Valère R. Lambert
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Education

California Institute of Technology, Pasadena, CA,
Ph.D. in Geophysics, minor in Mechanical Engineering 2021
Thesis: Constraining Earthquake Source Processes through Physics-Based Modeling
Thesis Advisor: Prof. Nadia Lapusta

California Institute of Technology, Pasadena, CA, M.Sc. in Geophysics 2017

California Institute of Technology, Pasadena, CA, B.Sc. in Physics with Honors 2014
Thesis: Multimodel Inference Ranking and Applications to Physics at the Large Hadron Collider
Thesis Advisor: Prof. Maria Spiropulu

Research Positions

Associate Research Scientist, 2023 - Present
Earth and Planetary Sciences, University of California, Santa Cruz

National Science Foundation (NSF) EAR Postdoctoral Fellow, 2021 - 2023
Earth and Planetary Sciences, University of California, Santa Cruz

Graduate Research Assistant, 2016-2021
Seismological Laboratory, California Institute of Technology

Research Assistant in Earthquake Physics, 2015-2016
Earth Observatory of Singapore, Nanyang Technological University

User Physicist with CMS ECAL and Pixel Software and Particle Identification Algorithms groups 2012-15
Compact Muon Solenoid Experiment, European Organization of Nuclear Research (CERN)

Research Assistant in Experimental Particle Physics 2014-2015
Physik-Institut, University of Zurich, Switzerland

CERN Summer Student 2013
Compact Muon Solenoid Experiment, European Organization of Nuclear Research

Rose Hills and Musk Foundation Undergraduate Research Fellow 2012-2014
High Energy Physics Group, California Institute of Technology

Kiyo and Eiko Tomiyasu Undergraduate Research Fellow 2011-2012
Tectonics Observatory, California Institute of Technology

Publications

15. **Lambert, V.**, and N. Lapusta (2023). Absolute stress levels in models of low-heat faults: Links to geophysical observables and differences for crack-like ruptures and self-healing pulses, *Earth and Planet. Sci. Letts.* 618. doi:10.1016/j.epsl.2023.118277.

14. Erickson, B. A., Jiang, J., **Lambert, V.** et al. (2023) Incorporating Full Elastodynamic Effects and Dipping Fault Geometries in Community Code Verification Exercises for Simulations of Earthquake Sequences and Aseismic Slip (SEAS), *Bull. Seis. Soc. Amer.* 113(2), 499-523. doi:10.1785/0120220066.

13. Williams, E.F., Heaton, T.H., Zhan, Z. and **V. Lambert** (2022). Variability in the natural frequencies of a concrete building from seconds to decades. *The Seismic Record* 2(4), 237-247. doi:10.1785/0320220032.

12. Mallick, R., **Lambert, V.**, and B. Meade (2022). On the choice and implications of rheologies that maintain kinematic and dynamic consistency over the entire earthquake cycle. *J. Geophys. Res. Solid Earth*, 127, doi:10.1029/2022JB024683.

