NSF BIOGRAPHICAL SKETCH

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IDENTIFYING INFORMATION:

NAME: Tromp, Jeroen

ORCID: 0000-0002-2742-8299

POSITION TITLE: Blair Professor of Geology

ORGANIZATION AND LOCATION: Princeton University, Princeton, NJ, US

Professional Preparation:

ORGANIZATION AND LOCATION	DEGREE (if applicable)	DATE RECEIVED	FIELD OF STUDY
Princeton University, Princeton, NJ, US	PHD	05/1992	Geophysics
Princeton University, Princeton, NJ, USA	MS	1990	Geophysics
Universiteit Utrecht, Utrecht, Utrecht, NL	BS	06/1988	Geophysics

Appointments and Positions

2008 - present Blair Professor of Geology, Princeton University, Princeton, NJ, US
2020 - present Full Member, Rutgers Cancer Institute of New Jersey, New Brunswick, NJ, USA
2019 - present Scientific Advisory Committee for the Leadership Class Computing Facility , Texas Advanced Computing Center, Austin, TX, USA
2017 - present Director, Princeton Institute for Computational Science & Engineering, Princeton, NJ, USA
2008 - present Professor of Applied & Computational Mathematics, Program in Applied & Computational Mathematics, Princeton University, Princeton, NJ, USA
2013 - 2017 Associate Director, Princeton Institute for Computational Science & Engineering, Princeton University, Princeton, NJ, USA
2010 - 2014 Faculty Fellow, Princeton Institute of Theoretical Science, Princeton University, Princeton, NJ, USA
2009 - 2013 Director, Princeton Institute for Computational Science & Engineering, Princeton University, Princeton, NJ, USA
2008 - 2009 Distinguished Visiting Professor, Dept of Civil Engineering, National University of Singapore, Queenstown, Not Applicable, N/A, Singapore
2003 - 2008 Director, Seismological Laboratory, Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, CA, USA
2000 - 2008 Professor, California Institute of Technology, Geological & Planetary Sciences, Pasadena, CA, US
1992 - 2000 Professor, Harvard University, Earth & Planetary Sciences, Cambridge, MA, US

Products

Products Most Closely Related to the Proposed Project

1. Bozdağ E, Peter D, Lefebvre M, Komatitsch D, Tromp J, Hill J, Podhorszki N, Pugmire D. Global adjoint tomography: first-generation model. Geophysical Journal International. 2016 December 01; 207(3):1739-1766. Available from: https://academic.oup.com/gji/article-lookup/doi/10.1093/gji/ggw356 DOI: 10.1093/gji/ggw356
2. Bachmann E, Tromp J. Source encoding for viscoacoustic ultrasound computed tomography. J Acoust Soc Am. 2020 May;147(5):3221. PubMed PMID: 32486789.
3. Lei W, Ruan Y, Bozdağ E, Peter D, Lefebvre M, Komatitsch D, Tromp J, Hill J, Podhorszki N, Pugmire D. Global adjoint tomography—model GLAD-M25. Geophysical Journal International. 2020 October; 223(1):1-21. Available from: https://academic.oup.com/gji/article/223/1/1/5841525 DOI: 10.1093/gji/ggaa253
4. Tromp J, Bachmann E. Source encoding for adjoint tomography. Geophysical Journal International. 2019 September; 218(3):2019-2044. Available from: https://academic.oup.com/gji/article/218/3/2019/5512593 DOI: 10.1093/gji/ggz271

Other Significant Products, Whether or Not Related to the Proposed Project

1. Tromp J. Support for anisotropy of the Earth's inner core from free oscillations. Nature. 1993 December; 366(6456):678-681. Available from: http://www.nature.com/articles/366678a0 DOI: 10.1038/366678a0
2. Komatitsch D, Tromp J. Introduction to the spectral element method for three-dimensional seismic wave propagation. Geophysical Journal International. 1999 December; 139(3):806-822. Available from: https://academic.oup.com/gji/article-lookup/doi/10.1046/j.1365-246x.1999.00967.x DOI: 10.1046/j.1365-246x.1999.00967.x
3. Tromp J, Tape C, Liu QY. Seismic tomography, adjoint methods, time reversal and banana-doughnut kernels. Geophysical Journal International. 2005; 160(1):195-216. Available from: http://gateway.webofknowledge.com/gateway/Gateway.cgi?GWVersion=2&SrcAuth=ORCID&SrcApp=OrcidOrg&DestLinkType=FullRecord&DestApp=V DOI: 10.1111/j.1365-246X.2004.02453.x
4. Komatitsch D, Tromp J. Spectral-element simulations of global seismic wave propagation - I. Validation. Geophysical Journal International. 2002; 149(2):390-412. Available from: http://gateway.webofknowledge.com/gateway/Gateway.cgi?GWVersion=2&SrcAuth=ORCID&SrcApp=OrcidOrg&DestLinkType=FullRecord&DestApp=V DOI: 10.1046/j.1365-246X.2002.01653.x
5. Komatitsch D, Tromp J. Spectral-element simulations of global seismic wave propagation - II. Three-dimensional models, oceans, rotation and self-gravitation. Geophysical Journal International. 2002; 150(1):303-318. Available from: http://gateway.webofknowledge.com/gateway/Gateway.cgi?GWVersion=2&SrcAuth=ORCID&SrcApp=OrcidOrg&DestLinkType=FullRecord&DestApp=V DOI: 10.1046/j.1365-246X.2002.01716.x

Synergistic Activities

1. Development of opensource software for the simulation of 2D and 3D acoustic/(a)elastic/poroelastic based upon spectral-element methods (geodynamics.org)

2. Near real-time animations of all southern California earthquakes with magnitudes greater than 3.5. (shakemovie. caltech.edu)
3. Near real-time animations and synthetic seismograms for all global earthquakes with magnitudes greater than 5.5. global.shakemovie.princeton.edu)

Certification:

When the individual signs the certification on behalf of themselves, they are certifying that the information is current, accurate, and complete. This includes, but is not limited to, information related to domestic and foreign appointments and positions. Misrepresentations and/or omissions may be subject to prosecution and liability pursuant to, but not limited to, 18 U.S.C. §§ 287, 1001, 1031 and 31 U.S.C. §§ 3729-3733 and 3802.

Certified by Tromp, Jeroen in SciENcv on 2023-03-29 11:58:25