

Seung-Sep Kim

Curriculum Vitae

Page 1

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Citizenship: Republic of Korea
Marital Status: Single
Date of Birth: 5 November 1975

EDUCATION:

Ph.D. 2010 Geology and Geophysics, University of Hawai'i at Mānoa, USA

Remote Sensing of Seamounts: A Geophysical Study of Lithospheric Flexure, Seamount Statistics and Intraplate Volcanism. Dissertation Advisor: Paul Wessel

M.Sc. 2005 Geology and Geophysics, University of Hawai'i at Mānoa (UH), USA

Separation of Regional and Residual Components of Bathymetry using Directional Median Filtering. Thesis Advisor: Paul Wessel

B.Sc. 2000 Earth and Environmental Sciences, Korea University (KU), South Korea

Magnetic Exploration on Archaeological Sites: A Case Study of Poryong and Nonsan, Korea. Thesis Advisor: Seong-Jae Doh

PROFESSIONAL WORK:

2011 – present Postdoctoral Researcher, Seoul National University

Spring 2010 Graduate Assistant (TA), University of Hawai'i at Mānoa

2002 – 2009 Graduate Assistant (RA), University of Hawai'i at Mānoa

2000 – 2002 Research Assistant, Korea Ocean Research and Development Institute (KORDI)

AWARDS:

2009 Third place, Math Matters Contest, SIAM

1998 – 1999 Semester High Honors, Korea University

GRANTS AND SCHOLARSHIPS:

2010 Fred M. Bullard Endowed Graduate Fellowship (\$6k), SOEST/GG, UH

2009 Travel Grant (\$1k), Graduate Student Organization, University of Hawai'i at Mānoa

2008 Student Research Grant (\$2k), International Association for Mathematical Geosciences

2008 Travel Grant (\$1.3k), Graduate Student Organization, University of Hawai'i at Mānoa

2007 Student Engagement Grant (\$33k), Maui High Performance Computing Center

1999 – 2000 Lotte Foundation Scholarships (\$7.5k), Korea University

1998 Best Honors Scholarship (\$2k), Korea University

AFFILIATIONS:

American Geophysical Union (AGU)
Society of Exploration Geophysicists (SEG)
Society for Industrial and Applied Mathematics (SIAM)
East–West Center Student Affiliate (2010)

FIELD EXPERIENCE:

2007/02 UH *SlowEQ*, Installation of seismometers on the south flank of Kilauea
2005/10 UH R/V *Kilo Moana*, Geophysical mapping of the offshore features of Kaua‘i
2005/07 USCG *Healy*, Seafloor mapping for the Hidden Ocean Arctic 2005
2004/12 KORDI R/V *Onnuri*, Sampling of hydrothermal vents in the eastern Lau Basin
2003/12 UH R/V *Kilo Moana*, Geophysical mapping of the offshore features of Kaua‘i
2002/11 UH R/V *Kilo Moana*, Geophysical mapping of the North Arch lava flows of the Hawai‘i Islands
2002/10 UW R/V *Thompson*, Sampling of underwater radial vents of Mauna Loa using WHOI Jason2
2001/06 KORDI R/V *Onnuri*, Geophysical mapping of seamounts in the northeast Marshall Islands
2001/05 KORDI R/V *Onnuri*, Geophysical mapping and sampling in the Ayu Trough, southern Philippine Sea
2000/09 KORDI R/V *Onnuri*, Acoustic imaging of manganese nodules in the central Pacific using HMRG MR1

OTHERS:

Expertise Acquisition, processing, and interpretation of gravity, magnetic, and bathymetric data. Geophysical data analysis and inversion.

International collaboration Geophysical mapping of fracture zones and small-scale volcanism on the Pacific plate (SOEST/KORDI)

Expert advice given Survey planning for KORDI deep-tow side-scan mapping of hydrothermal vents at Tongan seamounts, 2010

Outreach Science demos at SOEST/UH Open House 2005, 2007 and 2009

Program languages Fortran, C, MATLAB, Shell scripting, GMT

Platforms Mac OS, Windows, Unix, Linux

Languages Korean (native), English (proficient)

Military service 1996 – 1998 Korea Army (mandatory national service)

PAPERS:

1. **Kim, S.-S.**, and P. Wessel (2011), New global seamount census from altimetry-derived gravity data, *Geophys. J. Int.*, in revision.
2. **Kim, S.-S.**, and P. Wessel (2010), Flexure modeling at seamounts with dense cores, *Geophys. J. Int.*, 182, 583-598.
3. Wessel, P., D. T. Sandwell, and **S.-S. Kim** (2010), The global seamount census, *Oceanography*, 23, 24-33.
4. Wessel, P., T. Anderson, R. Austin, A. Benediktsdottir, M. T. Chandler, M. M. Conley, **S.-S. Kim**, R. L. Michaud, M. E. Rumpf, J. D. Sleeper, and J. R. Weiss (2009), Seminar 2.0: Learning with Skype and video podcasts, *Eos Trans. AGU*, 90, 145-147.
5. **Kim, S.-S.**, and P. Wessel (2008), Directional median filtering for regional-residual separation of bathymetry, *Geochem. Geophys. Geosyst.*, 9, Q03005, doi:10.1029/2007GC001850.
6. Lee, S.-M., and **S.-S. Kim** (2004), Vector magnetic analysis within the southern Ayu Trough, equatorial western Pacific, *Geophys. J. Int.*, 156, 213-221.

ABSTRACTS:

1. **Kim, S.-S.**, and P. Wessel (2009), SeaHunt: A nonlinear inversion for seamounts using the satellite-derived vertical gravity gradient, Seamounts '09 Workshop, *Workshop Volume*, 15-18.
2. P. Wessel, **S.-S. Kim** and Chandler. M. T. (2008), Marine gravity from satellite altimetry and the search for seamounts and fracture zones, *Int. Geo. Congr.*, 33, Abstract OSP02208L INVITED.
3. **Kim, S.-S.**, and P. Wessel (2008), Detecting seamounts in the satellite-derived vertical gravity gradient field by nonlinear inversion, *Geophysical Research Abstracts, EGU*, 10, EGU2008-A-04854.
4. Wessel, P., **S.-S. Kim** and D. T. Sandwell (2006), Global Distribution of Seamounts as Inferred from Ship Depth Soundings and Satellite Altimetry, *Eos Trans. AGU*, 87(52), Fall Meet. Suppl., Abstract V32A-01 INVITED.
5. Wessel, P., and **S.-S. Kim** (2006), Satellite Altimetry, Software, Fracture Zones and Seamounts, *Eos Trans. AGU*, 87(52), Fall Meet. Suppl., Abstract T51F-07 INVITED.
6. **Kim, S.-S.**, and P. Wessel (2006), Flexural Modeling With Dense Seamount Cores: Effect on the Estimation of Elastic Thickness, *Eos Trans. AGU*, 87(52), Fall Meet. Suppl., Abstract T51A-1515.
7. **Kim, S.-S.**, P. Wessel and D. Naar (2003), Regional and Residual Bathymetry and Flexure Modeling of the Nazca Plate, *Eos Trans. AGU*, 84(46), Fall Meet. Suppl., Abstract V12B-0585.

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8. **Kim, S.-S.**, and S.-M. Lee (2001), Investigation of Marine Magnetic Vector Anomalies in the Southern Ayu Trough, Southern Philippine Sea, *Eos Trans. AGU*, 82(47), Fall Meet. Suppl., Abstract T12C-0930.