

ANUPMA PRAKASH

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PROFESSIONAL PREPARATION:

- 1986 to 1989 B.Sc. in Geology, Zoology and Botany from Lucknow University, India.
1989 to 1991 M.Sc. in Geology from Lucknow University, India.
1992 to 1996 PhD in Earth Sciences from Indian Institute of Technology, Roorkee, India.
Thesis title: *Remote Sensing - GIS based geoenvironmental studies in Jharia coalfield, India, with special reference to coalmine fires.*
1996 to 1998 Post-Doctoral Researcher at the Applied Geomorphological Survey Division, International Institute for Geoinformation Science and Earth Observation (ITC), Enschede, The Netherlands.

APPOINTMENTS:

- Current Professor at the Geophysical Institute and the Department of Geology and Geophysics, University of Alaska Fairbanks, USA.
03/02 to 06/09 Associate professor at the Geophysical Institute and the Department of Geology and Geophysics, University of Alaska Fairbanks, USA.
1998 to 2002 Assistant professor at the Department of Earth Systems Analysis, ITC, Enschede, The Netherlands.

REPRESENTATIVE EXPERIENCE:

Dr. Prakash is a remote sensing geologist and geophysicist who specializes in the use of imaging spectrometry for mapping land surface composition and change across Alaska. She is currently working in interior Alaska (on remote sensing based near surface permafrost modeling) and Alaska North Slope (on remote sensing based evapo-transpiration modeling). Dr. Prakash is deeply involved in promoting STEM literacy at all grade levels and making geoscience data accessible and usable by educators. Her geoscience curricula material are part of reviewed collections of digital libraries such as DLESE and NSDL.

PUBLICATIONS RELATED TO THE PROPOSED PROJECT

- Wyatt, C., Mumm, J., Trochim, E., Fochesatto, J., **Prakash, A.**, Anderson, M., and Kane, D., 2009, An Integrated Multi-Scale Approach to the Study of Evapotranspiration on the Alaskan North Slope: Preliminary Characterization of Fluxes and Turbulence in the Imnavait Creek Basin, *Eos*, Vol. 90, No. 52, 29 December 2009, Fall Meet. Suppl., Abstract H41G-0980:
Panda, S., **Prakash, A.**, Solie, D., Romanovsky, V., and Jorgenson, T. M., 2010, Remote sensing and field-based mapping of permafrost distribution along the proposed gas pipeline corridor, Interior Alaska, *Permafrost and Periglacial Processes* (in review).
Quattrochi, D.A., **Prakash, A.**, Eveva, M., Wright, R., Hall, D.K., Anderson, M., Kustas, W.P., Allen, R.G., Pagano, T., and Coolbaugh, M.F., 2010, Thermal Remote Sensing: Theory, Sensors, and Applications. in *Manual of Remote Sensing*, 4th edition (in press).
Hook, S.J., Abrams, M., Anderson, M., Crowley, J., Eneva, M., Giglio, L., Kruse, F., Ousounov, D., **Prakash, A.**, Quattrochi, D., Realmuto, V., Roy, D., Silver, P. and Wright, R., 2008, The Thermal Infrared Instrument on the HypsIRI Mission: a key measurement for Wildfire and Water Use Ecosystems Related Research. Carbon Cycle and Ecosystems Joint Science Workshop, Adelphi, MD., April 28 – May 2.

Trochim, E.D., Kane, D.L., and **Prakash, A.**, 2008. Examining the Temporal Variation in Headwater Drainage Networks and Potential to Thermokarst using Remote Sensing in the Imnavait Basin. *9th International Conference on Permafrost*, Fairbanks, AK, June 29 -July 3.

OTHER SIGNIFICANT PUBLICATIONS:

Wiltse, M., **Prakash, A.**, Burns, L., 2010, Image Analysis of Airborne Geophysical Data from the Salcha River – Pogo Area, Alaska. *Canadian Journal of Remote Sensing*, (in print).

Smikrud, K., **Prakash, A.**, and Nichols, J., 2008, Decision based fusion for improved fluvial landscape classification using digital aerial photographs and forward looking infrared images. *Photogrammetric Engineering and Remote Sensing*, 74 (7), 903–911.

Ledley, T.S., **Prakash, A.**, Manduca, C., Fox, S., and DAWG members, 2008, Recommendations for Making Geoscience Data Accessible and Usable in Education. *EOS*, 89(32), 291, (DOI: 10.1029/2008EO2003).

Connor, C., and **Prakash, A.**, 2008, Experiential Discoveries in Geoscience Education: The EDGE Program in Alaska. *Journal of Geoscience Education*, 56(2), 179-186.

Prakash, A., and Berthelote A.R., 2007, Subsurface coal mine fires: Laboratory simulation, numerical modeling and depth estimation. *Geological Society of America: Reviews in Engineering Geology*, 18, 211-218.

SYNERGISTIC ACTIVITIES:

- Reviewer for several international journals (eg. IJRS; IEEE TGRS; PERS; IJCG) and for several funding agencies (eg. NASA; NSF; Volkswagen Stiftung, Germany)
- Member, Science Working Group for NASA's planned Hyperspectral Infrared Imager (HyspIRI) satellite mission (since early 2007).
- Treasurer, Secretary, Newsletter editor for Coal Geology Division, GSA (2006-2009);
- Lead for several NASA and NSF funded education outreach projects: see eg products at www.polar-remotesensing.alaska.edu; www.edge.alaska.edu; www.birds-eye-view.alaska.edu ; www.treasure-hunt.alaska.edu ; www.essedesignguide.org

COLLABORATORS AND OTHER AFFILIATIONS:

Collaborators and co-editors in last 48 months (in alphabetical order): limited listing

Anderson M (USDA);	Baise LG (Tufts Univ);	Collett T (USGS);
Connor C (UAS);	Hook S (NASA JPL);	Hower J (UKY);
Kane D (UAF-INE)	Kelley JJ (UAF-IMS);	Margraf J. (UAF-Coop Ext)
Quattrochi D (NASA MSFC)	Stracher G (E.Georgia)	Watson M (UBristol, UK)

Graduate and Postdoctoral advisors:

Genderen, J. L. van, Ph.D., (Postdoctoral Advisor for Prakash in The Netherlands)
Gupta, R.P., Ph.D., (Ph.D. advisor for Prakash at Indian Institute of Technology Roorkee.

Thesis Advisor: (19 – Year of graduation indicated in parenthesis)

Erin Trochim; Jason Stolarski, Santosh Panda, Lila Tauzer (current); Sudipta Sarkar, Kristin Papp (2008); Jeff Green (2007); Thomas Oommen (2006); Antony Berthelote (2005); Chunqing Wang, Tilahun Kerse (2002); Christopher Duku, Simon Njuguna, Ebenezer Agyakwabadu, Santa Gilgonzalez, Mulumebet Yigletu, John Baga Arumba (2001); Kenya Nunez Cambra, Mongontsetseg Baldondarj (2000)