

Raphaël Grandin

Maître de Conférences HDR, Institut de Physique du Globe de Paris (IPGP), Université de Paris (UP)

Area of specialization : Space Geodesy and Remote Sensing applied to Active Tectonics and Volcanism

Born 22 August 1982, Sèvres, France

Nationality French

Marital status Married

Family 2 children (born 2011 & 2016)

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Academic positions

2012-today	Associate Professor (<i>Maître de Conférences</i>)	Institut de Physique du Globe de Paris (IPGP) Université de Paris (UP)
2010-2012	CNES Post-doctoral Research Fellow (<i>Post-doctorant CNES</i>)	École Normale Supérieure de Paris (ENS) Centre National d'Études Spatiales (CNES)
2009-2010	Teaching Assistant (<i>Attaché Temporaire d'Enseignement et de Recherche</i>)	Université Paris Diderot

Education

2019	Habilitation to Supervise Research (<i>Habilitation à Diriger des Recherches</i>), awarded in December 2019. Dissertation: “ <i>From the earthquake source to seismic hazard: contribution of space geodesy</i> ”.
2006-2009	PhD in Geophysics, Institut de Physique du Globe de Paris, awarded in December 2009. Dissertation: “ <i>Insights into magmatic rifting processes from space geodesy: 2005-2009 Afar rifting episode</i> ”. Supervisor : Dr. Geoffrey C. P. King. Co-supervisor : Dr. Anne Socquet.
2002-2005	General Engineering Degree, École des Mines de Paris (<i>Ingénieur Civil des Mines</i>), awarded in July 2005. Specialization in Earth Sciences and Environment. Second year project carried out at University of Strathclyde (Glasgow, UK). Final year project carried out at IPGP. Dissertation: “ <i>Testing the Accelerating Moment Release hypothesis in Greece</i> ”. Supervisor : Dr. Geoffrey C. P. King.

Fellowships & Scholarships

2010-2012	Post-doctoral Research Fellowship (2 years), Centre National d'Études Spatiales (CNES)
2006-2009	PhD Fellowship (3 years), Ministry of Higher Education and Research (France)
2005-2006	Masters Research Fellowship (1 year), Fundação para a Ciência e a Tecnologia (Portugal)

Awards and Recognition of Scientific Excellence

2019	American Geophysical Union (AGU) Geodesy Section “John Wahr Early Career Award”.
2019	Prime d'Encadrement Doctoral et de Recherche (4 years)
2010	“Best 2009 PhD thesis” (ex-æquo) awarded by Comité National Français de Géologie (CNFG). Prize: 2300€.

Scientific Responsibilities

2021-today	Member of the Steering Committee of SNO “ISDeform” ISDeform (“Imagerie Satellitaire pour la Déformation”) is a new national service of observation (SNO) created in 2021.
2019	Member of the Scientific Committee “ REVOSIMA ” (scientific and operational response to volcano-seismic unrest in Mayotte)
2021-today	Member of the Executive Board of “ ForM@Ter ” ForM@Ter is the French national data center for Solid Earth Science. It is part of the national strategy for the management of scientific data led by the Centre National de la Recherche Scientifique (CNRS) and implemented by Institut National des Sciences de l'Univers (INSU).

Editors' citations for excellence in refereeing

Earth, Planets and Space (for 2015), *Journal of Geophysical Research – Solid Earth* (for 2013), *Geophysical Research Letters* (for 2012)

Research grants (as principal investigator)

2017-2018	Institut National des Sciences de l'Univers (INSU)	"Tracking topographic changes at Ibu volcano (Indonesia) using spaceborne radar imagery: insights into mechanisms of volcanic dome growth"	3 k€
2017-2019	IPGP internal call	"A prototype platform for near-real-time monitoring of deformation in the Lesser Antilles arc using Sentinel-1 InSAR data"	15 k€
2015-2017	Programme National de Télédétection Spatiale (PNTS)	"Development of a pre-processor for Sentinel-1 InSAR data"	29 k€
2012-2014	Université Paris Diderot	"Seismic cycle in the Himalaya and Chile convergence belts: insights from InSAR observations"	7 k€
2010-2012	Institut National des Sciences de l'Univers (INSU)	"Joint geodetic-seismological study of interseismic strain accumulation across the Himalaya"	18 k€

Other research projects

since 2010	ESA, DLR, JAXA, ASI, CNES, CSA	>10 research projects	as PI or co-I, access to satellite imagery (SAR and optical)
2019-2022	Agence Nationale de la Recherche	DISRUPT project	as co-I, PI: Y. Klinger (IPGP)
2019-2022	Agence Nationale de la Recherche	SLOWDEF project	as co-I, PI: M. Simoes (IPGP)
2012-2016	Agence Nationale de la Recherche	BhutaNepal project	as co-I, PI: R. Cattin (Geosci. Montpellier)
2012-2016	Agence Nationale de la Recherche	MEGA-Chile project	as co-I, PI: C. Vigny (ENS Paris)
2009-2013	Agence Nationale de la Recherche	EFIDIR project	as co-I, PI: E. Trouvé (LISTIC Annecy)
2009-2013	Agence Nationale de la Recherche	DoRA project	as co-I, PI: C. Doubre (IPG Strasbourg)

Supervisory experience

2020-2023	Louis-Marie Gauer (PhD)	"Estimating recent glacier melt in the Southern Hemisphere from satellite gravimetry and SAR interferometry."	Funding: MESRI. Co-director K. Chanard.
2020-2023	Roland Akiki (PhD)	"Local time and space estimation of small movements of permanent scatterers by SAR interferometry"	Funding: CIFRE. Director: J.M. Morel, ENS Saclay
2018-2020	Francisco Delgado (CNES Post-doc)	"Transient episodes of magma injection in silicic volcanoes: assessing the stress state in shallow magma reservoirs"	Funding: CNES. Now Asst. Prof. at Univ. de Chile
2017-2020	Tara L. Shreve (PhD)	"Crustal deformation at Ambrym imaged with satellite geodesy: constraints on magma storage, migration, and outgassing"	Co-director: J.C. Komorowski. Now post-doc at Carnegie Sc.
2016-2019	Benjamin Lauer (PhD)	"Joint inversion of high-resolution InSAR, SAR and optical image correlation for the Mw7.7 Balochistan September 2013 earthquake"	Funding: MESRI. Director: Y. Klinger. Now with Earthcube .
2014-2015	Delphine Smittarello (MSc)	"Re-interpretation of the post-1978 transient deformation episode in the Asal Rift, Djibouti"	Now post-doc at ECGS (Luxembourg)

Academic Service

RESPONSIBILITIES

2017-2021	Head of the Geophysics – Solid Earth Masters training program of IPGP.
since 2012	Maître de Conférences (equivalent to a US 2-2 course load).

COURSES TAUGHT

since 2012	Space Geodesy and Remote Sensing of Earth's Surface Deformation, Masters level (3 credits)
since 2014	Mathematics, Bachelor level (3 credits)
since 2012	Solid Mechanics and Electromagnetics, Bachelor level (3 credits)