

Scott Beaver, Ph.D.

Qualification summary

- Instruction of technical material and study skills with clear voice, plain English writing, and respect for diversity
- Effectiveness with technology, online learning, and lab demos
- Expertise with lab equipment, techniques, and computer automation
- Integrity with fair and constructive examination and grading techniques supporting SLOs
- Positive attitude empowering appreciation for school, lifelong learning, and responsibility

Education

University of California, Davis, Davis, CA, 2005

- PhD Chemical Engineering with Statistical Modeling minor. Full academic and diversity scholarships.

Lehigh University, Bethlehem PA, 2001

- BS Chemical Engineering with Economics minor. High Honors. Awarded Dean's Scholar funding.
- Peer Tutoring Services tutor for undergraduate students in chemistry, engineering, and business

College teaching experience

Santa Rosa Junior College, Santa Rosa, CA

Adjunct chemistry instructor, 2016-present

- Lecture, instruct automated labs, and provide instrument trainings for General Chemistry II (Chem 1B)

Skyline College, San Bruno, CA

Adjunct chemistry instructor, 2015-present

- Lecture and instruct labs for Intro Chemistry (CHEM 192) and General Chemistry I (CHEM 210)

College Of Marin, Kentfield, CA

Adjunct chemistry instructor, 2015

- Instructed General Chemistry (Chem 131) lecture and lab
- Developed introductory organic chemistry module for general chemistry students

University of California, Berkeley, CA

NSF Visiting Fellow, summer 2015

- Fabricated and characterized innovative nanomaterials measurement techniques in a National Science Foundation (NSF) Context-Based Research Experience for Teachers (RET) program at the Marvell Nanofab Lab
- Trained with Cal Dept. of Education and implemented an Education Transfer Grant to apply context-based teaching modules at Laney College and College Of Marin

Peralta Colleges, Oakland, CA

Adjunct chemistry instructor, 2014-2015

- Instructed labs and designed an intensive Saturday course for Intro Chemistry (Chem 30A) at Laney College
- Instructed evening Intro Chemistry (Chem 30A) courses at Merritt College
- Received top score in District-wide Lab Safety Assessment. Reported Student Learning Outcomes (SLOs)

Related teaching and industry experience

Planet Granite Climbing and Fitness, San Francisco, CA

Registered Yoga Teacher with 200-hr certification (RYT-200), 2012-present

- Teach breathing, mindfulness, and stretching techniques to classes of 5-25 students of varying experience
- Organize outdoor trips for small groups focusing on environmental science and ecotourism

Rethink Green, Inc., Oakland, CA

Chemical and industrial consultant, 2014-2015

- Developed plans, models, regulatory reporting methods, and grants for an innovative recycling program
- Won 1st place in the Clean Tech Open business accelerator, Chemicals/Materials – Western Division

Bay Area Air Quality Management District, San Francisco, CA

Atmospheric modeler (principal scientist), Planning, Rules, and Research Division, 2008-2013

- Led and managed teams of scientists, analysts, and technicians to develop educational and research materials
- Created and lectured Applied Remote Sensing Training (ARSET) course through collaboration with NASA and CA Air Resources Board (ARB)
- Spoke at academic, technical, and regulatory conferences and meetings related to atmospheric chemistry

University of California, Davis, Davis, CA

Post-doctoral researcher and PhD candidate, Dept. Chemical Engineering and Materials Science, 2001-07

- Trained and directed graduate students to research atmospheric chemistry and chemometrics analysis
- Oversaw technology transfer from academia to regulatory agencies

Private Tutor, Davis, CA, 2003-07

- Provided test preparation services for Professional Engineer exam and SAT 2 chemistry subject test
- Tutored organic chemistry

Selected peer-reviewed journal articles

Beaver S, Tanrikulu S, Palazoglu A, Singh A, Soong S-T, Jia Y, Tran C, Ainslie B, Steyn DG. Pattern-based evaluation of coupled meteorological and air quality models. *J Applied Meteorology and Climatology*, **49**(10), 2077-91, 2010.

