

Karisa M. Pierce

Seattle Pacific University
Department of Chemistry
206-281-2102 (Office)
pierck1@spu.edu

Education:

2007 – Ph.D. Analytical Chemistry, University of Washington, February 8, 2007
2004 – M.S. Analytical Chemistry, University of Washington
2002 – B.S. Chemistry, ACS accredited, Seattle University, Seattle, WA

Research Experience and Scientific Employment:

Assistant Professor (Fall 2008 - present) Seattle Pacific University

Visiting Assistant Professor (Fall 2007 – Summer 2008) Seattle University, General Chemistry and Quantitative Analysis lecture and lab

Scientist at Amgen Inc, Thousand Oaks, CA. (June 11, 2007 – August 31, 2007) Cell Sciences and Technology Dept. Act 1 temporary contract work running 600 MHz ¹H NMR experiments and building chemometric models to predict therapeutic recombinant protein production.

Research Associate (March 16, 2007 – June 10, 2007, Summer 2008) University of Washington Post-Doctoral research in two areas: dynamic surface tension detection for food samples and developed software for high-throughput online analysis of ultra high-speed gas chromatographic separations with novel spectrophotometric detection.

Visiting Assistant Professor (January 3, 2007 – June 10, 2007) Seattle University, Lecture and Lab CH319 Quantitative Analysis

Graduate Research Assistant (Fall 2002 – Winter 2007), Advisor: Prof. Robert E. Synovec, University of Washington. Novel chemometric tools for chromatographic retention time alignment, feature selection, data mining and pattern recognition for analysis of GC, GC-MS, GCxGC, and GCxGC/TOFMS separations of complex samples.

Chemistry Teaching Assistant (Fall 2002, Winter 2003, Spring 2003, Spring 2004), Univ. of Wash. 100-level General Chemistry, 400-level LabVIEW Programming in Chemistry.

Undergraduate Research Assistant (6/01 to 6/02), Advisor Dr. Kristen J. Skogerboe, Seattle University. Investigated fluorescence polarization of amniotic fluid as well as interactions at the air/liquid interface of lung surfactant proteins.

Undergraduate Research Assistant (1/01 through 6/01), Advisor Dr. Anna Larsen, Seattle University. Synthesized low melting ionic liquids of imidazolium cations and carborane anions, used 60 MHz ¹H NMR

Publications:

Karisa M. Pierce, Jamin C. Hoggard, Janiece L. Hope, Petrie M. Rainey, Andrew N. Hoofnagle, Rhona M. Jack, Bob W. Wright, and Robert E. Synovec. **Analytical Chemistry** 78 (2006) 14: 5068-5075.

Nathanial E. Watson, Matthew M. VanWingerden, **Karisa M. Pierce**, Bob W. Wright and Robert E. Synovec **Journal of Chromatography A** 1129 (2006) 1: 111-118.

Karisa M. Pierce, Janiece L. Hope, Jamin C. Hoggard and Robert E. Synovec. **Talanta** 70 (2006) 4: 797-804.

Karisa M. Pierce, Lianna F. Wood, Bob W. Wright, and Robert E. Synovec. **Analytical Chemistry** 77 (2005) 23: 7735-7743.

Karisa M. Pierce, Janiece L. Hope, Kevin J. Johnson, Bob W. Wright, and Robert E. Synovec **Journal of Chromatography A** (2005) 1096: 101-110.

Karisa M. Pierce, Bob W. Wright, and Robert E. Synovec **Journal of Chromatography A** (2007) 1141: 106-116.

Karisa M. Pierce, Janiece L. Hope, and Robert E. Synovec. **Lab Plus International** (November 2005 Issue)
Invited, Not peer-reviewed

Rachel E. Mohler, Kenneth M. Dombek, Jamin C. Hoggard, **Karisa M. Pierce**, Elton T. Young and Robert E. Synovec **The Analyst** (2007) 132: 756-767.

Karisa M. Pierce, Jamin C. Hoggard, Rachel E. Mohler, Robert E. Synovec **Journal of Chromatography A** (2008) 1184: 341-352

Satendra Prasad, **Karisa M. Pierce**, Hartwig Schmidt, Jaya V. Rao, Robert Güth, Sabine Bader, Robert E. Synovec, Geoffrey B. Smith and Gary A. Eiceman. **The Analyst** (2007) 132: 1031-1039.

Eric Burnham, Louis C. Bender, Gary A. Eiceman, **Karisa M. Pierce**, Satendra Prasad. **The Journal of Wildlife Management** (2008) 72: 792-797.

Satendra Prasad, **Karisa M. Pierce**, Hartwig Schmidt, Jaya V. Rao, Robert Güth, Robert E. Synovec, Geoffrey B. Smith, Gary A. Eiceman, **The Analyst** (2008) 6: 760-767.

Lectures:

Xavier University, 11/09/07, **Cincinnati, OH** “Using Chemometrics to Analyze Chromatographic Data.”