11. Jiang., J., Erickson, B., **Lambert, V.**, et al. (2022), Community-driven code comparisons for three-dimensional multiscale modeling of sequences of earthquakes and aseismic slip (SEAS), *J. Geophys. Res. Solid Earth*, 127, doi:10.1029/2021JB023519.
10. **Lambert, V.**, and N. Lapusta (2021). Resolving simulated sequences of earthquakes and fault interactions: Implications for physics-based seismic hazard assessment, *J. Geophys. Res. Solid Earth*, 126, doi:10.1029/2021JB022193.
9. **Lambert, V.**, Lapusta, N. and D. Faulkner (2021). Scale dependence of earthquake rupture prestress in models with enhanced weakening: Implications for event statistics and inferences of fault stress, *J. Geophys. Res. Solid Earth*, 126, e2021JB021886. doi:10.1029/2021JB021886.
8. **Lambert, V.**, Lapusta, N. and S. Perry (2021). Propagation of large earthquakes as self-healing pulses or mild cracks. *Nature* 591, 252-258, doi:10.1038/s41586-021-03248-1.
7. **Lambert, V.** and N. Lapusta (2020). Rupture-dependent breakdown energy in fault models with thermo-hydro-mechanical processes. *Solid Earth*, 11(6), 2283-2302, doi: 10.5194/se-11-2283-2020
6. **Lambert, V.** and V. C. Tsai (2020). Time-dependent stresses from fluid extraction and diffusion with applications to induced seismicity, *J. Appl. Mech.*, 87(8), 081002, doi:10.1115/1.4047034.
5. Perry, S., **Lambert, V.** and N. Lapusta (2020). Nearly Magnitude-Invariant Stress Drops in Simulated Crack-Like Earthquake Sequences on Rate-and-State Faults with Thermal Pressurization of Pore Fluids. *J. Geophys. Res. Solid Earth*, 125, e2019JB018597. doi:10.1029/2019JB018597.
4. Erickson, B., et al. (2020), The SCEC Community Code Verification Exercise for Simulating Sequences of Earthquakes and Aseismic Slip (SEAS), *Seismo. Res. Lett.*, doi:10.1785/0220190248.
3. Moore, J., et al. (2017). Rapid imaging of localised and distributed deformation following the 2016 Mw 7.1 Kumamoto earthquake. *Science*, 356, 6334, 163-167, doi:10.1126/science.aal3422.
2. Barbot, S., Moore, J. and **V. Lambert** (2017). Displacements and Stress Associated with Distributed Anelastic Deformation in a Half Space. *Bull. Seis. Soc. Amer.*, 107, 2, 821-855, doi:10.1785/0120160237.
1. **Lambert, V.** and S. Barbot (2016). Contribution of viscoelastic flow in earthquake cycles within the lithosphere-asthenosphere system. *Geophys. Res. Lett.* 43, 10,142-10, 154, doi:10.1002/2016GL070345

European Organization of Nuclear Research (CERN) Reports

- Implementation and training of charm-tagging algorithms in TMVA and CMSSW. CMS Analysis Note 2015/101, CERN, 2015.
- A study of the Higgs boson pair production cross section at 14 TeV in the decay channel to two photons and two b-jets. Technical Report CMS-PAS-FTR-13-001, CERN, 2013.
- Measurement of the CMS ECAL Performance with Z Dielectron Decay Events in 2012 Data. CMS Analysis Note 2012/408, CERN, 2012.

Awards and Recognition

American Geophysical Union (AGU) Seismology Section Keiiti Aki Early Career Award	2023
2022 Outstanding Reviewer Citation for AGU Journal of Geophysical Research: Solid Earth	2023
Demetriades - Tsafka - Kokkalis Prize in Seismo-Engineering, Prediction, and Protection	2021
NSF EAR Postdoctoral Fellowship	2021
Caltech GPS Graduate Fellowship	2016
CERN Doctoral Fellowship (declined)	2014
Caltech Campus Life and Master's Award	2014
CERN Summer Student Fellowship	2013
Musk Foundation Undergraduate Research Fellowship	2012
Rose Hills Foundation Undergraduate Research Fellowship	2012
Society of Exploration Geophysicists (SEG) Foundation Scholarship	2012
Kiyo and Eiko Tomiyasu Undergraduate Research Fellowship	2011
Anadarko/SEG Foundation Scholarship	2011
Yonghe and Grace Sun Scholarship	2010
Rotary Scholarship, Rotary Club of Coronado	2010

Funding

NSF EAR Postdoctoral Fellowship: PI: Valère Lambert ($174,000) 2021
The scale-dependent interplay between fault material strength, roughness and friction

Southern California Earthquake Center (SCEC) Awards:
Co-PIs Valère Lambert, Brittany Erickson and Junle Jiang
Advancing Simulations of Sequences of Earthquakes and Aseismic Slip (SEAS) 2022-23
Awards: #22079 ($56,000), #23144 ($55,000)
Workshop for Advancing Simulations of Sequences of Earthquakes and Aseismic Slip (SEAS) 2022
Award: #22123 ($12,000)
PI: Nadia Lapusta, VRL helped write the proposals and executed the work
Constraining friction properties of mature low-stress faults such as SAF 2018-21
Awards: #21005 ($39,788), #20079, ($38,864), #19085 ($38,648), #18085 ($37,909)
Optimizing and further developing simulations of sequences of earthquakes and aseismic slip 2018-21
Awards: #21006($30,821), #20080 ($30,575), #19086 ($28,243), #18174 ($28,513)

