

## **Biosketch** **Barron J. Orr**

### **(a) Professional Preparation**

Indiana University, Bloomington, Indiana

Bachelor of Arts in French and Political Science; Certificate in African Studies (May 1984)

Université de Strasbourg, France

Diplôme de l'Université d'Etudes Politiques (International Relations, May 1983)

Columbia University, New York, New York

Master of International Affairs (January 1988)

University of Arizona, Tucson, Arizona

Doctorate of Philosophy in Arid Lands Resource Sciences (December 2000)

### **(b) Appointments**

Associate Specialist, Geospatial Extension, Univ. of Arizona, Tucson, Arizona, 2001 to present

Associate Professor, Arid Lands, University of Arizona, Tucson, Arizona, 2002 to present

Associate Director, Arizona NASA Space Grant Consortium, Arizona, 2001 to present

Assistant Professor, Natural Resources, U. of Arizona, Tucson, Arizona, 2003 to present

Adjunct Professor, International C. for Desert Affairs, Xinjiang U., Urumuqi, China, 2003 to present

Assistant in Extension, Arid Lands, University of Arizona, Tucson, Arizona, 2000

Research Associate, Office of Arid Lands Studies, University of Arizona, Tucson 1998 to 1999

Research Coordinator, USAID/Gov. of Malawi/University of Arizona, Malawi, 1996 to 1997

Research Assistant, Office of Arid Lands Studies, University of Arizona, Tucson 1992 to 1996

General Manager, Maidenform International, Ltd. Shannon, Ireland, 1990 to 1992

Marketing Manager, Maidenform, Inc. New York, New York 1988 to 1989

Land Degradation Analyst, US Peace Corps and Moroccan Ministry of Agriculture, 1986 to 1987

Teacher, US Peace Corps and Sidi Ahmed Bennisr School, Zagora, Morocco 1985 to 1986

### **(c) Recent Relevant Publications**

(NB: My name and those of students mentored who are co-authors are identified in **bold**)

**Cattaneo, M.G.**, C. Yafuso, C. Schmidt, C-Y. Huang, **M. Rahman**, C. Olson, C. Eilers-Kirk, **B.J. Orr**, S.E. Marsh, L. Antilla, P. Dutilleul, and Y. Carrière. 2006. Farm-scale evaluation of the impacts of transgenic cotton on biodiversity, pesticide use, and yield. *Proceedings of the National Academy of Sciences* 103(20):7571-7576.

Gilruth, P.T., S. Kalluri, J.W. Robinson, J. Townshend, F. Lindsay, P. Davis, and **B. J. Orr**. 2006. Measuring performance: Moving NASA Earth science products into the mainstream user community. *Space Policy* 22(3): 165-175.

Marsh, S., **B. Orr**, W. van Leeuwen, A. Thwaites, A-M. White, W. Grunberg, K. Jain, C. Baker, J. Dale, **L. Baker**, Y. Yang, C-L. Kao, **N. Lerman**, **J. Saints**, **A. Olsson**, M-S. Kang, **G. Casady**, G. Oldham, C. Wallace, **C. McDonald**, **M. Hertzfeld**, **D. Tuttle**, **E. Benally**, K. Mauz, S. Herrmann, C. Hutchinson, B. Hutchinson, G. Ruyle, L. Howery, and P. Krausman. 2000-2007. *RangeView: Geospatial Tools for Natural Resource Management*. Tucson, AZ: Arizona Remote Sensing Center, University of Arizona. Online: <http://rangeview.arizona.edu>. 321 indexed web pages.

**Olsson, A.**, S.E. Marsh, **B.J. Orr**, E. Pfirman, R.A. Schowengerdt, C.F. Hutchinson, F. Rojas, **J. Goodhue**, **Y. Torrey**, **W. Kaplan-Dunn**, and D. Innes-Gwan. 1997-2007. *Arizona Regional Image Archive (ARIA)*. Tucson, AZ: Arizona Remote Sensing Center, University of Arizona. Online: <http://aria.arizona.edu>. 170 indexed web pages, 12,182 scenes, 16,627 registered users.

**Olsson, A.**, **B.J. Orr**, W. Grunberg, A. Thwaites, S. Marsh, G. Beuttner, G. Trobia, and K. Hemenway. 2004-2007. *Arizona FIREMAP: Fuels, Information, Restoration, and Education Mapping and*

*Assessment Program*. Phoenix, AZ: Arizona State Land Department. Online: <http://www.azfiremap.org/azfiremap/>. 92 indexed web pages.

