.
126- Larmat, C., P.A. Johnson, J.-P. Montagner, and RA. Guyer, Time reversal applied to seismic data of the Japan earthquake of March 11, 2011, *Bull. Seism. Soc. Am.*, submitted, 2016.
127- Maurya S., J.-P. Montagner, M.R. Kumar, P. Kumar, E. Stutzmann, S. Kiselev, G. Burgos, P.C. Rao, D. Srinagesh, Imaging the Lithospheric Structure beneath the Indian continent, *J. Geophys. Res.*, **121**, doi:10.002/2016JB012948, 2016.
128- Maurya S., J.-P. Montagner, M.R. Kumar, G. Burgos, E. Stutzmann, Deformation of the Indian continent as inferred from the joint inversion of surface wave and SKS data, *J. Geophys. Res.*, in preparation, 2016.
129- Montagner, J.-P., Burgos, G., Drilleau, M., Beucler, E., Capdeville, Y., Mocquet, A., Forte A., Mantle Transition zone boundary layer as revealed from seismic anisotropy, *G-cubed*, to be submitted, 2016.
130- Montagner, J.-P., K. Juhel, M. Barsuglia, J.-P. Ampuero, E. Chassande-Mottin, J. Harms, B. Whiting, P. Bernard, E. Clévédé, P. Lognonné, Prompt gravity signal due to the 2011 Tohoku-Oki earthquake, *Nat. Comm.*, 7, 13349, doi: 10.1038/ncomms13349, 2016.
131- Nita, B., S. Maurya, J.-P. Montagner, Anisotropic tomography of the European lithospheric structure from surface wave studies *G-Cubed*, 17, doi:10.1002/ 2015GC006243, 2016.
132- Sergeant, A., A. Mangeney, E. Stutzmann, F. Walter, J.-P. Montagner, O. Castelnau, L. Moretti, Complex force history of a calving-generated glacial earthquake derived from broadband seismic inversion, *Geophys. Res. Lett.*, 10,1002 2015/GL066785, 2016.
133- Tomar, G., N.M. Shapiro, A. Mordret, S. Singh, J.-P. Montagner, Radial anisotropy in Valhall: ambient noise based studies of Scholte and Love waves, *Geophys. J. Int.*, **208**, 1524-1539, 2016.
134- Alder, C. , T. Bodin, Y. Ricard, Y. Capdeville, E. Debayle, J.P. Montagner, Quantifying extrinsic anisotropy induced by small-scale chemical heterogeneities, *Geophys. J. Int.*, **211**, 1585–1600, 2017.
135- Mazzullo, A., E. Stutzmann, J.-P. Montagner, S. Kiselev, S. Maurya, G. Barruol, K. Sigloch, Anisotropic tomography around La Réunion Island from surface waves, *J. Geophys. Res.*, **122**, 9132-9148, 2017.
136- Saade, M., J.P. Montagner, P. Roux, K. Shiomi, B. Enescu, F. Brenguier, Monitoring of seismic anisotropy at the time of the 1 2008 Iwate-Miyagi earthquake, *Geophys. J. Int.*, **211**, 483-497, doi:10,002 /2015GL066785, 2017.
137- Tomar, G., S. C. Singh, J.-P. Montagner, Sub-sample time shift and horizontal displacement measurements using phase-correlation method in time-lapse seismics, *Geophys. Prosp.*, **65, 2**, 407–425, doi: 10.1111/1365-2478.12422, 2017.
138- Vallée M., J.-P. Ampuero, K. Juhel, P. Bernard, J.-P. Montagner, M. Barsuglia, Observations and modeling of the elasto-gravity signals preceding direct seismic waves, *Science*, **358**, 1164-1168, 2017.
139- Garber J.M., S. Maurya, J.-A. Hernandez, M.S. Duncan, Li Zeng, H. L. Zhang, U. Faul, C. McCammon, J.-P. Montagner, L. Moresi, B.A. Romanowicz, R.L. Rudnick, L. Stixrude,

