PROFESSOR DHANANJAY RAVAT

CONTACT INFORMATION

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EDUCATION

Bachelor of Science (Geology), M.S. University of Baroda, Baroda, India, 1981.

Master of Science (Geophysics), Purdue University, West Lafayette, Indiana, USA, 1985.

Doctor of Philosophy (Geophysics), Purdue University, West Lafayette, Indiana, USA, 1989.

APPOINTMENTS

- 2007-Present: Professor of Geophysics at University of Kentucky
- 2009-2012: Chair of Department of Earth & Environmental Sciences at University of Kentucky
- Nov/Dec 2008: Visiting Scientist, Geoscience Australia, Canberra, Australia
- 2003–2007: Professor of Geophysics at Southern Illinois University C'dale
- Summers 2005 & 2002: Senior Visiting Scientist, GeoForschungsZentrum, Potsdam, Germany
- July/August 2004: Visiting Scientist, Jet Propulsion Laboratory (JPL), CalTech, Pasadena
- January 2004 & December 2009: Visiting Scientist, Istituto Nazionale di Geofisica e Vulcanologia, Roma, Italia
- 1997-2003: Associate Professor of Geophysics at Southern Illinois University C'dale
- 1997-1998: Senior Visiting Research Scientist in Geomagnetism at GSFC/NASA
- 1991-1997: Assistant Professor of Geophysics at Southern Illinois University C'dale
- July 1995: Visiting Research Scientist in Geodynamics Branch at GSFC/NASA
- Summer 1994: Visiting Research Scientist in Geodynamics Branch at GSFC/NASA
- Summer 1992: Visiting Research Scientist in Geodynamics Branch at GSFC/NASA
- 1990: Post-Doctoral Research Associate in Geophysics at Purdue University
- 1982-1989: Teaching & Research Assistant in Geophysics at Purdue University

SUMMARY OF PAST PERFORMANCE

- **Grants managed:** 24; Peer-reviewed Publications: 83
- **Edited** special issues of journals: 3 (including IJES issue on terrestrial heat flow 2015-2017).
- **Graduate students** guided: 12; **Undergraduate students**' research guided: 22; **Post-docs**: 8; International Ph.D. student visitors: 4
- **Convener** of Conference Sessions/Workshops (AGU/IUGG/IAGA): 15
- **Public-domain datasets of substantial influence**: Long-wavelength corrected North American Magnetic Anomaly Map (2002); World Digital Magnetic Anomaly Map (2007); Full Spectrum Magnetic Anomaly Database of the North America (2009)

SELECTED PUBLICATIONS

Ferré, E., Kupenko, I., Martín-Hernández, F., **Ravat, D.**, & Sanchez-Valle, C., 2020, Magnetic Sources in the Earth's Mantle, Nature Reviews Earth and Environment, DOI: 10.1038/s43017-020-00107-x

Ravat, D., Purucker, M. E., & Olsen, N. (2020). Lunar magnetic field models from Lunar Prospector and SELENE/Kaguya along-track magnetic field gradients. Journal of Geophysical Research: Planets, 125, e2019JE006187, DOI: 10.1029/2019JE006187

Zhang, H. L., **Ravat, D.,** & Lowry, A. R. (2020). Crustal composition and Moho variations of the central and eastern United States: Improving resolution and geologic interpretation of EarthScope USArray seismic images using gravity. Journal of Geophysical Research: Solid Earth, 125, DOI: 10.1029/2019JB018537

Olsen, N., **D. Ravat**, C.C. Finlay, L. Kother, 2017, LCS-1: a high-resolution global model of the lithospheric magnetic field derived from CHAMP and Swarm satellite observations, Geophys. J. Int. DOI: 10.1093/gji/ggx381

Ravat, D., P. Morgan, A. Lowry, 2016, Geotherms from the temperature-depth–constrained solutions of 1-D steady-state heat-flow equation, GEOSPHERE, 12, DOI: 10.1130/GES01235.1

De Ritis, R. , **D. Ravat**, G. Ventura, and M. Chiappini, 2013, Curie isotherm depth from aeromagnetic data constraining shallow heat source depths in the central Aeolian Ridge (Southern Tyrrhenian Sea, Italy), Bull. Volcanol, 75, 710-xxx, DOI 10.1007/s00445-013-0710-9.

Ravat, D., A. Salem, A.M.S.Abdelaziz, E. Elawadi, and P. Morgan, 2011, Probing magnetic bottom and crustal temperature variations along the Red Sea margin of Egypt, Tectonophysics, 510, 337-344.

Salem, A., Williams, S., Samson, E., Fairhead, **D. Ravat**, D., and R.J. Blakely, 2010, Sedimentary basins reconnaissance using the magnetic Tilt-Depth method, Exploration Geophysics, 41, 198-209.

Salem, A., S. Williams, J.D. Fairhead, R. Smith, and **D. Ravat**, 2008, Interpretation of magnetic data using tilt-angle derivatives, Geophysics, 73, L1-L10.

Ravat, D., Finn, C., Hill, P., Kucks, R., Phillips, J., Blakely, R., Bouligand, C., Sabaka, T., Elshayat, A., Aref, A., and Elawadi, E., 2009, A preliminary, full spectrum, magnetic anomaly grid of the United States with improved long wavelengths for studying continental dynamics--A website for distribution of data: U.S. Geological Survey Open-File Report 2009–1258.

Korhonen, J., (and the rest alphabetically) J.D. Fairhead, M. Hamoudi, K. Hemant, V. Lesur, M. Mandea, S. Maus, M. Purucker, **D. Ravat**, T. Sazonova and E. Thebault, 2007, World Digital Magnetic Anomaly Map, CCGM-CGMW/UNESCO, 1:50 000 000, 1 sheet and 1 DVD.

Ravat, D., T.G. Hildenbrand, and W. Roest, 2003, New way of processing near-surface magnetic data: The utility of the Comprehensive Magnetic Field Model, The Leading Edge, 22, 784-785.

Ravat, D., 2000, Aeromagnetic Surveying, Curie Temperature, Geomagnetic Measurement, Techniques and Surveys, Geomagnetic Measurement, Techniques and Surveys, Geomagnetism: External Fields, Geomagnetism: Main Field, Secular Variation and Westward Drift, Geomagnetism: Polarity Reversals, Magnetic Pole, Magnetic Field: Origin of Internal Field, *in* The Oxford Companion to the Earth, P.L. Hancock and B.J. Skinner (eds.), Oxford University Press, Oxford, U.K.