**Orr, B.J.**, W. Grunberg, A. Thwaites, **A. Olsson**, H. Severson, A. Cockerham, M. Haseltine, **N. Lerman**, J.C. Dale, M-S. Kang, B.J. Morehouse, T.W. Swetnam, S.R. Yool, J.T. Overpeck, G.L. Christopherson, **M. Crimmins**, and S. Mayden. 2001-2007. *WALTER: Exploring Wildfire Alternatives*. Tucson, AZ: Arizona Remote Sensing Center, University of Arizona. Online: <http://walter.arizona.edu>. 276 indexed web pages.

**Orr, B.J.**, **Y. Torrey**, **M. Hertzfeld**, **P. Porras**, A. Thwaites, J. McGee, G. Bonyng, S. Prisløe, K. Vlaseck, and A. Hays. 2005 ó 2007. *National Geospatial Technology Extension Network (NGTEN)*. Online: <http://geospatialextension.org/>. 95 indexed web pages.

Morehouse, B.J., and **B.J. Orr**. 2007. Integrating science and community into decision support. Chapter 11. In: Wade E. Martin, Carol Raish and Brian Kent, eds. *Wildfire Risk: Perceptions and Management Implications*. Washington DC: Resources for the Future Press.

Morehouse, B., G. Christopherson, **M. Crimmins**, **B. Orr**, J. Overpeck, T. Swetnam, S. Yool. 2006. Modeling interactions among wildland fire, climate, and society in the context of climate variability and change in the US Southwest. In: M. Ruth, K. Donaghy, and P. Kirshen, (eds). *Regional Climate Change and Variability: Impacts and Responses*. Cheltenham, UK: Edward Elgar, pp. 58-78.

**Rahman M.M.**, M.S. Moran, D.P. Thoma, R. Bryant, C.D. Holifield, S. Skirvin, T. Jackson, **B. J. Orr** and M. Tischler. In Press. Mapping surface roughness and soil moisture using radar images without ancillary data. Submitted to *Remote Sensing of Environment*.

**Rahman M.M.**, M.S. Moran, D.P. Thoma, R. Bryant, E.E. Sano, C.D. Holifield Collins, S. Skirvin, C. Kershner and **B. J. Orr**. In Press. A theory-based derivation of roughness correlation length for parameterizing radar backscatter models. *International Journal of Remote Sensing* (revised 2006 and under final review).

van Leeuwen, W.J.D. and **B.J. Orr**. 2006. Spectral vegetation indices and uncertainty: insights from a user's perspective. *IEEE Transactions on Geoscience and Remote Sensing* 44(7): 1931-1933.

van Leeuwen, W.J.D., **B.J. Orr**, S.E. Marsh, and S. Herrmann. 2006. Multi-sensor NDVI data continuity: Uncertainties and implications for vegetation monitoring applications. *Remote Sensing of Environment* 100(1):67-81.

#### **(d) Synergistic Activities**

The role of an Extension Specialist is that of knowledge broker between research, applications development and practice in a given field. My research and extension efforts are therefore centered at the nexus of biophysical science, social science and translational science (moving basic research findings to end-users and user needs and knowledge back to the research community). For a Geospatial Extension Specialist this can be summarized as facilitating the practical use of Earth systems science and technology, and helping meet the growing demand for a spatially literate workforce. As one of the first three Geospatial Extension Specialists in the U.S., I collaborate with NASA, NOAA and USDA through Cooperative Extension to bridge the gap between geospatial technology and its potential users in the state of Arizona. Since its inception in 2001, the Arizona Geospatial Extension Program has engaged 16,700 participants in 638 educational events.

#### **(e) Honors and Awards**

- o Special Achievement in GIS Award, ESRI (2007)
- o Nominated for Outstanding Faculty Advisor, University of Arizona (nominated by advisees) (2006)
- o Geospatial Leadership Award, NACAA ó USDA ó NASA "On-Target" Alumni Association (2005)
- o Outstanding Service Award, Society for Range Management, Arizona Section (2004)
- o Certificate of Appreciation, Diné College (2004)
- o Nominated for Extensionist of the Year (nominated by peers) (2003)