

CURRICULUM VITAE
PIETER A. VAN DER BEEK
Professor

Institut des Sciences de la Terre
Observatoire des Sciences de l'Univers de Grenoble
Université Grenoble Alpes
CS 40700
38058 Grenoble Cedex 9
FRANCE

phone: +33 4 76 51 40 62

fax: +33 4 76 51 40 58

e-mail: peter.van-der-beek@univ-grenoble-alpes.fr

PERSONAL:

Date and place of Birth: 24 May 1967 at Voorburg, the Netherlands

Nationality: Dutch

RESEARCH INTERESTS:

Tectonic and climatic controls on relief and erosion rates; numerical modelling of erosional processes; long-term landscape development; quantifying exhumation and erosion histories using low-temperature thermochronology and cosmogenic nuclides.

PROFESSIONAL EXPERIENCE:

- 2018-2019 Alexander von Humboldt visiting research fellow, Universität Potsdam, Germany
- 2015-2020 Senior Member of the *Institut Universitaire de France**
- 2011 Visiting Fellow, CIRES, University of Colorado, Boulder, USA
- 2006- Full Professor, Université Joseph Fourier (now Université Grenoble Alpes), Grenoble, France
- 2005-2010 Junior Member of the *Institut Universitaire de France**
- 2003 *Habilitation à Diriger des Recherches*
- 2001-2002 Part-time appointment as research fellow at the *Centre National de Recherche Scientifique* (CNRS)
- 1998-2006 Assistant Professor (Maître de Conférences), Université Joseph Fourier, Grenoble, France
- 1995-1997 Post-doctoral Research Fellow, Research School of Earth Sciences, Australian National University, Canberra Australia
- 1991-1995 Research Assistant, *Vrije Universiteit* Amsterdam, the Netherlands
-

* Membership of the *Institut Universitaire de France* is attributed in recognition of research excellence in sciences, arts or humanities to up to 40 senior members and up to 70 junior members each year. Membership (for a 5-year period) entails a reduction in teaching load and allocated research funding.

EDUCATION:

- 1991-1995 **PhD in Earth Sciences**, *Vrije Universiteit*, Amsterdam, the Netherlands.
Thesis title: “Tectonic evolution of continental rifts: Inferences from numerical modelling and fission-track thermochronology”.
- 1985-1990: **MSc in Earth Sciences**, *Vrije Universiteit*, Amsterdam, the Netherlands.

SCIENTIFIC OUTPUT

- 120 publications (+4 in press); 1 textbook (WoS 25/11/2017: 2975 citations, H-index 33 – Scopus 25/11/2017: 3404 citations, H-index 38).
- 65 presentations in international conferences (25 invited/keynotes); 53 invited seminars (Europe, USA, Canada, Australia, Venezuela, Brazil, Peru, China, India)

CURRENT/RECENT RESEARCH FUNDING:

- **Humboldt Research Award**, Alexander von Humboldt Foundation, Germany; for developing collaboration with the University of Potsdam; 2018-2019; 60 k€ (sole recipient).
- **Coupling Lithosphere Deformation with Surface Processes and Stratigraphy (COLORS)**: consortium of 5 European Earth-Science departments and the TOTAL energy company; 2016-2020; Total budget 6 M€ (Grenoble budget 580 k€); PI.
- **Deciphering the tectonic and climatic controls on erosion rates and relief development**: Institut Universitaire de France; 2016-2020; 60 k€ (sole recipient).
- **Investigating Tectonic-Erosion-Climate Couplings in the Himalaya (iTECC)**: European Commission FP7 Initial Training Network (10 full partner institutes; 12 associate partners); 2013-2017; Total budget 4 M€ (Grenoble budget 773 k€); PI.
- **Apatite (U-Th)/He thermochronology: understanding diffusion behavior using multidisciplinary approaches (HeDiff)**: Agence Nationale de la Recherche (4 French partner institutes); 2012-2016; Total budget 400 k€ (Grenoble budget 38 k€); PI.
- **Evolution of Himalayan topography: control of the Main Himalayan Thrust versus climatic controls**: Institut National des Sciences de l’Univers (INSU-CNRS); 25 k€; Project Leader.
- **Erosion and Relief development in the western Alps (ERD-Alps)**: Agence Nationale de la Recherche (4 French partner institutes); 2008-2013; Total budget 540 k€ (Grenoble budget 217 k€); Project Leader.
- **Coupled climatic/tectonic forcing of European topography revealed through thermochronometry (Thermo-Europe)**: European Science Foundation Eurocores *Topo-Europe* programme (8 European partner institutes); 2008-2012; Total budget 1.7 M€ (Grenoble budget 173 k€); Project Leader.
- **Spatial and temporal coupling between tectonics and surface processes during lithosphere inversion of the Pyrenean-Cantabrian mountain belt (Pyrtec)**: European Science Foundation Eurocores *Topo-Europe* programme (5 European partner institutes); 2008-2012; Total budget 1,4 M€ (Grenoble budget 106 k€); PI.
- **Toward a new generation of landscape evolution models**: Collaborative Institute for Research in the Environmental Sciences (CIRES), University of Colorado, Visiting Fellowship; 2011; 20 k\$ (sole recipient).
- **Relief development in the Western Alps (France, Switzerland) in response to Quaternary glaciations assessed through high-resolution $^4\text{He}/^3\text{He}$ thermochronology**: France-Berkeley Fund; 2010; 10 k\$; Project co-leader.

