

## Robert J. Andres

Senior Research and Development Staff

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## Education and Training

1992 Michigan Technological University (MTU), Geology, PhD  
1988 New Mexico Institute of Mining and Technology (NMIMT), Geochemistry, MS  
1986 NMIMT, Geology, BS

## Research and Experience

2006-Present Senior R&D Staff, Environmental Sciences Division, Oak Ridge National Laboratory (ORNL), Oak Ridge, TN  
2005-Present Guest Scientist, Los Alamos National Laboratory, Los Alamos, NM  
2005-Present Andres.com, Self-employed Geochemical and Remote Sensing Consulting, Los Alamos, NM  
2005-2007 Adjunct Faculty, Department of Earth and Environmental Science, NMIMT, Socorro, NM  
2000-2006 Associate Professor, Department of Space Studies, University of North Dakota (UND), Grand Forks, ND  
2000-2002 Director (2001-2002), Acting Director (2000-2001), Assistant Director (2000), North Dakota Space Grant and NASA EPSCoR, Grand Forks, ND  
1999-2000 Research Associate Professor, Institute of Northern Engineering (INE), University of Alaska Fairbanks (UAF), Fairbanks, AK  
1997-2000 University Program Director, University of Alaska (UA)-Alaska Department of Environmental Conservation (ADEC) Memorandum of Agreement (MOA), Fairbanks, AK  
1995-2000 Visualization Laboratory Manager, Arctic Region Supercomputing Center (ARSC), Fairbanks, AK  
1994-1999 Research Assistant Professor, INE, UAF, Fairbanks, AK  
1992-1994 Postdoctoral Research Participant 3, Environmental Sciences Division, ORNL, Oak Ridge, TN  
1992-1993 Volcanological/Geochemical Consultant, Cookeville, TN  
1992-1993 Postdoctoral Fellow, Earth Sciences Department, Tennessee Technological University (TTU), Cookeville, TN  
1992-1993 Research Assistant I. Geology Department, MTU, Houghton, MI  
1992 Research Associate in Engineering. Center for the Management, Utilization and Protection of Water Resources, TTU, Cookeville, TN

## Publications

1. Andres RJ, Marland G, Biscof S (2009). "The Carbon Stable Isotopic Composition of Fossil Fuel Emissions." *Global Biogeochem. Cycles* (in revision)
2. Gregg JS, Losey LM, Andres RJ, Blasing TJ, Marland G (2009). "The Temporal and Spatial Distribution of Carbon Dioxide Emissions from Fossil-Fuel Use in North America." *Journal of Applied Meteorology and Climatology* 48:2528-2542. Doi:10.1175/2009JAMC2115.1
3. Gregg JS, Andres RJ, Marland G (2008) China: Emissions pattern of the world leader in CO<sub>2</sub> emissions from fossil fuel consumption and cement production. *Geophys. Res. Lett.* 35: L08806, doi:10.1029/2007GL032887.

4. Erickson, DJ III, Mills RT, Gregg J, Blasing TJ, Hoffman FM, Andres RJ, Devries M, Zhu Z, Kawa SR (2008) An estimate of monthly global emissions of anthropogenic CO<sub>2</sub>: Impact on the seasonal cycle of atmospheric CO<sub>2</sub>. *J. Geophys. Res.*, 113: G01023, doi:10.1029/2007JG000435.
5. Gregg JS, Andres RJ (2008) "A method for estimating the temporal and spatial patterns of carbon dioxide emissions from national fossil-fuel consumption." *Tellus* 60B:1-10, doi:10.1111/j.1600-0889.2007.00319.x.
6. Gurney K, Ansley W, Mendoza D, Seib B, Petron G, Frost G, Gregg J, Fischer M, Pataki D, Ackerman K, Houweling S, Corbin K, Andres R, Blasing TJ (2007) "Research Needs for Finely Resolved Fossil Carbon Emissions." *Eos* 88:542-543.
7. Losey LM, Andres RJ, Marland G (2006) Monthly estimates of carbon dioxide emissions from fossil-fuel consumption in Brazil during the late 1990s and early 2000s. *Area* 38:445-452. doi:10.1111/j.1475-4762.2006.00713.x.
8. Baklanov A, Mahura A, Jaffe D, Thaning L, Bergman R, Andres R (2002). "Atmospheric transport patterns and possible consequences for the European North after a nuclear accident." *J. Environ. Radioactivity* 60:23-48.
9. Andres RJ, Schmid JW (2001) The effects of volcanic ash on COSPEC measurements. *J. Volcanol. Geoth. Res.* 108:237-244.
10. Lee X, Bullock Jr OR, Andres RJ (2001) Anthropogenic emission of mercury to the atmosphere in the northeast United States. *Geophys. Res. Lett.* 28:1231-1234.

### **Synergistic Activities**

1. Reviewed 154 proposals for funding from the American Chemical Society, ARSC/Cray Grants, Department of Energy (DOE) (panel), EPA (4 panels), Flemish Government, Marsden Fund (New Zealand), National Aeronautics and Space Administration (NASA) (panel), National Geographic Society, National Science Foundation (NSF), National Oceanic and Atmospheric Administration (NOAA), Natural Environment Research Center (NERC, UK), North Dakota EPSCoR, UAF Center for Global Change and Arctic System Research, UND Summer Graduate Research Professorships, Graduate School, and Water Resources Research
2. Reviewed 63 manuscripts for refereed publications, including *Antarctic Research Series, Atmospheric Environment, Bulletin of Volcanology, The Energy Journal, Environmental Science & Technology, Geocarto International, Geochemical Journal, Geochimica et Cosmochimica Acta, Geological Survey of Canada Special Paper, Geology, Geophysical Research Letters, Global and Planetary Change, Global Biogeochemical Cycles, Intergovernmental Panel on Climate Change Third Assessment Report, Journal of Geophysical Research, Journal of Volcanology and Geothermal Research, Tellus, and Volcanism and the Earth's Atmosphere*

### **Collaborators and Co-Editors**

Gregg JS (University of Maryland); Losey LM, Sodeinde OR, Bolles BA (University Of North Dakota); Blasing TJ, Marland G, Erickson DJ, Boden TA, Hoffman FM (Oak Ridge National Laboratory); Gurney K (Purdue University); Baklanov A (Russia); Mahura A, Jaffe D, Schmid JW (University Of Alaska-Fairbanks); Treanton K (International Energy Agency); Nassar R (U. Of Toronto); Patra PK (JAMSTEC); Nowatzki J (ND Ag Extension Service)

### **Graduate and Postdoctoral Advisors**

*Postdoc advisors:* Dr. G. Marland

*PhD advisor:* Dr. WI Rose

*MS advisor:* Dr. PR Kyle