Multidisciplinary constraints on the abundance of diamond and eclogite in the cratonic, *G-cubed*, **19**, 2062-2086, 2018.
140- Juhel K., J.-P. Montagner, J. P. Ampuero, M. Barsuglia, P. Bernard, E. Clévéd; J. Harms, M. Vallée, B. F. Whiting, Elasto-gravitational perturbations from earthquake with normal mode-based simulations of early elasto-gravitational perturbations induced by earthquake rupture, *Geophys. J. Int.*, **216, 2**, 935–947, 2018.
141- Juhel, J. P. Ampuero, M. Barsuglia, P. Bernard, J. Harms, J.-P. Montagner, M. Vallée, B. F. Whiting, Early earthquake warning using future generation gravity strainmeters, *J. Geophys. Res.*, **123, 12**, 10–889, 2018.
142- Montagner, J.-P., G. Burgos, Lithospheric and asthenospheric structure below oceans from anisotropic tomography, AGU monograph "Lithospheric Discontinuities", 55–69, 2018.
143- Sergeant, A., V. A. Yastrebov, O. Castelnau, A. Mangeney, J.-P. Montagner, E. Stutzmann, Numerical modeling of the iceberg capsizing force responsible for glacial earthquakes, *J. Geophys. Res.*, **123, 11**, 3013–3033, 2018.
144- Scholz J.R., G. Barruol, F.R. Fontaine, A. Mazzullo, J.-P. Montagner, E. Stutzmann, L. Michon, K. Sigloch, SKS splitting in the Western Indian Ocean from land and seafloor seismometers: Plume, plate and ridge signatures, *Earth Planet. Sci. Lett.*, **498**, 169-184, 2018.
145- Tomar G. , E. Stutzmann, A. Mordret, J.-P. Montagner, S.C. Singh, N.M. Shapiro, Joint inversion of the first overtone and fundamental mode for deep imaging at the Valhall oil field using ambient noise, *Geophys. J. Int.*, **214**, 122-132, 2018.
146- Barruol G., K. Sigloch, J.-R. Scholz, A. Mazzullo, E. Stutzmann, J.-P. Montagner, S. Kiselev, F. Fontaine, L. Michon, C. Deplus, J. Dyment, Large-scale flow of Indian Ocean asthenosphere driven by Réunion plume, *Nature Geosc.*, in press, 2019.
147- Saade, M., K. Araragi, J.-P. Montagner, Y. Aoki, E. Kaminski, P. Roux, F. Brenguier, Evidence of reactivation of a hydrothermal system from seismic anisotropy changes, *Nature Com.*,10, 5278, doi:10.1038/s41467-019-13156-8, 2019.
148- Sergeant, A., A. Mangeney, V. Yastrebov, F. Walter, J.-P. Montagner, O. Castelnau, E. Sgtutzmann, P. Bonnet, V. J.-L. Ralaiarisoa, S. Bevan, A. Luckman, Greenland calving volumes from glacial earthquakes]Monitoring Greenland ice-sheet buoyancy-driven calving discharge withusing glacial earthquakes, *Ann. Glaciol.*, in press, 2019.
149- Vallée, M., J.-P. Ampuero, K. Juhel, P. Bernard, J.-P. Montagner, M. Barsuglia, Comment on 'Earthquake-induced prompt gravity signals identified in dense array data in Japan' by Kimura et al., *Earth, Planets and Space*, **71**,1, 51, 2019.
150- Bernard, P., K. Juhel, M. Vallée, J.-P. Montagner, J.-P. Ampuero, M. Barsuglia, Contribution to the analytical modeling of prompt gravity signals from seismic sources, *Geophys. J. Int.*, submitted, 2020.

Books or chapters of books
1- Montagner, J.-P., Sismologie- La Musique de la Terre, Coll. Les Fondamentaux, Hachette, 156pp., 1997.
2- Gillet P., and Montagner, J.-P., La Géophysique des milieux extrêmes, Numéro spécial I.U.F., (ouvrage collectif), *Bull. Soc. Geol. Fr.*, **170**, 1999.
3- Fink, M., Kuperman, W., J.-P. Montagner, and A. Tourin Imaging of Complex Media with Acoustic and Seismic Waves, Springer, Berlin, 338pp., 2002.
4- Montagner, J.-P., Himalaya- Tibet, Le choc des Continents, La Terre: Une gigantesque machine thermique,CNRS Editions, Chap. 1, 12-19, 2002.
5- Montagner, J.-P., Upper mantle Structure: Global isotropic and anisotropic tomography, Treatise on Geophysics, Vol 1 : Seismology and Structure of the Earth (Eds. A.M. Dziewonski, B. Romanowicz), 559-589, 2007.