Student/Early Career Funding
US Nat. Comm. for Theoretical and Applied Mechanics Presenter Fellowship for ICTAM 2020+1 2021
Numerical Modeling of Earthquake Motions workshop travel award 2019
Cargèse School on Earthquakes travel award 2017
George W. Housner Discovery award 2012

Student Advising

PhD Students:
Minghan Yang, UCSC PhD student (Geophysics) co-advising with Emily Brodsky 2023-present
Huiyun Guo, UCSC PhD student (Geophysics) co-advising with Emily Brodsky 2022-present
Taeho Kim, Caltech PhD student (Applied Mechanics) co-advising with Nadia Lapusta 2021-present

Undergraduate Interns:
Mia Trodden, UCSC (Earth and Planetary Sciences) co-advising with Emily Brodsky 2022-present
Indentation measurements of scale-dependent strength on natural fault samples

Victoria Gonzalez, LAMAT REU intern (Earth Sciences) co-advised with Tamara Pico 2023
Correlation of submarine landslide deposits with GIA-induced sea-level and topography changes

Joseph Wick, SCEC SOURCES intern (Physics) SCEC 11568 2021-2022
Efficient viscoelastic earthquake sequence simulations using hierarchical matrices

Yanke Song, Caltech SURF (Applied & Computational Math) SCEC 8402 2018-2020
Adaptive time-stepping algorithms for earthquake sequence simulations

Lily Coffin, Caltech FSRI (Mech. Engineering) Modeling stick-slip motion of Whillans ice stream 2020

Yuling (Aileen) Zhang, Caltech SURF (Astrophysics) SCEC 9904 2019
Updating Caltech Millikan Library Shaker for time-lapse seismic imaging

Luis Camargo-Carlos, Caltech FSRI (Physics) Poroelastic modeling of reservoir fluid extraction 2018

Cheng Xuan, NTU CN Yang Fellow (Earth Sciences) AGU G51B-1101 and G31B-0906 2016-2017
Geodetic inversion of afterslip and viscous relaxation for 2012 Mw 8.6 Indian Ocean EQ

Arjun Goswami, Caltech SURF (Physics), AGU T13A-2682 2016
Earthquake sequence simulations with poroelasticity and pore fluid flow

Jared Filseth, Caltech SURF (Physics) 2016
Joint geodetic inversion of afterslip and viscous relaxation in Southern California

Teaching

California Institute of Technology, Pasadena, CA, Certificate of Practice in University Teaching 2019

Guest Lecturer, Caltech Department of Mechanical and Civil Engineering:

Mechanics of Rocks (3 lectures), Spring 2019 and Winter 2021

Dynamic Fracture and Frictional Faulting (4 lectures), Spring 2020

Continuum Mechanics of Fluids and Solids/ Mechanics of Structures and Solids (10 lectures), Fall 2018-20

Teaching Assistant: Designed and lectured recitation sections, conducted office hours, ran laboratory sessions, developed and graded problems for assignments and exams

California Institute of Technology:

- Dynamic Fracture and Frictional Faulting, Spring 2020
- Mechanics of Rocks, Spring 2019
- Continuum Mechanics of Fluids and Solids / Mechanics of Structures and Solids, Fall 2018 and 2019
- Hydrology, Spring 2018
- Analog Electronics Laboratory, Fall 2012

University of Zurich, PHY122: Praktikum zur Physik II (physics lab course), Spring 2015

