Curriculum Vitæ of Susana Custódio

Full Name:	Susana Inês da Silva Custódio
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Education

PhD	Geological Sciences University of California, Santa Barbara, USA GPA: 4.0/4.0	Sep. 2003 — Dec 2007
Licenciatura	Physics Engineering Instituto Superior Técnico, Lisbon, Portugal Final Average: 17/20	Sep. 1997 — Jul. 2002

PhD Thesis

Title: Earthquake Rupture and Ground-Motion: The 2004 M_W6.0 Parkfield Earthquake
Committee: Prof. R. J. Archuleta, Prof. Toshiro Tanimoto, Prof. Chen Ji, Dr. Jamie Steidl

Licenciatura Thesis

Title: Diurnal and Semi-diurnal Modulation of Seismic Noise in Fogo Island, Cape Verde
Supervisor: Prof. J. Fonseca
Thesis Grade: 19/20

Research Experience

Assistant Researcher	Centro de Geofísica da Univ. de Coimbra, Portugal	2008
Visiting Researcher	Institute for Crustal Studies, UCSB, USA	2008
Graduate Researcher	Institute for Crustal Studies, UCSB, USA	2003 - 2007
Intern	US Geological Survey, Menlo Park, CA, USA	2003
Research Assistant	ICIST, Inst. Superior Técnico, Lisbon, Portugal	2001-2003

Teaching Experience

Teaching Assistant	Thermodynamics	UCSB	Fall	2006
Graduate Mentor	Seismic Hazard Analysis	UCSB	Summer	2006
Teaching Assistant	Natural Disasters	UCSB	Winter	2005
Teaching Assistant	Seismology	UCSB	Winter	2004

Awards and Fellowships

Graduate Award for Research Excellence, Dept. of Earth Science, UCSB	2007
Outstanding Student Paper Award, AGU Fall Meeting	2006
Student Presentation Award, SSA Annual Meeting	2006
Graduate Award for Geophysics, Department of Earth Science, UCSB	2005
Young Scientist Research Award – Physics and Environment, Calouste Gulbenkian Foundation, Lisbon	2002
Graduate Scholarship from the Portuguese Foundation for Science and Technology, Earth Sciences	2003-2007

Scientific Training

Instrumental Study of the Active Faulting in the Lower Tagus Valley.
Supervisor: Prof. J. Fonseca, IST, Lisbon, Portugal (2002-2003).

Investigation of the Mechanism of Volcanic Tremor
Supervisor: Dr. B. Chouet, US Geological Survey, Menlo Park, California (2003).

Analysis of Broadband Digital Data - Young Seismologist Training Course (European Seismological Commission - IASPEI sponsored)
Supervisor: Dr. K. Klinge (CSO, Potsdam, Germany), Dr. K. Stammler (CSO, Potsdam, Germany) and Dr. D. Storchak (ISC, UK) (2002).

Geophysical Monitoring of the Fogo Volcano, Cape Verde - field work in seismology, tilt instrumentation, water prospection and data base management.
Supervisor: Prof. J. Fonseca, IST, Lisbon, Portugal (2002).

Oceanographic Study of the Norwegian Fjords - work on board of the research ship Hakon Mosby on physical oceanography.
Supervisor: Prof. P. Haugan, Geophysical Institute of the University of Bergen, Norway (2001).

Erasmus Program in the University of Copenhagen, Denmark - exchange program within the European Union for undergraduate students.
Supervisors: Prof. S. Steenstrup, Copenhagen University, and Prof. J. Fonseca, IST, Lisbon (2000-2001).

Geodetic Monitoring of Fogo Volcano with GPS, Cape Verde - GPS field work.
Supervisors: Eng. N. Lima (IICT, Lisbon, Portugal) and Prof. J. Fonseca (IST, Lisbon, Portugal) (2000).

Academic Service

Graduate Student Representative	Earth Science Dpt., UCSB	2005-2006
Undergraduate Student Representative	Physics Dpt., IST	1997-2000
Director	Physics Student Association, IST	1998

Memberships

American Geophysical Union	2004 - 2008
Seismological Society of America	2004 - 2008

Publications in Peer-Reviewed Journals

1. Custódio, S., Page, M.T. and Archuleta, R.J., *submitted*. Constraining earthquake source inversions with GPS data 2: A two-step approach to combine seismic and geodetic datasets. *Journal of Geophysical Research*.

2. Page, M.T., Custódio, S., Archuleta, R.J. and Carlson, J.M., *submitted*. Constraining earthquake source inversions with GPS data 1: Resolution based removal of artifacts. *Journal of Geophysical Research*.

3. Ma, S., Custódio, S., Archuleta, R.J. and Liu, P., *in press*. Dynamic modeling of the 2004 M_w6.0 Parkfield, California, earthquake. *Journal of Geophysical Research*.

4. Custódio, S. and R.J. Archuleta, 2007. Parkfield earthquakes: Characteristic or complementary? *Journal of Geophysical Research*, 112, B05310, doi:10.1029/2006JB004617.