POST-DOCS ADVISED:

1. *Magdalena (Maggie) Curry* (2017-): Coevolution of compressional tectonics and topography: the Pyrenean Orogen; funded by TOTAL COLORS consortium.
2. *Christoph Glotzbach* (2008-2010): Topographic evolution of the European Alps in the Neogene, forced by coupled climatic/tectonic processes; funded by *Centre National de la Recherche Scientifique* (CNRS). Currently Research Scientist at Eberhard Karls Universität Tübingen (Germany).
3. *Claire Perry* (2007-2008): Modeling detrital thermochronology data using *Pecube*; funded by *Agence Nationale de la Recherche* (ANR). Currently Research Scientist at Natural Resources Canada and Adjunct Research Associate Professor at Indiana University.
4. *Matthias Bernet* (2004-2006): Exhumation history of the Nepal Himalaya from detrital thermochronology of Siwalik sediments; funded by European Commission *Marie Curie* fellowship. Currently Associate Professor at Université Grenoble Alpes.

PHD STUDENTS ADVISED:

1. *Zakaria Ghazoui* (2013-): Tectonic vs. climatic control on Quaternary – Recent erosion and exhumation rates in the central Himalaya (iTECC).
2. *Lorenzo Gemignani* (2013-2018); co-advisor (30%) with J. Wijbrans (VU Amsterdam) and Y. Najman (U. Lancaster): Extracting erosion and exhumation patterns from detrital thermochronology: an example from the eastern Himalaya (iTECC). Currently post-doc at University of Torino (Italy).
3. *Natalie Vögeli* (2013-2016); co-advisor (50%) with P. Huyghe (Grenoble) and Y. Najman (U. Lancaster): The influence of climate on the sedimentary record in the Himalaya (iTECC). Currently in search of employment.
4. *Margaux Mouchéné* (2012-2016); co-advisor (70%) with F. Mouthereau, Université Toulouse (France): Development and fluvial incision of the Miocene Lannemazan Megafan, northern Pyrenean foreland. Currently post-doctoral researcher at University of Colorado, Boulder, USA.
5. *Rachel Abrahami* (2011-2015); co-advisor (50%) with Pascale Huyghe: Controls on the evolution of fluvial megafans in the central/eastern Himalaya. Currently post-doctoral researcher at the Universidad de Santiago, Chile.
6. *Zoltan Erdős* (2010-2014); co-advisor (20%) with R. Huismans, University of Bergen (Norway): Coupled surface process and tectonic modelling of extension-inversion tectonics in the Pyrenees. Currently post-doctoral researcher at Eötvös University, Budapest, Hungary.
7. *Jonathan Mercier* (2010-2014); co-advisor (50%) with Jean Braun: Structure and dynamics of orogenic wedges: a multidisciplinary approach to the Himalayan case study. Currently at the Centre Géologique de l'Oisans, Bourg d'Oisans, France.
8. *Charlotte Fillon* (2008-2012); co-advisor (70%) with R. Huismans, University of Bergen (Norway): Spatial and temporal variations in Cenozoic exhumation of the Pyrenean-Cantabrian mountain belt. Currently with TOTAL Research & Development, Pau, France.
9. *Pierre Valla* (2007-2011): Numerical modeling of relief development in response to Quaternary glaciation in the western Alps. Currently CNRS researcher, Grenoble, France.
10. *Thibaud Simon-Labric* (2006-2010); co-advisor (50%) with C. Teyssier, University of Lausanne / University of Minneapolis: Thermal, tectonic and erosional controls on thermochronology data from magmatic arcs – Cascades range and Central America (joint PhD University of Lausanne / University of Grenoble). Currently director of Centre Géologique de l'Oisans, Bourg d'Oisans, France.
11. *Romain Delunel* (2006-2010): Relief development following rapid (glacial-interglacial) climate change: the external crystalline massifs of the western Alps. Currently post-doctoral fellow at the University of Berne, Switzerland.
12. *Romain Beucher* (2006-2009); co-advisor (30%) with P. Tricart: Neogene Evolution of the southwestern Alps (French-Italian border): An integrated seismotectonic and thermochronological approach. Currently post-doctoral fellow at the University of Melbourne, Australia.