Beaver S, Palazoglu A, Singh A, Soong S-T, Tanrikulu S. Identification of weather patterns impacting 24-h average fine particulate matter pollution. *Atmospheric Environment*, **44**(14), 1761-71, 2010.

Beaver S, Palazoglu A. Hourly surface wind monitor consistency checking over an extended observation period. *Environmetrics*, **20**(4), 399-415, 2009.

Beaver S, Palazoglu A. Influence of synoptic and mesoscale meteorology on ozone pollution potential for San Joaquin Valley of California. *Atmospheric Environment*, **43**(10), 1779-88, 2009.

Pakalapati S, Beaver S, Romagnoli JA, Palazoglu A. Sequencing diurnal air flow patterns for ozone exposure assessment around Houston, Texas. *Atmospheric Environment*, **43**(3), 715-23, 2009.

Beaver S, Palazoglu A, Tanrikulu S. Cluster sequencing to analyze synoptic transitions affecting regional ozone. *J Applied Meteorology and Climatology*, **47**(3), 901-16, 2008.

Beaver S, Palazoglu A, Romagnoli JA. Cluster analysis for autocorrelated and cyclic chemical process data. *Industrial & Engineering Chemistry Research*, **46**(11), 3610-22, 2007.

Beaver S, Palazoglu A. Cluster analysis of hourly wind measurements to reveal synoptic regimes affecting air quality. *J Applied Meteorology and Climatology*, **45**(12), 1710-26, 2006.

Beaver S, Palazoglu A. A cluster aggregation scheme for ozone episode selection in the San Francisco, CA Bay Area. *Atmospheric Environment*, **40**(4), 713-25, 2006.

Selected conference presentations

Beaver S, Tanrikulu S, Tran C, Soong ST, Jia Y, Rogers R, Deng A, Stauffer DR. Fine particulate matter modeling in Central California, Part II: Application of the Community Multiscale Air Quality model. AMS 91st Annual Meeting, 13th Conf Atmospheric Chemistry, #5.4. Seattle, WA, 2011.

▶Presentation: <http://ams.confex.com/ams/91Annual/flvgateway.cgi/id/16797?recordingid=16797>

▶Abstract: http://ams.confex.com/ams/91Annual/webprogram/Manuscript/Paper182942/AMS2011_5-4.pdf

Beaver S, Palazoglu A, Singh, A, Tanrikulu S. Assessment of PM transport patterns using advanced clustering methods and simulations around the San Francisco Bay Area, CA. AMS 90th Annual Meeting, 12th Conf Atmospheric Chemistry, #J4.2. Atlanta, GA, 2010.

▶Presentation: <http://ams.confex.com/ams/90annual/recordingredirect.cgi/id/11553>

▶Abstract: <http://ams.confex.com/ams/pdfpapers/156988.pdf>

Beaver S, Tanrikulu S, Steyn D, Jia Y, Soong S-T, Tran C, Ainslie B, Palazoglu A, Singh A. Cluster analysis and classification of wind fields for meteorological and air quality model validation. NATO Science for Peace and Security 30th International Technical Meeting on Air Pollution Modeling and its Application XX, 325-29. San Francisco, CA, 2009.

Beaver S, Palazoglu A, Singh A. Fresno Eddy recirculation and its impact on ozone buildup in the San Joaquin Valley of California. AMS 88th Annual Meeting, 15th Joint Conf Applications of Air Pollution Meteorology w/ A&WMA, #7.3. New Orleans, LA, 2008.

▶Presentation: <http://ams.confex.com/ams/88Annual/wrfredirect.cgi?id=7977>

Beaver S, Palazoglu A. Understanding the relationship between meteorology and ozone in central California. Air & Waste Management Assn Symposium on Air Quality Measurement Methods and Technology, #66. San Francisco, CA, 2007.

Beaver S, Palazoglu A, Romagnoli JA. Cluster analysis for continuous chemical process fault diagnosis. American Institute of Chemical Engineers 2006 Annual Meeting, San Francisco, CA, 2006.