6- Grappin, C., P. Cardin, B. Goffé, L. Jolivet & J.-P. Montagner, (ouvrage collectif), Terre Planète Mystérieuse, AIPT, Ed Cherche-Midi, 2008.
7- Montagner, J.P., Imager la Terre pour mieux l'imaginer, AIPT-"Terre, Planète Mystérieuse", Ed Cherche-Midi, 101-106, 2008.
8- Montagner, J.-P., Global Structure of the Earth, Encyclopedia of Solid Earth Geophysics, Ed. H. Gupta, Springer, 144-154, 2011.
9- Montagner, J.-P., Upper mantle Structure: Global isotropic and anisotropic tomography, Treatise on Geophysics, Vol 1 : Seismology and Structure of the Earth (Eds. A.M. Dziewonski, B. Romanowicz), 2nd edition, 2015.
10- Bodin, T., Y. Capdeville, B. Romanowicz, & J.-P. Montagner, Interpreting Radial Anisotropy in Full-Waveform Tomographic Models, in "The Earth's Heterogeneous Mantle", Springer, 105-144, 2015.
11- Montagner, J.-P., D. Mainprice, Anisotropic Seismology, Cambridge University Press, to be published in 2020.
12- Montagner, J.-P., Global Structure of the Earth, Encyclopedia of Solid Earth Geophysics, Ed. H. Gupta, Springer, in Press, 2020.
13- Montagner, J.-P., & A. Mangeney, Seismology and Environment, Encyclopedia of Solid Earth Geophysics, Ed. H. Gupta, Springer, in Press, 2020.

Other publications (Popular journals, No peer reviewed papers)
1- Cazenave A. and J.P. Montagner, Noyau et Manteau. Introduction, *Courrier du C.N.R.S.*, **76,** 9-11, 1990.
2- Montagner J.P. and B. Romanowicz, Le Scanner de la Terre: la tomographie sismique, *Courrier du C.N.R.S.*, **76,** 13-15, 1990.
3- Montagner, J.P., and B. Romanowicz, Hétérogénéités du manteau - Réseau GEOSCOPE. *Rapport quadriennal, C.N.F.G.G., 49-63,* 1991.
4- Montagner, J.P., J.F. Karczewski, L. Floury, and P. Tarits, Towards a geophysical ocean bottom observatory, *Seismic Waves*, **3**, 7-9, 1994.
5- Roult, G., and J.P. Montagner, The Geoscope Program, in the "1994 status Report of the Federation of Digital Seismographic Networks", *Annali di Geofisica* , **27**, 1054-1059, 1994.
6- Montagner, J.P., "Observatoires Polyvalents sur le fond de la Mer", *ODP-France Information*, **11**, 6, 1995.
7- Montagner, J.-P., and Y. Lancelot, Editors of Proceedings, 230pp., ION/ODP Workshop "Multidisciplinary Observatories on the deep sea floor", Marseilles, Jan 1995. 17-27, 1995.
8- Cacho, S., J.F. Karczewski, J.-P. Montagner, P. Lognonne, M. Morand, and R. Beauduin, Which Broadband seismometer in Ocean Bottom Observatory? Preliminary results of simultaneous of seismic signals using STS-1, STS-2, CMG-3 during May 1993 at St-Sauveur (France), Proc. ION/ODP Workshop"Multidisciplinary Observatories on the deep sea floor", Marseilles, Jan 1995, 82-87, 1995.
9- Montagner, J.-P., and B. Romanowicz, Global Seismology, Proc. ION/ODP Workshop "Multidisciplinary Observatories on the deep sea floor", Marseilles, Jan 1995, 17-27, 1995.
10- Montagner, J.-P., and G. Roult, The GEOSCOPE Program and its data center, Orfeus News., 1998.
11- Montagner, J.-P., Tomographie des objets géologiques à toutes les échelles, Numéro spécial, Symposium I.U.F., Lyon, Oct. 97, *Bull. Soc. Geol. Fr.*, **170**, 1999.
12- Montagner, J.-P., La Tomographie de la Terre, Entretiens de la Physique, S.F.P., EDPsciences, 45-67, 1998.
13- Montagner, J.-P., Une Planète bien turbulente, Revue du Palais de la Découverte, RST 2000,, **277**, 28-37, 2000.