5. Liu, P., Custódio, S. and Archuleta, R.J., 2006. Kinematic inversion of the 2004 M_w6.0 Parkfield earthquake including an approximation to site effects. *Bulletin of the Seismological Society of America*, vol. 96, no. 4B, pp. S143-S158, doi:10.1785/0120050826.

6. Custódio, S., Liu, P. and Archuleta, R.J., 2005. The 2004 M_w6.0 Parkfield, California, earthquake: Inversion of near-source ground motion using multiple data sets. *Geophysical Research Letters*, vol. 32, L23312, doi:10.1029/2005GL024417.

7. Custódio, S., Fonseca, J.F.B.D., d'Oreye, N.F., Faria, B.V.E. and Bandomo, Z., 2003. Tidal modulation of seismic noise and volcanic tremor. *Geophysical Research Letters*, vol. 30 (15), doi: 10.1029/2003GL016991 .

Abstracts in Scientific Meetings

1. Custódio, S., Page, M. T. and Archuleta, R. J. (2007). A New Approach for Combining GPS and Seismic Data in Kinematic Inversions. *EOS Trans. AGU, 88(52), Fall Meet. Suppl., Abstract S53C-05.*

2. Custódio, S., Page, M. T. and Archuleta, R. J. (2007). Integrating GPS and Seismic Data in Earthquake Source Inversions. *EOS Trans. AGU, 88(52), Fall Meet. Suppl., Abstract G23A-01.*

3. Page, M. T., Custódio, S., Archuleta, R. J. and Carlson, J. M. (2007). Using Resolution Information to Remove Artifacts from GPS Inversions. *EOS Trans. AGU, 88(52), Fall Meet. Suppl., Abstract S51B-0499.*

4. Archuleta, R. J., Liu, P., Custódio, S. and Page, M. T. (2007). Improving on Inversions for Kinematic Parameters of the Earthquake Source. *EOS Trans. AGU, 88(52), Fall Meet. Suppl., Abstract S53C-02.*

5. Custódio, S., Page, M. T., Larson, K. and Archuleta, R. J., 2007. Combining Different Datasets to Obtain a Rupture Model: The 2004 M6.0 Parkfield, California, Earthquake. *Seismological Research Letters*, vol. 78(2), pp 302.

6. Page, M. T., Custódio, S., Archuleta, R. J. and Carlson, J. M., 2007. Resolution of GPS Data from the 2004 Mw6.0 Parkfield Earthquake. *Seismological Research Letters*, vol. 78(2), pp 289.

7. Custódio, S. and Archuleta, R. J., 2006. b-Values as a Proxy for Stress – Inferences for Dynamic Modeling of the 2004 Parkfield Earthquake. *EOS Trans. AGU, 87(52), Fall Meet. Suppl., Abstract S23C-0167.*

8. Archuleta, R. J., Custódio, S. and Ma, S., 2006. Effect of Realistic 3D-Velocity Structure on Rupture Dynamics and Ground- Motion. *EOS Trans. AGU, 87(52), Fall Meet. Suppl., Abstract S53D-05.*

9. Page, M. T., Custódio, S., Archuleta, R. J., and Carlson, J. M., 2006. Resolution of GPS data from the 2004 Mw6.0 Parkfield Earthquake. *EOS Trans. AGU, 87(52), Fall Meet. Suppl., Abstract NS31C-1582.*

10. Ma, S., Archuleta, R. J., Custódio, S., and Liu, P., 2006. Dynamic Modeling of the 2004 Mw 6.0 Parkfield Earthquake. *EOS Trans. AGU, 87(52), Fall Meet. Suppl., Abstract S32A-03.*

11. Custódio, S., Ma, S. and Archuleta, R. J., 2006. Modeling Earthquake Dynamic Ruptures in Realistic 3D Heterogeneous Material – Preliminary Results. *Annual Meeting of the Southern California Earthquake Center, Palm Springs, California*, Sep. 10-13, 2006.

12. Page, M., Custódio, S., Archuleta, R. J., and Carlson, J., 2006. Resolution of GPS data from the 2004 Mw6.0 Parkfield Earthquake. *Annual Meeting of the Southern California Earthquake Center, Palm Springs, California*, Sep. 10-13, 2006.

13. Custódio, S. and Archuleta, R. J., 2006. The Parkfield Section of the San Andreas Fault, California: Characteristic or Complementary Earthquake Ruptures? *International workshop on comparative studies of the North Anatolian Fault and the San Andreas Fault (Southern California), Istanbul Technical University, Turkey*, Aug. 14-18, 2006.

14. Page, M., Custódio, S., Archuleta, R. J., and Carlson, J., 2006. Source Inversion Resolution Analysis of the 2004 Mw6.0 Parkfield Earthquake. *International workshop on comparative studies of the North Anatolian Fault and the San Andreas Fault (Southern California), Istanbul Technical University, Turkey*, Aug. 14-18, 2006.