Coordinator/Instructor for Reading Groups and Workshops

- UC Santa Cruz, Topics in Dynamic Fracture Theory and Computational Mechanics, Fall 2021 - 2022
- UC Santa Cruz Geoscientists Encouraging Openness & Diversity in the Earth Sciences (GEODES), Introduction to Python and Scientific Computing 'on-ramp', Fall 2021 - 2022
- Earth Observatory of Singapore, Bayesian Inference, Spring 2016
- Earth Observatory of Singapore, Introduction to Green's Functions, Spring 2016

Caltech Teaching Conference Session Coordinator:

- Discussions on remote teaching and creating inclusive and accessible classrooms, Fall 2020
- Effective Recitations: The Power of Being Prepared, Fall 2019
- Considerations for Effective Mentoring, Fall 2018
- Teaching the Global Classroom, Fall 2017
- Caltech 101: What you need to know if you're going to teach undergraduates, Fall 2017 - 2019

Synergistic Activities

- Co-leader of SCEC Advancing Simulations of Earthquakes and Aseismic Slip code-verification project
- Panel Discussion Leader for 2022 Caltech Seismolab Centennial Envisioning the Future of Geophysics
- Assistant co-editor and contributing author for Report to the National Science Foundation: "Modeling Earthquake Source Processes: from Tectonics to Dynamic Rupture"
- Guest Associate Editor of 2019-2021 Journal of Geophysical Research - Solid Earth special issue: "Creep on continental faults and subduction zones: Geophysics, geology and mechanics"
- Deep dive on "Understanding conditions for stable/unstable fault slip" to Industrial Advisory Board for Caltech Geomechanics and Mitigation of Geohazards Industry-University Research Center
- Proposal reviewer: NSF Marine Geology and Geophysics Program
- **Journal referee:** Science, Nature Communications, Nature Communications Earth & Environment, Nature Scientific Reports, Journal of Mechanics and Physics of Solids, Physics Review E, Earth and Planetary Sciences Letters, Geophysical Research Letters, Journal of Geophysical Research-Solid Earth, Bulletin of the Seismological Society of America, Seismological Research Letters, Pure and Applied Geophysics, Journal of Structural Geology, Journal of Seismology

Conference/Workshop convener and organizer

- AGU Fall Meeting, Convener of S011: How do earthquakes start? 2022
- SCEC Workshop on Advancing Simulations of Sequences of Earthquakes and Aseismic Slip 2022
- SCEC Workshop on Advancing Simulations of Sequences of Earthquakes and Aseismic Slip 2021
- EGU General Assembly, Convener for TS4.2:
  Seismic and aseismic deformation at seismogenic faults: from distributed to localized deformation 2021

- AGU Fall Meeting, Primary Convener of S026: *How do earthquakes start?* 2020
- EGU General Assembly, Convener for TS5.4/GS9.4/SM2.9, AGU Tectonophysics co-sponsor: Interplay between Seismic and Aseismic Slip on Seismogenic Faults 2020
- 10th Annual Knowles Lectures and Symposium on Solid Mechanics, Organizing Committee 2019
- AGU Fall Meeting, Session Chair for T027: Interplay between Seismic and Aseismic Slip on Seismogenic Faults 2019
- AGU Fall Meeting, Primary Convener of S021: How do earthquakes start? 2019
- NSF Workshop on Modeling Earthquake Source Processes, Local Organising Committee 2018
- AGU Fall Meeting, Primary Convener of T025: Interplay between seismic and aseismic slip: Implications for fault physics 2018
- AGU Fall Meeting, Convener of S006: Earthquake Source Physics: Unified perspectives from Kinematic Source Imaging, Physics-based Modeling, Laboratory Experiments, and Earthquake Geology 2018

Institutional Service

- UC Santa Cruz Institute for Geophysics and Planetary Sciences Seminar Committee 2021-2023
- Caltech Institute Computing Advisory Committee 2018-21
- Caltech Seismolab Seminar Organizing Committee 2018-19
- Caltech Academic Policies Faculty Board Committee 2017-19
- Caltech Teaching Conference Planning Committee 2017-19
- Caltech Honor Code Board of Control 2012-14
- Caltech Physics Student-Faculty Committee, Committee chair 2012-13
- Caltech Core Curriculum Steering Committee 2011-12

