

## VITA

NAME: T. Guy Masters

CITIZENSHIP: Resident Alien

### DEGREES:

B.Sc. 1975 University of Manchester, England (Physics/Geology-Class I)

Ph.D. 1979 University of Cambridge, England

### POSITIONS HELD:

9/2009–present: Director, Institute of Geophysics and Planetary Physics,  
SIO, University of California, San Diego.

9/2008–9/2009: Program Director (GEO), SIO, UCSD

7/2005–6/2006: Director for the USCD Earth Sciences Program.

7/1999–6/2002: Director for the USCD Earth Sciences Program.

7/1999–6/2002: Vice Chair, SIO Graduate Department.

7/1990–present Professor, Institute of Geophysics and Planetary Physics,  
SIO, University of California, San Diego.

7/1985–6/1990 Associate Professor, Institute of Geophysics and Planetary Physics,  
SIO, University of California, San Diego.

7/1981–6/1985 Assistant Research Geophysicist, Institute of Geophysics and Planetary Physics,  
SIO, University of California, San Diego.

1/1980–6/1981 Postgraduate Researcher, Institute of Geophysics and Planetary Physics,  
SIO, University of California, San Diego.

1979–1980 Cecil and Ida Green Scholar, Institute of Geophysics and Planetary Physics,  
SIO, University of California, San Diego.

10/1978–12/1978 Research Assistant, Department of Geodesy and Geophysics,  
University of Cambridge, England.

### PROFESSIONAL SOCIETIES:

Royal Astronomical Society;

American Geophysical Union;

Seismological Society of America;

Royal Society of London;

AAAS

### AWARDS:

Cecil and Ida Green Scholarship (1979–80)

Fellow AGU, 1995

Fellow, Royal Society of London, 2005

### Graduate student supervision:

Dr J.S. Gombert (1986)

Dr M. Ritzwoller (1987)

Dr M.F. Smith (1989)

Dr R.L. Woodward (1989)

Dr R. Widmer (1991)

Dr. V. Schulte-Pelkum (2001)

Dr. U. Manners (2008)

Dr. J. Scott(1992)

Dr. J. Bhattacharyya (1995)

Dr. H. Bolton (1996)

Dr. S. Johnson (1997)

Dr. J. Hanson (1998)

Dr. C. Reif (2005)

### Postdoctoral supervision:

Dr I.H. Henson (1987–1988)

Dr G. Laske (1994–1996)

Dr T. Becker (2002–2004)

Dr. Q Liu (2007–2008)

Dr J. Um (1994–1997)

Dr. G. Pari (1997–1999)

Dr. M Ishii (2003–2005)

Dr. S. Oki (2007–2008)

### INVITED LECTURES (2006–2009):

(excluding invited AGU presentations)

CalTech seminar, April, 2006

Bristol University, June, 2006

Gordon Conference, High Pressure, June, 2006

Instructor, CIDER meeting, Santa Barbara Jul. 2006  
Munich Workshop, Earth's mantle, Sept. 2006  
CIG Workshop, Saint Louis, Nov. 2006  
Northwestern, Division seminar, Mar. 2007  
Princeton, Symposium in honor of Tony Dahlen, Sep. 2007  
Munich Workshop, Earth's mantle, Sept. 2007  
Max Plank Institute, Schloss Ringberg Workshop, Jan.2008  
Instructor, CIDER meeting, Santa Barbara Jul. 2008  
CalTech Seismo Lab seminar, Oct. 2008  
UCLA Division seminar, Mar. 2009

#### SERVICE TO THE COMMUNITY (excluding university service):

Member, ISC Executive Committee (International Seismological Center) (2006–2008)  
Chair, ISC Executive Committee (2009–present)  
Member, Steering Committee for COMPRES (Consortium for Material Properties research in the Earth Sciences)(2003–2008)  
Member, Executive Committee of SEDI (Studies of the Earth's Deep Interior)(1991–present)  
Member, Steering Committee of CIDER(2003–present)  
Member, US Array Advisory Committee (2008–present)  
Writing committee for the Long Range Science Plan in Seismology (2008)  
Executive committee of IRIS (Incorporated Research Institutions in Seismology) 1991–1993  
Executive committee of CHiPR (Center for High Pressure Research) 1997–2001  
Hess medal committee (AGU), AGU 1995–1996  
NRC/NAS Committee on Seismology 1996–2000  
NSF Geophysics Panel 1995–1997  
NSF CSEDI Panel 1996  
DMSSC, IRIS, 1999-2002

