

## Curriculum Vitae - Jaboyedoff Michel

**Last name:** Jaboyedoff                      **First name:** Michel  
**Gender:** Male                                      **Birth date:** 8 February 1962  
**University:** University of Lausanne        **Professional title:** Full Professor of Institute of Earth Sciences  
**Nationality:** Swiss and French              **Internet site:** <https://wp.unil.ch/risk/>; <https://quanterra.ch/>

### Education

**1999**              PhD Thesis subject in clay mineralogy (University of Lausanne, Switzerland)  
**1990**              Degree in physics (University of Lausanne, Switzerland)  
**1986**              Master in geology (University of Lausanne, Switzerland)  
**1980**              EPFL admission by special mathematics course (EPFL, Switzerland)

### Professional experience

**01.2019-now**              Director of Institute of Earth Sciences (ISTE) (UNIL)  
**08.2016-07.2018**        Vice-Dean for Research, Communication and Quality of the Faculty of Geosciences and Environment at University of Lausanne (UNIL)  
**02.2016-2020**              Adjunct professor at University of LAVAL (Québec)  
**08.2013-08.2016**        Vice-director of ISTE at FGSE of UNIL  
**08.2012-07-2013**        Vice-director of Center for Research on Terrestrial Environment at FGSE of UNIL  
**03.2005-Present**        Full Professor at Institute of Earth Sciences at Faculty of Geosciences and environment of University of Lausanne (UNIL)  
**2008-2010**              Director Institute of geomatic and risk (IGAR)  
**02.2003-03.2005**        Joint project Geological survey of Canada-Quanterra: development of a software of terrain analysis  
**06.2001-10.2002**        Researcher at EPFL Swiss Federal Institute of Technology, Lausanne – ENAC – Rock mechanics laboratory  
**08.1994-06.1994**        Researcher at CREALP (Research center of alpine environment) and University of  
**/04.2000-5.2001**        Lausanne (UNIL)

### Selected main research projects (past 5 years)

**Understanding loCal Risk cUlture(s) in the context of climate CrisIs: AvaLanche hazard from the perspective of anthropology and natural sciences & technologies / CRUCIAL (2023-2024):** join CROSS project with EPFL Dre F. Graezer Bideau.

**ValP - Express : un métro à grande vitesse pour une mobilité durable dans les Alpes : Un métro alpin à grande vitesse pour réaliser des gains énergétiques (2022-2021) :** join CLIMACT project with EPFL Prof. L. Laloui.

**Analysis of la Brenva Aosta (2017-2023):** monitoring Evolution of the instability of la Brenva Mont Blanc massif financed by the Aosta region.

**Analyse des incidences induites par le changement climatique dans la gestion intégrée des risques liés aux dangers naturels sur le territoire vaudois, support à la cellule de projet CDN-VD et thèse de doctorat :** project financed by the Canton of Vaud.

**Study of the instabilities of the Cima del Simano (2020-2023):** project financed by the Canton of Ticino.

**Factual analysis of the Granges quarry landslide of 3 October 2017 (2021-2022):** in the context of the Le Locle bypass road FEDRO project

**Quaternary mapping for natural hazards for Canton de Vaud (2020-2021):** Development map of quaternary deposits for mass movement susceptibility

**Rockfall modelling Tool for Canton de Vaud (2018→):** Development of rockfall model including impacts against trees and associated documentation (<https://stnparabel.org/>)

**La Brenva instability study for Val D'Aosta Regione (2017-→):** Analysis of the potential rockslide falling on the glacier in the Mont-Blanc massif.

**Kii Mountain (Japan) landslide analysis using DEM (2015→2019):** project about the analysis of large landslide failure surface using Lidar DEM, project funded by DPRI and supported by Prof. Chigira (DPRI – University of Kyoto).

### 1.1 Editorial responsibilities

- **Member of the Editorial Board: *Engineering Geology*** Editorial Board
- Often work as **Specific Paper Editor** for Landslides journal
- **Reviewer** for the **37 kinds** of high-level international journals, such as ***Nature Communication, Nature Reviews Earth & Environment, Engineering Geology, Geology, Geomorphology, Landslides, Natural Hazards*** etc.

### 1 Awards

- **2023** Engineering Geology 2023 Best Paper Award

- **2017** 2017 DPRI Award, University of Kyoto.
- **2012** Best Paper Award 2011 in Landslides.
- **2000** Science faculty award of University of Lausanne for PhD thesis.