Experimental and Field Experience

- Active seismics for Oak Ridge Earthflow Observatory, San Jose, CA, 2023
- Nano and microindentation measurements of engineering and natural fault surfaces, 2021-2023
- Refurbishment and operation of Caltech Hall Library Shaker for controlled seismic source experiments with the Pasadena Distributed Acoustic Sensing Array, CA 2018-21
- Seismic node deployment and retrieval for imaging of the San Gabriel Basin, CA 2018-19
- Seismometer deployment for Caltech/JPL/LBNL Goldstone optical fiber seismic experiment, Goldstone Deep Space Communication Complex, CA 2017

Community Involvement

- UC Santa Cruz EPS/ESCI undergraduate mentoring program 2022-present
- Adopt-a-Physicist, American Physical Society 2015-present
- Convener for Caltech Summer Undergraduate Research Fellow (SURF) Seminars, Judge for Perpall Speaking and Gee Poster Competitions 2016-21
- Caltech Seismological Laboratory outreach at local schools and 'Science for March' event 2017-19
- Instructor for CERN and ETH Zürich International Physics High School Masterclasses 2014-15
- Tour guide, Compact Muon Solenoid Experiment and CERN 2014-15
- Juror for the Swiss Young Physicists Tournament 2015
- Red Cross Emergency Medical Responder and Health Advocate at Caltech 2011-14
- Caltech tour guide, tour guide captain (2012-14) 2011-14

Invited Talks and Seminars

University of Washington Department of Earth and Space Sciences	2023
Engineering Mechanics Institute (EMI) Conference 2023, Session MS706	2023
MIT Civil and Environmental Engineering Department Seminar	2023
Harvard Earth and Planetary Sciences Department Seminar	2023
Asian School of Environment Department Seminar, Nanyang Technological University, Singapore	2023
USGS Earthquake Science Center Seminar	2023
Risk Management Solutions Inc., Earthquake Modeling Group	2022
Engineering and Applied Science Forum (EASF) Young Webinar	2022
SCEC Annual Meeting plenary session on System-Level Models and Earthquake Forecasting	2022
UC Davis Earth and Planetary Sciences Lunch Talk	2022
Cornell Earth and Atmospheric Science Department Seminar	2022
UC Davis Earth and Planetary Sciences Department Seminar	2022
UC Berkeley Seismological Laboratory	2021
SCEC Community Workshop on Stress Drop Validation	2021
UC Santa Cruz Institute for Geophysics and Planetary Physics (IGPP)	2021
Penn State Department of Geosciences Colloquium Series	2021
American Geophysical Union (AGU) Fall Meeting, Session S016	2020
SCEC Workshop on Co-seismic Fault Friction	2020
Laboratoire de Géologie, Ècole Normale Supérieure de Paris, France	2019
Department of Earth Sciences, University of Liverpool, United Kingdom	2019
National Research Institute for Earth Science and Disaster Resilience (NIED), Tsukuba, Japan	2019
SCEC Community Stress Model Workshop	2019
9th Knowles Symposium on Solid Mechanics, Caltech	2018
Computational Infrastructure for Geodynamics (CIG) Crustal Deformation Modeling Workshop	2017
American Geophysical Union Fall Meeting, Session T22B	2016

Professional Affiliations

Society for Industrial and Applied Mathematics, since 2018
Seismological Society of America, since 2016
American Geophysical Union, since 2016
American Physical Society, since 2013
Southern California Earthquake Center, since 2011

Media Coverage

Untangling the Heat Paradox along Major Faults, **Caltech News**

Conference/Workshop presentations

Oral presentations

21. **Lambert, V.** (2023, invited) Scale dependence of frictional rupture prestress: Implications for earthquake statistics and inferences of fault stress. Engineering Mechanics Institute, Atlanta, GA.

20. **Lambert, V.** (2023) Average prestress condiitons for earthquake rupture in numerical models of low-stress faults with enhanced weakening: Relation to earthquake statistics and apparent quiescence of mature faults. USGS Subduction Zone Science Workshop, Seattle, WA.