#### RESEARCH INTERESTS:

1) Analysis of earth structure using the splitting and coupling of free oscillations; 2) 3D structure and anisotropy of the upper mantle using the phase and polarization of surface waves; 3) Global mantle tomography using long-period absolute and differential travel times; 4) Attenuation in the earth from mode, surface wave, and body-wave data; 5) Global crust and lithosphere models. 6) Inclusion of mineral physics data into seismological modelling

#### BIBLIOGRAPHY (excluding abstracts and unpublished reports)

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- Masters, G., J. Berger, and F. Gilbert, Observations from the IDA network of the moment tensor of the Oaxaca earthquake, November 29, 1978, *Geofisica Internacional*, **17**, 281–286, 1978.
- Gubbins, D., and T.G. Masters, Driving mechanisms for the Earth's dynamo, In: *Advances in Geophysics, Academic Press*, pp.1–50, 1979.
- Gubbins, D., T.G. Masters, and J.A. Jacobs, Thermal evolution of the Earth's core, *Geophys. J. R. Astron. Soc.*, **59**, 57–99, 1979.
- Masters, G., Observational constraints on the chemical and thermal structure of the earth's deep interior, *Geophys. J. R. Astron. Soc.*, **57**, 507–534, 1979.
- Masters, G., and F. Gilbert, Structure of the inner core inferred from observations of its spheroidal shear modes, *Geophys. Res. Lett.*, **8**, 569–571, 1981.
- Masters, G., T.H. Jordan, P.G. Silver, and F. Gilbert, Aspherical earth structure from fundamental spheroidal-mode data, *Nature*, **298**, 609–613, 1982.
- Masters, G., and F. Gilbert, Attenuation in the earth at low frequencies, *Phil. Trans. R. Soc. London*, **A308**, 479–522, 1983.
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- Priestley, K.F., and T.G. Masters, Source Mechanism of the September 19, 1985 Michoacan earthquake and its implications, *Geophys. Res. Lett.*, **13**, 601–604, 1986.
- Agnew, D.C., J. Berger, W.E. Farrell, J.F. Gilbert, G. Masters, and D. Miller, Project IDA: A decade in review, *EOS Trans. AGU*, **67**, 203–212, 1986.

- Ritzwoller, M., G. Masters, and F. Gilbert, Observations of anomalous splitting and their interpretation in terms of aspherical structure, *J. Geophys. Res.*, **91**, 10,203–10,228, 1986.
- Stark, P.B., R.L. Parker, G. Masters, and J.A. Orcutt, Strict bounds on seismic velocity in the spherical earth, *J. Geophys. Res.*, **91**, 13,892–13,902, 1986.
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- Masters, G., and M. Ritzwoller, Low frequency seismology and three-dimensional structure – observational aspects, In: *Mathematical Geophysics*, eds. N.J. Vlaar, G. Nolet, M.J.R. Wortel, and S.A.P.L. Cloetingh, D. Reidel Publ. Co., Dordrecht, The Netherlands, pp.1–30, 1988.
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- Gomberg, J.S., K.F. Priestley, T.G. Masters, and J.N. Brune, The structure of the crust and upper mantle of northern Mexico, *Geophys. J.*, **94**, 1–20, 1988.
- Gomberg, J.S., and T.G. Masters, Waveform modeling using locked-mode synthetic and differential seismograms: application to the determination of the structure of Mexico, *Geophys. J.*, **94**, 193–218, 1988.
- Smith, M.F., and G. Masters, Aspherical structure constraints from free oscillation frequency and attenuation measurements, *J. Geophys. Res.*, **94**, 1953–1976, 1989.
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- Masters, G., Low frequency seismology and the three-dimensional structure of the Earth, *Phil. Trans. R. Soc. London*, **A328**, 329–349, 1989.
- Smith, M.F., and G. Masters, The effect of Coriolis coupling of free oscillation multiplets on the determination of aspherical earth structure, *Geophys. Res. Lett.*, **16**, 263–266, 1989.
- Shearer, P.M., and G. Masters, The density and shear velocity contrast at the inner core boundary, *Geophys. J. Int.*, **102**, 491–498, 1990.
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- Manners, U., Q. Liu, G. Masters, and J. Tromp, Modeling the lowermost mantle using diffracted phases and finite frequency kernels, *Geophys. J. Int.*, , (in revision), 2009.
- Manners, U., and G. Masters, Relations between shear velocity and bulk sound speed in the lower mantle, *Geophys. J. Int.*, , (in revision), 2009.
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