## 2 Publication list

### 2.1 Books

**Jaboyedoff, M.**, Locat J., Derron M.-H. et Michoud C.(editeur) (**in prep**): Traité sur les glissements de terrain et autres mouvements gravitaires. Presse polytechnique romande

### 2.2 Selected publications in peer reviewed ranked journals (past 5 years)

1. Fei, L., Jaboyedoff, M., Guerin, A., Noël, F., Bertolo, D., Derron, M.-H., Thuegaz, P., Troilo, F. & Ravel, L. 2023. Assessing the rock failure return period on an unstable Alpine rock wall based on volume-frequency relationships: The Brenva Spur (3916 m a.s.l., Aosta Valley, Italy). *Engineering Geology*, 323, 107239, doi: <https://doi.org/10.1016/j.enggeo.2023.107239>.
2. Wang, J., Chen, G., Jaboyedoff, M., Derron, M.-H., Li, F., Li, H. & Luo, X. 2023. Loess landslides detection via a partially supervised learning and improved Mask-RCNN with multi-source remote sensing data. *Catena*, 231, 107371, doi: <https://doi.org/10.1016/j.catena.2023.107371>.
3. Noël, F., Nordang, S.F., Jaboyedoff, M., Travelletti, J., Matasci, B., Digout, M., Derron, M.-H., Caviezel, A., Hibert, C., Toe, D., Talib, M., Wyser, E., Bourrier, F., Toussaint, R., Malet, J.-P. & Locat, J. 2023. Highly energetic rockfalls: back analysis of the 2015 event from the Mel de la Niva, Switzerland. *Landslides*, 20, 1561-1582, doi: 10.1007/s10346-023-02054-2.
4. Wyser, E., Alkhimenkov, Y., Jaboyedoff, M., and Podladchikov, Y. Y. (2021). An explicit GPU-based material point method solver for elastoplastic problems (ep2-3De v1.0), *Geosci. Model Dev.*, 14, 7749–7774.
5. Franz, M., Jaboyedoff, M., Mulligan, R. P., Podladchikov, Y., & Take, W. A. (2021). An efficient two-layer landslide-tsunami numerical model: effects of momentum transfer validated with physical experiments of waves generated by granular landslides. *Natural Hazards and Earth System Sciences*, 21(4), 1229-1245.
6. Jaboyedoff, M., Choanji, T., Derron, M.-H., Fei, L., Gutierrez, A., Loiotine, L., Noel, F., Sun, C., Wyser, E., Wolff, C. (2021). Introducing Uncertainty in Risk Calculation along Roads Using a Simple Stochastic Approach. *Geosciences*, 11(3).
7. Guerin, A., Jaboyedoff, M., Collins, B.D., Stock, G.M., Derron, M.-H., Abellán, A., Matasci, B., (2021). Remote thermal detection of exfoliation sheet deformation. *Landslides*, 18(3), 865-879.
8. Jaboyedoff M., Carrea D., Derron M.-H., Oppikofer T., Penna I.M., Ruda B., (2020). A review of methods used to estimate initial landslide failure surface depths and volumes. *Engineering Geology*, 267, 105478. <https://doi.org/10.1016/j.enggeo.2020.105478>
9. Guerin, A., Ravel, L., Matasci, B., Jaboyedoff, M., Deline, P. (2020). The three-stage rock failure dynamics of the Drus (Mont Blanc massif, France) since the June 2005 large event. *Scientific Reports*, 10(1), 17330.
10. Guerin, A., Stock, G.M., Radue, M.J., Jaboyedoff, M., Collins, B.D., Matasci, B., Avdievitch, N. and Derron, M.H. (2020). Quantifying 40 years of rockfall activity in Yosemite Valley with historical Structure-from-Motion photogrammetry and terrestrial laser scanning. *Geomorphology*. 356, 107069.
11. Mergili, M., Jaboyedoff, M., Pullarello, J., and Pudasaini, S. P. (2020). Back calculation of the 2017 Piz Cengalo–Bondo landslide cascade with r.avaflow: what we can do and what we can learn, *Nat. Hazards Earth Syst. Sci.*, 20, 505–520.
12. \*Penna, I.M., Hermanns, R.L., Nicolet, P., Morken, O.A., Dehls, J., Gupta, V., Jaboyedoff, M., 2020. Airblasts caused by large slope collapses. *GSA Bulletin*. <https://doi.org/10.1130/B35531.1>
13. Pudasaini, S.P., Jaboyedoff, M. (2020). A general analytical model for superelevation in landslide. *Landslides*. 17, 1377–1392.
14. Jaboyedoff, M., Chigira, M., Arai, N., Derron, M.-H., Rudaz, B., and Tsou, C.-Y. (2019). Testing a failure surface prediction and deposit reconstruction method for a landslide cluster that occurred during Typhoon Talas (Japan), *Earth Surf. Dynam.*, 7, 439-458.

## 3 Publications

Total of **40** articles in **2019–23** in peer reviewed ranked journals.

Total of **202** articles cited **6691** in **Web of Science (all database)**. **170** articles peer reviewed ranked journals and **169** articles in books chapters specialized review or conf. Proceedings, a total of **13146 (h=58)** citations in **Google scholar**.

(<https://scholar.google.ch/citations?user=mIwz4vEAAA&hl=en>)

Welcome to the internet site of Prof.Michel <https://wp.unil.ch/risk/> to get the full information.

Lausanne, 28 August 2023