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Mail
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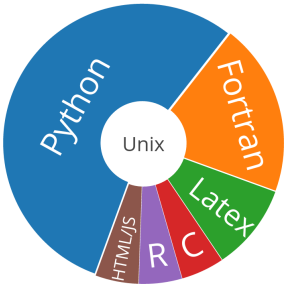
Web & Git
github.com/cthorey
cthorey.github.io
scholar.google.fr/thorey
kaggle.com/cthorey

Python library
pdsimage

Programming



PhD skills

Dr Clément Thorey

Data scientist

Research Experience

12/10 - 15/11 **PhD in Geophysics (Planetary Sciences)** Institut de Physique du Globe, France.
Topic: Intrusive magmatism on terrestrial planets.
Methods: Numerical simulation / Data analysis.

11/11 - 11/07 **Research assistant** Faculty of Science, University of Colima, Mexico.
Topic: Active volcano monitoring.
Methods: Seismic activity, thermal imaging, CO2 release and deformation mapping (GPS). Data preprocessing and analysis.

10/05 - 10/08 **Research assistant** Benjamin Levich Institut, New York, USA.
Topic: Investigation of the periodic jamming and unjamming of dense suspensions in a particular geometry.
Methods: Experiments, Particle tracking (PIV).

Teaching

12/10 - Now **Teaching assistant** Université Paris Diderot - Paris, France.
Mathematics - Linear algebra, ODP, EDP, Fourier series, Fourier transform
Physics - Mechanics, Experimental Physics (undergraduate level)
Informatics - C (graduate level), Python (undergraduate level).

Education

2012 - 2015 **PhD in Geophysics (Planetary Sciences)** Institut de Physique du Globe, Paris.
Thesis title: Dynamics of shallow magmatic intrusions
Advisor: Dr Chloé Michaut and Prof. Mark Wieczorek
Mention: Highest distinction.

2011 - 2012 **Master's Degree in Earth Science** Institut de Physique du Globe, Paris, France.
Main subjects: Volcanology, Seismology, Geophysical Fluid Dynamics.
Mention: Honors.

2009 - 2011 **Master's Degree in Theoretical Physics and Chemistry** ENS Lyon, France.
Main subjects: Entire spectrum of physics and chemistry.
Mention: Honors.

2008 - 2009 **Bachelor's Degree in Physics and Chemistry.** ENS Lyon, France.
Main subjects: Physics and chemistry such as quantum physics and statistical physics. Mathematics and computer science. *ENS is a French elite graduate school recruiting among the top 1% of science students*.

2006-2008 **Bachelor's Degree in Mathematics and Physics.** Univ. Lille 1, Lille, France.
Main subjects: Mathematics, Physics and Computer Science
Mention: Honors.

Personal Skills

Homes/Confs

Languages

French ★★★★★
English ★★★★☆
Spanish ★★★★☆

Complementary education: Formation/MOOC

- **High performance computing training**
  Course instructor: Cédric Castagnède (ClusterVision)
  Topic: GPU programming (CUDA).
- **Machine learning**
  Course instructor: Tom Mitchell - Carnegie Mellon University
  Topics: Bayesian networks, decision tree learning, Support Vector Machines, statistical learning methods, unsupervised learning and reinforcement learning.
- **Convolutional Neural Networks for Visual Recognition**
  Course instructor: Fei-Fei Li, Andrej Karpathy, Justin Johnson - Standford
  Topics: Support Vector Machine, Neural networks, Convolutional Neural Networks, Recurrent Neural Networks, Long Short Term Memory,Reinforcement Learning.
  Assignments: cthorey/CS231
- **Probabilistic Programming and Bayesian Methods for Hackers**
  Topic: Bayesian modeling.

Peer-Reviewed Articles

- **Thorey, C.**, Michaut, C., 2015. Elastic-plated gravity current with temperature-dependent viscosity. Journal of Fluid Mechanics. (Under revision)
- **Thorey, C.**, Michaut, C., Wieczorek, M.A., 2015. Gravitational signatures of lunar floor-fractured craters. Earth and Planetary Science Letters 1–40. doi:10.1016/j.epsl.2015.04.021
- **Thorey, C.**, Michaut, C., 2014. A model for the dynamics of crater-centered intrusion: Application to lunar floor-fractured craters. J. Geophys. Res. Planets 119, 286–312. doi:10.1002/2013je004467
- Michaut, C., Baratoux, D., **Thorey, C.**, 2013. Magmatic intrusions and deglaciation at mid-latitude in the northern plains of Mars. Icarus 225, 602–613. doi:10.1016/j.icarus.2013.04.015

Communications in major scientific conferences

- Michaut, C. and **Thorey, C.**, Magmatism on the Moon, European Geophysical Union conference 2016, Talk, Vienna.
- **Thorey, C.**, Floor-Fractured Crater detections through Machine Learning Methods, American Geophysical Union Fall meeting 2015, Poster, San Francisco.
- **Thorey, C.** and Michaut, C., A General model for shallow magmatic intrusions, American Geophysical Union Fall meeting 2015, Poster, San Francisco.
- **Thorey, C.**, Detection of lunar floor-fractured craters using machine learning methods, European Planetary Science conference 2015, Poster, Nantes.
- Michaut, C. and **Thorey, C.**, Magmatic intrusions in the lunar crust, European Planetary Science conference 2015, Talk, Nantes.
- **Thorey, C.** and Michaut, C., Effect of a temperature-dependent viscosity on the spreading of laccoliths, AGU Fall meeting 2014, Poster, San Francisco.
- **Thorey, C.**, Michaut, C., Wieczorek, M., Gravitational signatures of lunar floor fractured craters, GRAIL science meeting may 2014, Talk, Boulder.
- **Thorey, C.**, Gravitational signatures of lunar floor fractured craters, Workshop Structure and Dynamics of Earth-like Planets, Collège de France, Poster, November 2014, Paris.

- **Thorey, C.**, Les cratères au sol fracturé: Témoins d'un magmatisme intrusif passé sur la Lune. UnivEarths, November 2014, Talk. Paris.
- **Thorey, C.**, Michaut, C., Wieczorek, M., Gravitational signatures of lunar floor fractured craters, 45th LPSC, March 2014, Poster, Houston.
- **Thorey, C.** and C. Michaut, Thermal evolution of a magmatic intrusion, AGU Fall meeting 2013, Poster, San Francisco.
- **Thorey, C.** and Michaut C., Floor-fractured craters on the Moon: an evidence of past intrusive magmatism, 44th Lunar and Planetary Science Conference, March 2013, Talk, Houston.
- **Thorey, C.** and Michaut C., Floor-fractured craters on the Moon: an evidence of past intrusive magmatic activity, AGU Fall meeting 2012, Poster, San Francisco.

February 25th, 2016

Clément Thorey