13. *Mauricio Bermudez* (2006-2009); co-advisor (50%) with M. Bernet: Cenozoic exhumation patterns across the Venezuelan Andes: insights from fission-track thermochronology. Currently lecturer at Universidad Central de Venezuela, Caracas, Venezuela.
 14. *Jérémie van Melle* (2005-2008); co-advisor (50 %) with A. Pêcher: Crustal exhumation and morphological variability in the northwestern Himalaya: post-5 Ma structural and thermochronological history. Currently with KAENA Consulting, St. Vincent de Mercuze, France.
 15. *Xavier Robert* (2005-2008): Role of erosion in the fault activation sequence and dynamics of the frontal Himalayan prism; an approach using thermochronology and numerical modelling. Currently Researcher at the Institut de Recherche pour le Développement, Lima, Peru.
 16. *Antoine Vernon* (2004-2008); co-advisor (50 %) with Hugh Sinclair, University of Edinburgh (UK): Pliocene exhumation of the European Alps: differentiation of climatic versus tectonic controls (joint PhD University of Edinburgh / University of Grenoble). Currently with Shell Exploration & Production, Houston, TX, USA.
 17. *Benham Oveisi* (2003-2007); co-advisor (50 %) with J. Lavé: Differential uplift and river incision in the Zagros folded belt, Iran. Currently head of seismotectonics group at the Geological Survey of Iran, Tehran.
 18. *Bénédicte Champel-Duffait* (2000-2004): Along-strike tectonic variation in the Himalayan orogen; a link with along-strike climatic variation? A numerical modeling study. Currently at the Commissariat pour l'Energie Atomique et Alternative (CEA), Grenoble.
 19. *Gilles Brocard* (1998-2002): calibration of fluvial transport laws and time-scales of fluvial incision from an analysis of western Alpine rivers, SE France. Currently Research Fellow at the University of Sydney, Australia.
- Advisor for 14 MSc. and 12 undergraduate projects (since 1998).

SYNERGISTIC ACTIVITIES:

- Editor-in-Chief for *Basin Research* (2008-2014) (IF 3.46; ISI rating 23/173 Geosciences Multidisciplinary in 2014);
- Member of the editorial board for *Earth Surface Dynamics* (2016-); Associate editor for *Tectonics* (2018-);
- President of the European Geosciences Union (EGU) Geomorphology division (2015-2019); member of EGU Council and Topical Events Committee.
- President of the International Association of Geomorphology (IAG) working group on Tectonic Geomorphology (2017-);
- President of the organising committee of the 14th International Conference on Thermochronology, Chamonix-Mt. Blanc, France, September 2014.
- Member of the organising committee of the 2016 Himalayan-Karakorum-Tibet Workshop (HKT), Aussois, France, May 2016.
- External examiner for numerous PhD and HDR theses (France, Sweden, UK, Netherlands, Spain, Germany, Italy, Australia, India).

NATIONAL COMMISSIONS OF TRUST:

- Member of the INSU-CNRS national panel on research infrastructures in geochemistry (RéGEF); representing the thermochronology community (2015-).
- Member of HCERES departmental review panel for CRPG Nancy (2016), IDES Orsay (2009);
- Member of the INSU-CNRS *Reliefs de la Terre* scientific programme committee (2004-2008);

LOCAL RESPONSIBILITIES:

- President of the Habilitation Committee and president of the Council of the Graduate School in Earth, Planetary and Environmental Sciences, *Université Grenoble Alpes* (2017-).
- In charge of the Master's Programme in Earth and Environmental Sciences at *Université Grenoble Alpes* (2012-);
- Adjunct Director (Director of Studies) of the *Observatoire des Sciences de l'Univers de Grenoble* (2013-2015);
- Adjunct Director of the *Laboratoire de Géodynamique des Chaînes Alpines* (2007-2010) and the ensuing *Institut des Sciences de la Terre* (2011-2012);
- Representative for the Earth and Environmental Sciences in the Undergraduate Council of *Université Joseph Fourier*, Grenoble (2002-2006);

TEACHING:

- Since 1998 Earth Sciences at Université Joseph Fourier / Université Grenoble Alpes, Grenoble:
- General Geology / Earth System Science (Bachelors);
 - Geomorphology, structural analysis, mapping (Bachelors);
 - Tectonophysics, Cartography and Remote sensing, Basin Analysis, Earth Systems, Dynamics of Mountain Belts, Lithosphere Dynamics, Earth Surface Dynamics, (Master);
 - Field camps and field trips at undergraduate and graduate level (tectonics / structural geology / geomorphology / active tectonics).
 - Postgraduate courses and seminars in tectonics/surface processes interaction and thermochronology.
- 2012-2013 International Alpine Field Course, organized with Università Milano Bicocca and ETH Zürich, open to international students.
- 2016 International Field Course Pyrenees, organized with Universitat de Barcelona and Université de Toulouse
- 2017 International Field Course Turkey, organized with Universität Potsdam and Istanbul Technical University
- 1991-1995 Instructor, 1st year field trips (mapping, structural and sedimentary geology), southern Spain; 3rd year basin analysis practical classes (backstripping, forward modeling of basin subsidence).

PROFESSIONAL MEMBERSHIPS / HONORS AND AWARDS:

- Alexander von Humboldt Research Prize (2017)
- Senior member of the Institut Universitaire de France (2015-)
- European Geosciences Union Ralph Alger Bagnold Medal 2014
- Junior member of the Institut Universitaire de France (2005-2010)
- Member of the European Geosciences Union, American Geophysical Union
- 25 keynotes/invited lectures since 2000.