19. **Lambert, V.** (2022, invited) Scale dependence of critical stress for frictional rupture: Implications for earthquake statistics and inferences of fault stress. Engineering and Applied Science Forum Young Webinar.

18. **Lambert, V.** (2022, invited). Advancing models of earthquake source processes towards physics-informed seismic hazard assessment. SCEC Annual Meeting Plenary Session on System-Level Models and Earthquake Forecasting

17. **Lambert, V.** and N. Lapusta (2022). Rupture-dependent breakdown energy in fault models with thermo-hydromechanical processes. ERC TECTONIC/FEAR Workshop on Earthquake Dynamics: Mechanical Work and Fracture Energy.

16. **Lambert, V.**, Lapusta, N., and D. Faulkner (2021). Scale dependence of earthquake rupture prestress in models with enhanced weakening: Implications for event statistics and inferences of fault stress. AGU Fall Meeting
15. **Lambert, V.** (2021, invited). Stress Drop in Earthquake Source Physics. SCEC Workshop on Stress Drop Validation.
14. **Lambert, V.** and N. Lapusta (2020, invited). Resolving simulated sequences of earthquakes and fault interactions. AGU Fall Meeting.
13. **Lambert, V.** and N. Lapusta (2020). The role of fluids in governing rupture modes and seismic radiation on mature faults. AGU Fall Meeting.
12. **Lambert, V.** and N. Lapusta (2020, invited). Constraining physical conditions for the low-stress, low-heat operation of mature faults. SCEC Dynamic Rupture Group Workshop on Fault Friction, Pomona, CA.
11. **Lambert, V.** and N. Lapusta (2019). Energy budget of Earthquakes: connecting remote observations with local physical behavior, Numerical Modeling of Earthquake Motions, Smolenice, Slovakia.
10. **Lambert, V.** and N. Lapusta (2019). Energy Budget of Earthquakes: Investigating the Relation Between Actual and Seismologically-Inferred Quantities using Dynamic Simulations of Earthquake Sequences, 2nd International Symposium on Crustal Dynamics (2019), Uji, Japan
9. **Lambert, V.** and N. Lapusta (2019, invited). Modeling the low-heat, low-stress operation of mature faults. SCEC Community Stress Model Workshop, Pomona, CA.
8. **Lambert, V.** and N. Lapusta (2018). Energy budget of earthquakes: connecting remote observations with local physical behavior, AGU Fall Meeting, Washington DC.
7. **Lambert, V.** and Z. Zhan (2017). Global high-frequency source imaging accounting for complexity in Green's functions, AGU Fall Meeting, New Orleans, LA.
6. **Lambert, V.** and N. Lapusta (2017) Implications of depth-dependent variations in fault zone properties for the frequency content of seismic radiation, Cargèse School on Earthquakes, Cargèse, France.
5. **Lambert, V.**, Barbot, S. and N. Lapusta (2017, invited). Modeling the interaction between fault slip and viscoelastic deformation. CIG Crustal Deformation Modeling Workshop, Golden, CO.
4. **Lambert, V.** and S. Barbot (2016, invited). The role of thermal processes in defining the seismogenic zone: The interplay between faults and shear zones. AGU Fall Meeting, San Francisco, CA.
3. **Lambert, V.** and S. Barbot (2016). How to Break the Lithosphere: Insight from the 2012 Wharton Basin Earthquake, AOGS 13th Annual Meeting, Beijing, China.
2. **Lambert, V.** and S. Barbot (2016). Role of Thermal Processes in the Earthquake Cycle: Insight from the 2012 Wharton Basin Earthquake, Workshop on Geodynamics of the Indo-Eurasia Plate Boundary, IISc Bangalore, India.
1. **Lambert, V.** (2013) Measurement of the Higgs Pair Production Cross Section at 14 TeV in the Decay Channel to Two Photons and Two B-Jets, CERN Student Sessions, CERN, Switzerland

