

JORGE S. ALVARADO
Applied Geosciences and Environmental Management Section
Environmental Science Division
Argonne National Laboratory

Education:

Ph.D. Northern Illinois University, Analytical Chemistry, 1993
B.S. University of Costa Rica, Chemistry, 1988

Experience:

2005-present, Chemist - AGEM Analytical Laboratory, EVS
1999-2005, Chemist - Group Leader, ERD
1996-1999, Assistant Chemist, ERD
Environmental Science Division
Argonne National Laboratory

Manage the Analytical Laboratory for the Applied Geosciences and Environmental Management Section. Validate and develop new methodologies for analysis of organic compounds in environmental samples. Conduct research in chemical characterization of organic pollutants and transport of chemical contaminants in the subsurface. Establish analytical capabilities necessary to conduct laboratory and field analyses of samples. Oversee program interaction with contract laboratories, including analytical sample management, analytical laboratory subcontract management, data validation, and review.

1993-1995 Postdoctoral Research Associate, Environmental Research Division,
Argonne National Laboratory

Conducted research and development projects for evaluation, characterization, and improvement of radioanalytical methods using alpha-beta spectrometry and inductively coupled plasma-mass spectrometry (ICP-MS). Developed microscale and "green" techniques for routine PCBs analysis using *fast*-GC and GC-MS. Responsibilities include supervision of undergraduate and graduate research.

Summary of Previous Experience:

1989-1993 Graduate Teaching Assistantship,
Northern Illinois University, DeKalb, IL

Conducted research in helium microwave-induced plasma (He-MIP) atomic emission spectrometry. Responsibilities included the teaching and maintenance of analytical and instrumental laboratories. Proficient in UV-VIS-spectroscopy, IR-spectroscopy, GC, HPLC, AA, fluorescence, and electrochemical methods.

1988-1989 Teacher, CICA – GTZ – University of Costa Rica, Dept. of Chemistry
1987-1989 Research Associate, Environmental Research Center

Conducted research in organochlorinated pesticides determination on sediments, water and fish by gas chromatography (GC-ECD).

Professional Activities:

Adjunct Professor, Benedictine University, Lisle, IL (2008-present)
Adjunct Professor, Triton College, Maywood, IL (1999-2000; 2003-4)
Instructor – CHEM524 – Spectroscopic Methods II, Illinois Institute of Technology (2002-2003)
Member of ASTM task Group for developing standards for Vapor Intrusion, 2006.
Reviewer for the National Science Foundation, 2009, 2010, 2012.
Member of the Postdoctoral Committee, Argonne National Laboratory, 2009-present.
Member of the LDRD Committee, Argonne Laboratory, 2011-present
Panel of reviewer of the Royal Society of Chemistry, 2000-present
Sigma Xi, The Scientific Research Society
Phi Lambda Upsilon, National Honorary Chemical Society
American Chemical Society

Awards:

HENACC- Great Minds in STEM, Outstanding Technical Achievement Award, 2010
Argonne National Laboratory Director's Award for Outstanding Safety Performance, 2010
Member of a Team Awarded the R&D40 – Argonne National Laboratory, 1999.
Member of a Team Awarded an R&D100 – Rad-Empore Technology, 1997.
Dissertation Completion Award – Northern Illinois University, 1992-93.

Publications:

Author or co-author of more than 60 peer-review journal articles, book chapters, conference proceedings, and presentations.