15. Heleno, S. I. N., Fonseca, J. F. B. D., Custódio, S. and Faria, B. V. E., 2006. Unusual Volcanic Tremor Observations from Fogo Island, Cape Verde. *IV Jornadas Internacionais de Vulcanologia do Pico, Azores*, May 2-3, 2006.

16. Custódio, S., Liu, P., Archuleta, R., and Larson, K., 2006. Kinematic Inversion of the 2004 M_w 6 Parkfield Earthquake from Strong Motion Seismic Data and High-rate GPS Data. *Seismological Research Letters*, vol. 77(2), pp 289.

17. Custódio, S., Archuleta, R., and Liu, P., 2006. Kinematic Rupture Model for the 1966 M_w6 Parkfield Earthquake with Assessment of Resolution. *Seismological Research Letters*, vol. 77(2), pp 243.

18. Custódio, S., Liu, P. and Archuleta, R., 2005. The 2004 Parkfield Earthquake and its Relation to the Surrounding Fault-Zone Structure. *EOS Trans. AGU, 86(52), Fall Meet. Suppl., Abstract S53A-1086.*

19. Archuleta, R., Custódio, S., and Liu, P., 2005. Comparison Between the Ruptures of the 1966 and 2004 Mw6 Parkfield Earthquakes. *EOS Trans. AGU, 86(52), Fall Meet. Suppl., Abstract S52A-05.*

20. Ma, S., Custódio, S., Liu, P. and Archuleta, R., 2005. Spontaneous Rupture Modeling of the 2004 Parkfield Earthquake With Estimates of the Fracture and Radiated Energy. *EOS Trans. AGU, 86(52), Fall Meet. Suppl., Abstract S33C-02.*

21. Lavallée, D., Custódio, S., Liu, P. and Archuleta, R., 2005. On the Random Nature of Earthquake Source and Ground Motion: the 2004 Parkfield Earthquake. *EOS Trans. AGU, 86(52), Fall Meet. Suppl., Abstract S13B-0200.*

22. Archuleta, R.J., Custódio, S., and Liu, P., 2005. Resolving the Source Parameters of the Parkfield Earthquake By Multiple Inversions of Different Data Sets. *Symposium on Strong Ground Motion Prediction and Seismic Exploration in Urban Areas, Earthquake Research Institute, University of Tokyo, Japan*, Oct. 25-27, 2005.

23. Custódio, S., Liu, P. and Archuleta, R. J., 2005. 2004 Parkfield Kinematic Inversion Using Strong-Motion Data Corrected by Site Effects. *Annual Meeting of the Southern California Earthquake Center, Palm Springs, California*, Sep. 11-14, 2005.

24. Lavallée, D., Custódio, S. and Liu, P., 2005. On the Random Nature of Earthquake Processes: A Case Study the 2004 Parkfield Earthquake. *Annual Meeting of the Southern California Earthquake Center, Palm Springs, California*, Sep. 11-14, 2005.

25. Custódio, S., Liu, P. and Archuleta, R.J., 2005. Prediction of Near-source Ground Motion for the 2004 Mw 6.0 Parkfield Earthquake: Effects of Using Different Data Sets in the Inversion. *Seismological Research Letters*, vol. 76(2), pp 211.

26. Liu, P., Custódio, S. and Archuleta, R.J., 2005. Finite-fault Model of the 2004 Mw 6.0 Parkfield Earthquake from Inversion of Strong-motion Data. *Seismological Research Letters*, vol. 76(2), pp 210.

27. Custódio, S., Fonseca, J.F.B.D., Faria, B.V.E. and d'Oreye, N., 2005. Tidal Modulation of seismic noise and volcanic tremor in Fogo island, Cape Verde. *International Workshop on Ocean Island Volcanism, Sal Island, Cape Verde Republic.*

28. Heleno, S., Custódio, S., Faria, B. and Bandomo, Z., 2004. Volcanic tremor observations in Fogo Island, Cape Verde. *6th National Congress of Seismology and Earthquake Engineering and International Workshop, Universidade do Minho, Portugal*, pp. 966.

29. Custódio, S. and Heleno, S.I., 2004. Unusual Volcanic Tremor Observations in Fogo Island, Cape Verde. *AGU Fall Meeting Abstracts*, abstract #V14B-04.

30. Custódio, S., Fonseca, J.F.B.D., Faria, B.V.E. and d'Oreye, N., 2002. Tidal Modulation of the Volcanic Tremor in the Fogo Island, Cape Verde. *XXVIII General Assembly of the ESC, 1-6 September 2002 (Book of abstracts and papers)*, pp.51.

31. Custódio, S., Bandomo, Z., Faria, B.V.E., d'Oreye, N., Heleno, S. and Fonseca, J.F.B.D., 2002. Semi-diurnal Modulation of the Seismic Noise in the Fogo Island, Cape Verde, and its Possible Causes. *Proceedings of the 3ª Assemblea Hispano-Portuguesa de Geodesia y Geofisica, 4-8 February 2002*, pp.234.