Kirk R. Jensen
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PROFESSIONAL EXPERIENCE

Osaka University, Osaka, Japan (2015 – 2018)
Research Assistant Professor:
- Successfully developed on-site helium isotope measurement method.
- Contributed to improving imaging mass spectrometry spatial resolution using conventional techniques.
- Tested a prototype detector for an outside company.
- Completed chemometric analysis of *Pseudomonas aeruginosa* clinical samples as part of an international collaborative project.
- Mentored students and taught a short course on chemometrics.

Invited Researcher:
- Conducted research on an on-site cortisol measurement method.
- Successfully developed a novel mass calibration method for Time-of-Flight mass spectrometry.

Kelatron Corporation, Ogden, UT (2007 – 2008)
Analytical Scientist:
- Completed daily chemical analysis of production lots.
- Led a research project to adapt a conventional chemical analysis method to a different type of instrument.

RESEARCH EXPERIENCE

Undergraduate Research, University of Northern Colorado (2005)
- Attempted to synthesize substituted fullerene compounds for stabilization of complex boron systems.

Graduate Research, Colorado School of Mines (2008-2014)
- Published papers on multivariate statistical analysis of bacterial mass spectral data for classification purposes and wrote basic data preparation software for the study in R and Python.
- Established a direct link between fuel additives and nitro compound production during diesel combustion.
- Successfully developed a fast lateral flow detection method for *Bacillus anthracis*.
- Analyzed illicit drug cutting agents in urine and tissue samples in a collaborative project with the University of Colorado medical school.

EDUCATION

Ph.D., Applied Chemistry
Colorado School of Mines, Dept. of Chemistry and Geochemistry, 2014

B.S., Chemistry
University of Northern Colorado, Dept. of Chemistry, 2005

SKILLS AND TECHNIQUES

Software and Programming
- Statistical analysis using R and R Studio.
- Basic level Python and C++.
- Document preparation using LaTeX.
- Other scientific data analysis software such as Sigma Plot, MMass, and proprietary data analysis tools.
- Linux (every day usage)

Hardware and Instrumentation
- High performance PC assembly, maintenance, and troubleshooting.
- Fixing and maintaining scientific instrumentation.

Statistical Analysis
- Principal component analysis.
- Linear discriminate analysis.
- SIMCA.
- K-nearest neighbor.
- Cross validation.
- Clustering techniques.
- Random forest.

LANGUAGES

English: Native.
Japanese: Speaking (good), reading (can read with dictionary), writing (can write with dictionary).

MEMBERSHIPS

- American Chemical Society
- American Society of Mass Spectrometry
- National Society of Collegiate Scholars
- Japan Geoscience Union
- Mass Spectrometry Society of Japan
- Shorinji Kempo

References, list of publications, and full *curriculum vitae* available on request