Poster presentations

37. **Lambert, V.**, Erickson, B., Jiang, J., et al. (2023). Community Code Verification Exercises for Simulations of Earthquake Sequences and Aseismic Slip (SEAS): Effects from Dipping Faults and Full Elastodynamics to Fluids and Fault Friction Evolution. AGU Fall Meeting.
36. **Lambert, V.**, Erickson, B., Jiang, J., et al. (2023). Community Code Verification Exercises for Simulations of Earthquake Sequences and Aseismic Slip (SEAS): Effects from Dipping Faults and Full Elastodynamics to Fluids and Fault Friction Evolution. SCEC Annual Meeting.
35. Giacomel, P., Faulkner, D. R., **Lambert, V.** and M.J. Allen (2023) A novel automated procedure for determining steady-state friction conditions in the context of rate-and-state friction analysis. EGU Meeting, Vienna, AT.
34. **Lambert, V.**, Jiang, J., Erickson, B. et al. (2022). Community Code Verification Exercises for Simulations of Earthquake Sequences and Aseismic Slip (SEAS): From 3D, Full Elastodynamics and Dipping Faults to Fluids and Fault Friction Evolution. AGU Fall Meeting.

33. Jiang, J., **Lambert, V.**, Erickson, B. et al. (2022). Community Code Verification Exercises for Simulations of Earthquake Sequences and Aseismic Slip (SEAS): From 3D, Full Elastodynamics and Dipping Faults to Fluids and Fault Friction Evolution. SCEC Annual Meeting.
32. **Lambert, V.** and N. Lapusta (2022). Absolute stress levels in models of low-heat faults: Links to seismological observables and differences for crack-like ruptures and self-healing pulses. SCEC Annual Meeting.
31. Giacomel, P., Faulkner, D.R., Allen, M.J. and **V. Lambert** (2022). The conundrum of steady-state in the framework of rate- and state- friction analysis. Gordon Research Conference on Rock Deformation.
30. Mallick, R., **Lambert, V.** and B. Meade (2021). On the choice and implications of rheologies that maintain kinematic and dynamic consistency over the entire earthquake cycle. AGU Fall Meeting.
29. Jiang, J., Erickson, B., **Lambert, V.** et al. (2021). Community Code Verification Exercises for Simulations of Earthquake Sequences and Aseismic Slip (SEAS): 3D Effects, Fully Dynamic Ruptures, and Dipping Fault Geometries. AGU Fall Meeting.
28. **Lambert, V** and N. Lapusta (2021). Resolving simulated sequences of earthquakes and fault interactions. SCEC Annual Meeting.
27. Lapusta, N. and **V. Lambert** (2021). Modeling absolute stress levels on mature faults: Implications for seismic radiation and earthquake statistics. SCEC Annual Meeting.
26. Wick, J. and **V. Lambert** (2021). Optimizing Numerical Simulations of Earthquake Sequences Including Off-Fault Viscoelastic Deformation using Hierarchical Matrices. SCEC Annual Meeting.
25. Jiang, J., Erickson, B. and **V. Lambert**, et al. (2021). Community Code Verification Exercises for Simulations of Earthquake Sequences and Aseismic Slip (SEAS): Three-Dimensional Problems. SCEC Annual Meeting.
24. Erickson, B. et al. (2021). Community Code Verification Exercises for Simulations of Earthquake Sequences and Aseismic Slip (SEAS): Dynamic Effects and Dipping Fault Geometries. SCEC Annual Meeting.
23. **Lambert, V** and N. Lapusta (2021). Resolving simulated sequences of earthquakes and fault interactions. 25th International Congress of Theoretical and Applied Mechanics.
22. **Lambert, V.** and N. Lapusta (2021, virtual lightning) Examining critical stress conditions for rupture occurence in numerical simulations of sequences of earthquakes and aseismic slip (SEAS). Northern California Earthquake Hazards Workshop.
21. **Lambert, V.** and N. Lapusta (2021, virtual lightning) Examining critical stress conditions for rupture occurence in numerical simulations of sequences of earthquakes and aseismic slip (SEAS). ShakeAlert R&D Workshop.
20. **Lambert, V** and N. Lapusta (2020). Resolving simulated sequences of earthquakes and fault interactions. SCEC Annual Meeting.
19. Lapusta, N. and **V. Lambert** (2020). Relation between absolute stress levels, rupture style, and seismic radiation on mature faults. SCEC Annual Meeting.
18. Williams, E.F., Heaton, T.H., **Lambert, V.** and Z. Zhan (2020) Structural healing of Millikan Library over 20 years of continuous seismic monitoring. SCEC Annual Meeting.
17. Erickson, B.A. et al. (2020). Community Code Comparisons for Simulating Sequences of Earthquakes and Aseismic Slip (SEAS): Exploring Full dynamics and 3D Effects. SCEC Annual Meeting.
16. **Lambert, V.** and N. Lapusta (2019). Combining kinematic and energy-based inferences to constrain physical conditions surrounding the low-stress, low heat operation of mature faults. AGU Fall Meeting.
15. Zhang, Y., Williams, E.F., **Lambert, V.**, and Z. Zhan (2019). Updating the Caltech Millikan Shaker for time-lapse seismic imaging in Southern California. SCEC Annual Meeitng, CA.
14. Erickson, B.A. et al. (2019). The Community Code Verification Exercise for Simulating Sequences of Earthquakes and Aseismic Slip (SEAS). SCEC Annual Meeting.