14- Silveira G., S. vander Lee, E. Stutzmann, L. Matias, D. James, P. Burkett, M. MIranda, L. Mendes-Victor, J.L. Gaspar, L. Senos, S. Solomon, J.-P. Montagner, D. Giardini, Coordinated Seismic experiment in Azores, *Orfeus Electronic Newsletter*, **4, 2**, 2002.
15- Montagner, J.-P., Les panaches mantelliques: des chalumeaux mythiques, *Pour la Science*, Décembre 2004.
16- Montagner, J.-P., La Terre, une gigantesque machine thermique, Quels Acquis pour demain? Muséum National d'Histoire Naturelle, in **Muséums en Rénovation**, Les Editions du Muséum,pp 73–89, 2005.
17- Montagner, J.-P., Numéro Spécial ORE (Observatoires de Recherche en Environnement), Editorial, Lettre du Changement Global, **18**, 1-6, 2005.
18- Montagner, J.-P., Les limites de l'exploration de la Terre Profonde, *Pour la Science*, **370**, Août 2008.
19- Montagner, J.-P., Les panaches: mythe ou réalité, *Pour la Science*, Numéro Spécial "La Terre à coeur Ouvert", 2010.
20- Montagner, J.-P., P. Roux, F. Brenguier, S. Durand, P. Cupillard, L. Zaccarelli, and M. Saade, Monitoring of fractured media by temporal changes of anisotropy using ambient seismic noise, EAGE, Copenhagen, extended abstract, 2012.
21-Tomar G., N.M. Shapiro, A. Mordret, S. Singh and J.-P. Montagner, Noise-based seismic tomography at the Valhall oil field with using Scholte and Love waves, EAGE, Madrid, extended abstract, 2015.
22-Tomar G., N.M. Shapiro, S. Singh, J.-P. Montagner, and A. Mordret, Radial anisotropy in Valhall from ambient noise surface wave tomography of Scholte and Love wave, SEG, extended abstract, 2342–2347, 2015.
23- Tomar G., N.M. Shapiro, A. Mordret, S. Singh and J.-P. Montagner, 3D and 4D imaging using a non-destructive ambient noise seismic interferometry, EAGE, Madrid, extended abstract, 2015.

PhD Student Advisory

Antoine Mocquet (1986-1989): Structure profonde de l'Océan Atlantique à partir des données GEOSCOPE (Director: Barbara Romanowicz, training and monitoring). Professor University Nantes.
Ouiza Hadiouche (1986-1990): Structure profonde de l'Afrique à partir des ondes de surface (Director: Nelly Jobert, training and monitoring). CRAAG, Alger, décédée
Laurence Bourjot (1987-1991): Tomographie du Tibet à partir des ondes de surface (Director: Barbara Romanowicz, training and monitoring). Entreprise Bourjot Environnement, Aix-les-Bains.
1-Eleonore Stutzmann (1990-1993): Extraction des modes harmoniques des ondes de surface. Tomographie de la zone de transition à partir des données GEOSCOPE. Physicist IPGP.
2-Eric Clévédé (1991-1994): Etude des modes normaux d'une terre bourrée d'a prioris. (co-direction Philippe Lognonné). CNRS scientist
3-Jean-Louis Thirot (1991-1995): Dynamique du manteau à partir des données GEOSCOPE et des anomalies géochimiques. Engineer CNRS.
4-Martine Bussy (1988-1993) Tomographie anélastique du manteau supérieur sous l'Océan Pacifique à partir des données GEOSCOPE. Soutenance en Juillet 93 (co-direction Barbara Romanowicz, U.C. Berkeley). Professor High school.
5-Raoul Beauduin (1993-1996): Etude du bruit de fond sismique en milieu continental et océanique. Interprétation des données de l'expérience SISMOBS/OFM. Engineer OPERA Pau.
6-Stéphane Cacho (1993-1998) Mise au point d'un sismométre triaxial (co-direction Philippe Lognonné). Engineer Diagnostica Stago (Directeur R&D), Gennevilliers, France.

