

Dr. Michal Ellen Ruder
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Professional Resume

DATE OF BIRTH: 19 February 1957

CURRENT TITLE: President, Wintermoon Geotechnologies, Inc., and Immediate Past Second Vice-President, Society of Exploration Geophysicists

EDUCATION: Ph.D., Geophysics, The Pennsylvania State University, 1986.
B.A. cum laude, Geology and Physics, Bowdoin College, 1979.

AWARDS: B.F. Howell Award for Professional Excellence in Geophysics, College of Earth and Mineral Sciences, The Pennsylvania State University, 1985.
NASA Graduate Student Researcher, 1983-1985.
Graduate Fellowship, National Science Foundation, 1982-1983, 1985-1986.
Fellowship, Mining and Mineral Resources Research Institute of The Pennsylvania State University, 1982.
Outstanding Instructor Award, Exxon Production Research Company, 1992.
Instructor and Course Designer, Society of Exploration Geophysicists, Introduction to Gravity and Magnetism and Advanced Gravity and Magnetism curricula, 1993 to present.
Instructor and Curriculum Developer, University of Denver, GIS Certificate Program, Remote Sensing Concentration (four courses), 1995 to present.

SIGNIFICANT TEACHING EXPERIENCE:

Michal Ruder received her doctorate in geophysics from The Pennsylvania State University in 1986. She has worked as a research geophysicist and as an applications geophysicist in gravity, magnetism, and remote sensing for NASA and for major oil company laboratories in the United States for 17 years. In addition, Michal has extensive teaching experience in both remote sensing and digital image processing, having served as a visiting professor at the Institut de Geodynamique at the Universite de Bordeaux III in France (1988-1989), and as an adjunct professor in the Department of Geography at the University of Denver (1993-2000). At both universities, Michal designed and implemented complete remote sensing curricula for master's level graduate study. Michal serves on the Continuing Education faculty of the Society of Exploration Geophysicists, where she teaches courses that she has written on an annual basis to her exploration peers. While teaching at Exxon Production Research Company, Michal was honored with the prestigious Outstanding Instructor Award (1992).

EXPERIENCE:

1996 to Present WINTERMOON GEOTECHNOLOGIES, INC., DENVER, COLORADO.
Founder and President. Oversee and conduct research and applications for value-added potential fields analysis, remote sensing, GIS spatial data management, raster data visualization and integration in support of hydrocarbon and mineral exploration and logistical planning. Primary clients include major and independent oil companies. Provide expert training for state-of-the-art potential fields modeling and processing, remote sensing and digital cartographic software (GMSYS, Geosoft, ESRI, ERMapper and Landmark products).

1997 to 1998 INTEGRATED GEOPHYSICS CORPORATION, DENVER, COLORADO.
Geophysical Manager. Director of all gravity and magnetic research and applications. Quality control analysis of all applications projects. Provide expert gravity and magnetism consultation to clients for the Gulf of Mexico, Western Canada Basin, South America, Africa.

- 1985 to 1989 INDEPENDENT CONSULTING, HOUSTON, TEXAS, and DENVER, COLORADO.
Geophysical Consultant. Primary project focus on gravity and magnetics, remote sensing, digital cartography; techniques include forward and inverse modeling, data/image enhancement and filtering, and signal processing, GIS spatial data management.
- 1988 to 1989 INSTITUT DE GEODYNAMIQUE, UNIVERSITE DE BORDEAUX 3, BORDEAUX, FRANCE.
Visiting Professor. Designed remote sensing and image processing curriculum for upper-level undergraduate and graduate students; advised graduate-level research in natural resource assessment.
- 1986 to 1988 GEOPHYSICAL DATA ENHANCEMENT SECTION, EXXON PRODUCTION RESEARCH COMPANY, HOUSTON, TEXAS.
Research geophysicist. Initiated project to merge digital seismic, gravity, magnetic, and magnetotelluric data to design constrained crustal models for frontier and mature prospects. Developed two-dimensional signal processing techniques for potential field data within an interactive image processing environment. Designed a suite of filters to enhance gravity and magnetic data and isolate signal of interest, for both regional tectonic and local prospect analysis.
- 1979 to 1981 GEOPHYSICS BRANCH, NASA - GODDARD SPACE FLIGHT CENTER, GREENBELT, MARYLAND.
Research geophysicist. Participated in initial analysis of MAGSAT satellite magnetic anomaly signals.

COMPUTER SKILLS:

Experienced user of ERMAPPER, DYNAMIC GRAPHICS, IDIMS, VICOM, and PERISCOPE image processing software, ARC/INFO geographic information system software, and Landmark Zycor ZmapPlus digital cartographic mapping software, LCT and NGA (GMSYS) gravity and magnetic modeling software, LCT and Geosoft gravity and magnetic processing software. Programmed in Fortran and Pascal languages within IBM/TSO, IBM/ISPF, SUN, VAX/VMS, PRIME, and IBM/PC environments, using IRIX, UNIX, JCL, DCL, and DOS operating systems. Member of the Sunsoft Catalyst Developers' Group (managed by Sun Microsystems).

PUBLICATIONS:

Over 25 publications in professional geophysical and remote sensing journals, and numerous proprietary, unpublished client reports.