

Manon Dalaison

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EDUCATION

ÉCOLE NORMALE SUPÉRIEURE (ENS)

PHD IN GEOPHYSICS
Expected Oct. 2021 | Paris

ÉCOLE NORMALE SUPÉRIEURE (ENS) & INSTITUT DE PHYSIQUE DU GLOBE DE PARIS (IPGP)

MASTER IN GEOSCIENCES
Gr ad. July 2018 | Paris
Combined with the ENS Diploma

AUSTRALIAN NATIONAL UNIVERSITY (ANU)

HONOURS IN EARTH SCIENCE
Grad. Dec 2016 | Canberra
Research project in Geodynamic
Final grade: 91 / 100

BACHELOR OF SCIENCE
Grad. Dec 2015 | Canberra
Earth Science Major
Earth Physics Specialisation
Mathematics Minor
Cum. GPA: 6.708 / 7.0

MAISON D'EDUCATION DE LA LEGION D'HONNEUR

Grad. June 2012 | St Denis,
France
Scientific French Baccalaureat with
High Distinction

COURSEWORK

Structural Geology & Field mapping
Sedimentology & Petrology
Magmatism & Metamorphism
Fluid & Solid Mechanics
Ordinary & Partial Diff. equations

RESEARCH PROJECTS

ENS GEOSCIENCES DEPARTMENT | POSTGRAD

- **DATA ASSIMILATION APPLIED TO INSAR PROCESSING** | Feb - Jun 2018
Implementation of a Kalman Filter for the processing of interferometric Synthetic Aperture Radar (InSAR) data and time series analysis. Supervised by **Dr Romain Jolivet**
- **KINEMATICS & DYNAMICS OF THE NATRON BASIN (EARS, TANZANIA)** | Mar - Jul 2017
Getting the velocity field on the western branch of the rift from GPS measurement processed with GAMIT/GLOBK softwares. Followed by its interpretation with the help of viscoelastic models of post-dyking relaxation. Supervised by **Pr Eric Calais**

ANU RESEARCH SCHOOL OF EARTH SCIENCES | UNDERGRAD

- **SMALL-SCALE CONVECTION UNDER THE LITHOSPHERE** | Jan - Sep 2016
2-D and 3-D numerical modelling of the evolution of the oceanic lithosphere and of how a mantle plume interacts with it using the *Fluidity* framework. Supervised by **Dr Rhodri Davies**
- **INVESTIGATION OF THE NATURE OF WEATHERED SUBSURFACE AT MAJORS CREEK (NSW)** | Jun - Nov 2015
Use of geophysical inversion techniques and of the mineralogy of auger samples. Field component (400m resistivity line and augering) and Laboratory component (data processing with Res2DInv and XRD analysis). Supervised by **Dr Eva Papp**. Sponsored by the Australian Society of Exploration Geophysicist
- **A QUANTITATIVE COMPARISON OF THE OBSERVED AND PREDICTED MASS FLUX OF MANTLE PLUMES** | Feb - Jun 2015
Critical review of the academic literature and trend studies on existing measurements. Comparison with a global mantle circulation model elaborated by **Dr Rhodri Davies** and data plot in Python Basemap.

EXPERIENCE

POSTERS

AGU Fall meeting Dec 2018 | Washington

Manon Dalaison, Romain Jolivet, Angélique Benoit; *A Kalman filter approach of InSAR time series analysis*

AGU Fall meeting Dec 2017 | New Orleans

Manon Dalaison, Elifuraha Saria, Eric Calais, Cécile Doubre and Frederic Masson; *Present-day Opening of the Natron Rift: Tectonic and Magmatic Processes at Work*

ASEG-PESA-AIG 25th Geophysical Conference Aug 2016 | Adelaide

Manon Dalaison and Rhodri Davies; *Small-scale Convection under Oceanic Lithosphere*

SKILLS

GEOLOGY

Structural measurements • Hand samples and Mineral identification • field mapping • stratigraphic column • cross section

GEOPHYSICS

Mantle Dynamics • Resistivity survey • Global and regional Tectonic • GPS and InSAR processing • Inverse problem

COMPUTING

Python • MatLab • Unix • Generic Mapping Tools (GMT) • Bash • Microsoft Excel • \LaTeX

LANGUAGES

French	<i>native proficiency</i>
English	<i>bilingual proficiency</i>
Spanish	<i>upper intermediate</i>
German	<i>elementary</i>

FIELD EXPERIENCES

LIVING FAULT FIELD COURSE

May 2018 | Corinth Gulf and Peloponese, Greece

Observation of fresh and old fault scarps, sedimentary deposits and marine terraces.

GPS CAMPAIGN IN THE SOUTHERN EAST AFRICAN RIFT SYSTEM

Jul 2017 | Natron Basin, Tanzania

Measurements of ~ 15 campaign sites

MAPPING IN THE OUTBACK

Jul 2015 | Mount Isa, Queensland Australia

Mapping 3km^2 of multiply deformed (folded and faulted) sedimentary terrain and of the boundary of a large regional magmatic intrusion in teams of 3. Elaboration of km scaled cross sections.

ARCHAEOLOGICAL EXCAVATIONS

Jul 2009, Aug 2011, Jul 2012 | Burgundy & Alsace, France

Excavation at Bibracte, a Gallo-Roman oppidum. Excavation and study of metallurgy from the Middle Ages to the 17th century at the Altenberg Silver Mines.

OTHER EXPERIENCES

MATHS AND PHYSICS TUTOR

2014 – 2018 | Canberra & Paris

Teaching high-school students for about 3 to 5 hours per weeks.

VICE PRESIDENT OF THE EARTH AND MARINE SCIENCES SOCIETY

2015 | ANU

Taking care of the communication. Designed a new logo and advertising posters for the society. Organised large events (Geoball) in external venues.

PHOTOGRAPHER FOR WORONI, ANU STUDENT JOURNAL

2014 - 2015 | Canberra

AWARDS

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| 2016 | A.L. Hales Honours Year Scholarship |
| 2015 | GSA Mike Rickard Third Year Prize
Best results in 3rd year Earth Sciences |
| 2015 | Anthony Seelaf Memorial Prize in Geology
Best results in 3rd year Geology fieldwork |
| 2014 | W B Clarke Prize in Earth Sciences
Best results in 2nd year Earth Sciences |
| 2013 | First Year Prospectors Earth Science Prize |