7-Karine Gouget (1993-1997) Inversion de la source sismique à partir des données GEOSCOPE. Engineer CGG, ATOS.
8-Daphné-Anne Griot (1993-1998): Tomographie anisotrope de l'Asie centrale. (Co-Direction avec Paul Tapponnier, IPG Paris). Engineer IRSN, Hémispheres.
9-Sébastien Chevrot (1995-1998): Les hétérogéeités dans le manteau à toutes les échelles. CNRS scientist Toulouse.
10-Yann Capdeville (1996-2000): Méthode couplée Elements spectraux- Modes. CNRS scientist Nantes.
11- Jean Battaglia (1997-2001): Déformations à courtes et longues périodes à la Réunion-Broadband seismology on volcanoes (Co-direction Kei Aki). CNRS scientist Clermont-Ferrand.
12-Christophe Gaboret (1997-2002): Anisotropie sismique et géodynamique (co-direction Alessandro Forte). Research Engineer CNRS Paris XI.
13-Eric Beucler (1998-2002): Tomographie du manteau à partir de l'inversion conjointe des ondes de volume et des modes harmoniques. Assistant Professor, Univ. Nantes.
14-Laurent Guillot (1999-2004). Seismic tomography and mineral physics. researcher CEA-DASE, Bruyères-le-Chatel.
15-Sébastien Rousset (2000-abandon). Modélisation de la structure à grande échelle du manteau à partir d'ondes à basse fréquence. (co-tutelle with UC Berkeley- Barbara Romanowicz). Professor High School.
16-Amal Sebai (1998-2002): Compréhension du bruit de fond sismique (co-direction avec Eléonore Stutzmann). Researcher CRAAG, Alger.
17-Deborah Sicilia (1999-2003): Structure profonde des panaches mantelliques sous la Corne de l'Afrique. Engineer EDF, Aix-en-Provence.
18-Carène Larmat (2000-2004): Application de la Méthode des éléments spectraux à la Sismologie (Co-direction Jean-Pierre Vilotte). researcher at Los Alamos National Laboratory, USA.
19-Yilong Qin (2003-2007) Spectral element method- Benchmark of tomographic models (co-direction Yann Capdeville). Engineer Tetrale, Calgary, Canada.
20-Phung Huong-Nguyen (2006-2010) Time-reversal Imaging of environmental sources. Assistant professor, Hanoi, Vietnam.
21-Paul Cupillard (2005-2008): Regional Spectral Element Method (co-direction Yann Capdeville). Assistant professor, Geol. Nancy.
22-Aurélie Guilhem (2007-2012). Analysis of unusual earthquake and tremor seismicity at the Mendocino Triple Junction and Parkfield, California (Co-tutelle, co-director Doug Dreger, UC Berkeley). scientist CEA, DASE, Bruyères-le-Chatel.
23-Gael Burgos (2009-2013): Tomographie globale du manteau terrestre. Post-Doc CEA, France
24-Stéphanie Durand (2009-2012). Attenuation of the Earth (co-direction Yanick Ricard, ENS Lyon). Post-doc ENS Lyon.
25-Nian Wang (2010-2014). Separation Intrinsic- Extrinsic anisotropy (co-direction Yann Capdeville, Univ. Nantes, ITN QUEST fellowship). Post-Doc WHOI, USA.
26-Reza Mansouri (2011-2015). Time-reversal imaging of seismic sources (co-tutelle University of Tehran, Iran).
27-Maria Saadé (2012-2016) Seismic monitoring of seismogenic zones (co-direction Philippe Roux, Univ. Grenoble)- Research Scientist Sixense.
28-Amandine Sergeant-Boy (2013-2016) Seismic investigation of glacial earthquakes (co-direction Anne Mangeney, DGA fellowship)
29-Gaurav Tomar (2012-2016) 4D-imaging of reservoirs (co-direction Satish Singh, fellowship Pg CO2)
30-Satish Maurya (2012-2016). Deep structure of the Indian continent (fellowship CEFIPRA).

31-Alessandro Mazzullo (2013-2017) RHUM-RUM project (co-direction Eleonore Stutzmann, MESR fellowship).
32-Daxin Yu (2013-2016). Seismic tomography of N.E.China, co-tutelle (Prof. Wu, CEA, Beijing, China). Post-Doc Wuhan, China.
33-Kevin Juhel (2014-2017). Prompt detection of earthquakes through their gravitational signature (co-direction Matteo Barsuglia, APC, Paris-Diderot) (USPC fellowship).
34-Mathurin Wamba (2016-2020). Full waveform inversion of the RHUM-RUM seismic data (co-direction Barbara Romanowicz) (USPC fellowship).
35-Olga Barentseva (2018- ...). Deep structure of the Slave craton from the joint inversion of receiver functions and surface waves (co-advisor with Peter Engesgaard, Un. Copenhagen).

Master Student Advisory - M2 Research

-Maria Saade (2012) Temporal variations of seismic anisotropy in seismogenic zones: numerical modeling.
-Kevin Juhel (2014) Détection des tremblements de Terre par leurs anomalies gravimétriques - Cas du séisme de Tohoku (Japon, 11 mars 2011).
-Claude el-Tannoury (2015) Tomographie du Groenland à partir du bruit sismique
-Mathurin Wamba (2016) Anisotropic Tomography of the Indian Ocean by waveform inversion.

Post-Doc

-Fred Pollitz (CNRS/IPGP support) 1992-1993
-Ylong Qin (European project) 2007-2008
-Murat Erduran (NERIES Programme) 6months 2008
-Blanka Nita (Marie Curie fellowship) 2012-2014
-Kevin Juhel, ANR- LABEX support 2018-2019

Every year, many participations or interviews on TV (TF1, Antenne2, M6, FR3, i-télé, BFM-TV, RFO ...) or radio broadcast (Europe 1, France Inter, RFI, RFO, France Culture, RTL, Nostalgie,...)