Amgen Inc, 9/13/07, **Longmont, CO** “Screening peptone lots using chemometrics and NMR.”

Amgen Inc, 8/24/07, **Thousand Oaks, CA** “Screening peptone lots using chemometrics and NMR.”

New Mexico State Univ., 12/06/06, **Las Cruces, NM** “Interpreting Complex Data from One-Dimensional and Multidimensional Chromatography.”

CPAC Meeting, 11/07/06, **Seattle, WA** “Addressing the Needs of Process Analysis through Advancements in High-Speed GC, Multi-dimensional GC, and Data Analysis.”

ChevronTexaco, 11/01/06, **Richmond, CA**, “Interpreting Complex Data from Multidimensional Chromatography”

Pacific Northwest National Laboratories, 09/06/06, **Richland, WA**, “Analytical Advances with Gas Chromatography and Chemometrics”

ExxonMobil, 07/10/06, **Clinton, NJ**, “Extracting Information from Chromatographic Separations of Complex Samples.”

CPAC Meeting, 05/09/06, **Seattle, WA** “Addressing the Needs of Process Analysis through Advancements in High-Speed GC, Multi-dimensional GC, and Data Analysis.”

CPAC Meeting, 11/08/05, **Seattle, WA**, “Chemometrics for multidimensional chromatographic analysis.”

Federation of Applied Chemistry and Spectroscopy Societies 2005, 10/10/05, **Quebec City, Canada**, “Chemometrics and Chromatography: Extracting Information from Large Volumes of Multivariate Data”

DOW Chemical Co., 06/07/05, Live web broadcast world-wide from **Seattle, WA**, “Gas Chromatography: Advances in Separation Technology.”

deCODE Genetics, Inc, 05/31/05, **Bainbridge Island, WA**, “Chemometric Analysis of Gas Chromatographic Data using Retention Time Alignment, Feature Selection and Principal Component Analysis.”

International Symposium on Capillary Chromatography and Electrophoresis, May 24, 2005, **Las Vegas, NV**, “Chemometric Analysis of Gas Chromatographic (GC and GCxGC) Data using Retention Time Alignment, Feature Selection and Principal Component Analysis.”

CPAC Meeting, 05/03/05, **Seattle, WA**, “Chemometrics for multidimensional chromatographic analysis.”

CPAC Meeting, 11/09/04, **Seattle, WA**, “Process GC with Chemometrics.”

Pacific Northwest National Laboratory, 11/01/04, **Richland, WA**, “Objective Classification of Gasoline Samples Using Chromatographic Fingerprints.”

Univ. of Wash. Chemistry Masters Exam, 2/23/04, **Seattle, WA**, “Using Fluorescence Polarization to Determine Fetal Lung Maturity.”

Seattle University Celebration of Student Scholarship, 4/02, **Seattle, WA**, “Isolation and detection of surfactant protein B using fluorescence polarization.”

Posters:

Eigenvector University 5/6/08, **Seattle, WA**, “Chemometric Analysis of Complex NMR Spectral Data.”

Eigenvector University 4/24/06, **Seattle, WA**, “Correcting Retention Time Shifts in Chromatography for Improved Data Analysis.”

PittCon 3/13/06, **Orlando, FL**, “Correcting Retention Time Shifts in Chromatography for Improved Data Analysis.”

International Symposium on Capillary Chromatography and Electrophoresis 5/24/05, **Las Vegas, NV**, “Tools for the Extraction of Useful Information from Metabolic Profiles: Techniques for Mining the GC x GC-TOFMS Data Cube.”

CPAC Meeting 11/03, **Seattle, WA**, “Process Gas Chromatography and Chemometrics.”

CPAC Meeting 5/03, **Seattle, WA**, “Process Gas Chromatography and Chemometric Analysis.”

CPAC Meeting 11/02, **Seattle, WA**, “Online measurement of interfacial properties: Dynamic surface tension detection.”

National Conference for Undergraduate Research, 2/02, **Whitewater, WI**, “Isolation and detection of surfactant protein B using fluorescence polarization.” *Proceedings of the National Conference for Undergraduate Research.*

Honors:

Boris Weinstein Fellow (2003), University of Washington

American Chemical Society Undergraduate Award in Analytical Chemistry (2001)

Bannan Scholar (2001), Seattle University

Best poster - Eigenvector University April 24, 2006

Best poster – CPAC conference May 3, 2005

Washington Scholar 1998-2002

Seattle University Presidential Scholar 1998-2002

Service to the Scientific Community:

Annual Science Workshop Teacher (2000 – 2008), Expanding Your Horizons Conference for Girls, Seattle, WA

Supervising undergraduate research (2004-2008) – Matthew VanWingerden, Lianna Wood, Elise Knutzen

Reviewer for journal manuscripts

Faculty Development and Continuing Education

ASMS Metabolomics May 27, 2008

POGIL Standard Workshop, Linfield College, Linfield, OR, June 20-22, 2008

Teaching 101 from SPU Center for Scholarship and Faculty Development, September 19, 2008