13. **Lambert, V.** and N. Lapusta (2019). Modeling the low-stress, low-heat operation of mature faults. SCEC Annual Meeting.
12. **Lambert, V.** and N. Lapusta (2019). Energy budget of dynamic shear ruptures: connecting remote observations with local physical behavior, Engineering Mechanics Institute.
11. Erickson B. A. et al. (2018). The Community Code Verification Exercise for Simulating Sequences of Earthquakes and Aseismic Slip (SEAS): Initial Benchmarks and Future Directions, AGU Fall Meeting,.
10. Song, Y., **Lambert, V.**, and N. Lapusta (2018). Investigation of Adaptive Time-Stepping Algorithms for Simulating Sequences of Earthquakes and Aseismic Slip (SEAS). SCEC Annual Meeting.
9. **Lambert, V.**, Perry, S. and N. Lapusta (2018) Earthquake Sequences in Rate-and-State Fault Models with Thermal Pressurization, SCEC Annual Meeting.
8. Erickson, B.A. et al. (2018). The Community Code Verification Exercise for Simulating Sequences of Earthquakes and Aseismic Slip (SEAS): Initial Benchmarks and Future Directions. SCEC Annual Meeting.
7. Cheng, X., **Lambert, V.**, et al. (2017). Joint models of GPS and GRACE data of postseismic deformation following the 2012 Mw 8.6 Indian Ocean earthquake. AGU Fall Meeting.
6. **Lambert, V.** and N. Lapusta (2017). Under the Hood of the Earthquake Machine: from Computational Mechanics to Seismic Hazard. NSF Center for Geomechanics and Mitigation of Geohazards.
5. **Lambert, V.** and N. Lapusta (2017). Implications of depth-dependent variations in fault zone properties for the frequency content of seismic radiation, SCEC Annual Meeting, CA.
4. Cheng, X., **Lambert, V.** et al. (2016). Joint inversion of afterslip and viscoelastic relaxation following the 2012 Mw 8.6 Indian Ocean earthquake. AGU Fall Meeting.
3. Goswami, A.S., Barbot, S., Moore, J., and **V. Lambert** (2016). Pore fluid pressure in impermeable fault zones throughout earthquake cycles. AGU Fall Meeting.
2. **Lambert, V.** and S. Barbot (2016). Thermo-mechanical coupling of faults and mantle shear zones, EGU Meeting.
1. **Lambert, V.**, Barbot, S. and J.-P. Avouac (2011) Elastostatic Solutions for Realistic Slip and Stress around Shear Cracks, Implications for Inverting Geodetic Measurements for Fault Slip, SCEC Annual Meeting.