

Michael Pyrcz, Ph.D., P.Eng.

Associate Professor

H.B. Harkings, Jr. Professor of Petroleum Engineering

Hildebrand Department of Petroleum and Geosystems Engineering, Cockrell School of Engineering

Bureau of Economic Geology, Jackson School of Geoscience

Michael's Background

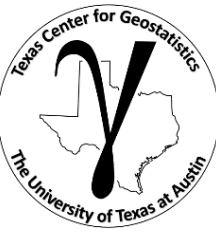
- **Education:**

- Mining Engineering B.Sc., and Geostatistics Ph.D.
 - » engineering, earth science, spatial statistics and coding (FORTRAN and C++)

- **Work Experience:**

- 2000-2004: Independent Reservoir / Spatial Modeling Consultant
 - » during my Ph.D.
- 2004-2014: Research Scientist, Subject Matter Expert, Chevron ETC
 - » data analytics, spatial, uncertainty modeling, product development (C++, Gocad, QT)
- 2014-2017: Research Team Leader, Program Manager, Chevron ETC
 - » multiscale, uncertainty, fracture modeling, model updating, strategy
- 2017-2018: Associate Professor, the University of Texas at Austin
 - » data analytics, geostatistics and machine learning

Michael's Current Research



- **Current Research:**

- Surface-based, grid-free reservoir models, model resampling
- Machine learning based (recurrent and convolutional neural nets) forecasting
- Statistical methods for unconventional reservoirs
- Spatiotemporal modeling for induced seismicity risk modeling
- Fractured reservoir uncertainty and value of information

- **Recent Teaching:**

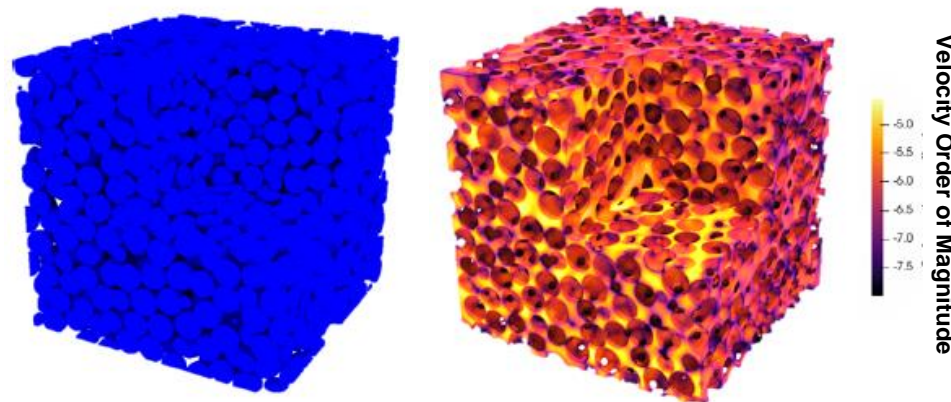
- Data Analytics and Geostatistics, Undergraduate Course, Spring / Fall 2018
- Subsurface Modeling, Graduate Course, Fall 2017, Spring 2019
- Subsurface Machine Learning, Graduate Course, Fall 2019
- Data Analytics and Geostatistics, Short Course, Anadarko, Hess, RMAG, Equinor
- Data Analytics and Machine Learning, Short Course, Chevron
- Subsurface Geology and Engineering, Short Course, BHGE

Michael's Publications

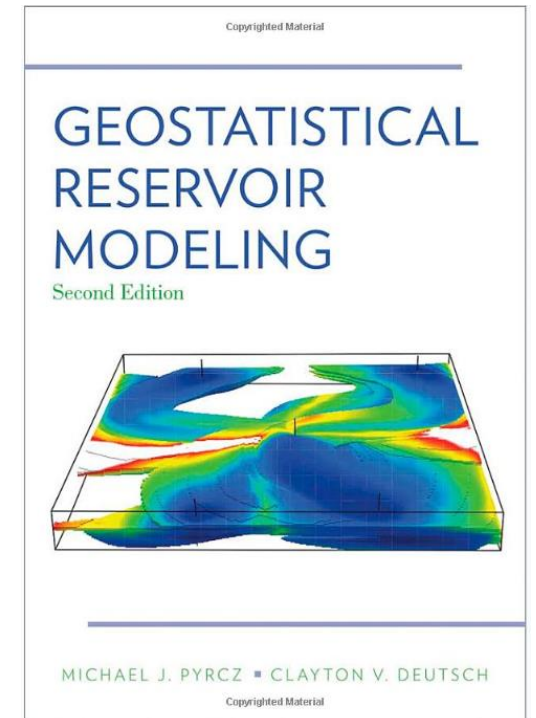
- **Publications:**
 - GeostatsPy Python package for spatial data analytics and subsurface modeling



- textbook, >45 peer-reviewed publications

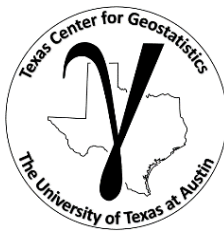


Javier, Xu, Prodanovic and Pyrcz, 2018, Model flow through a sphere pack with convolutional neural nets.



Geostatistics Textbook

Michael in the Professional Community

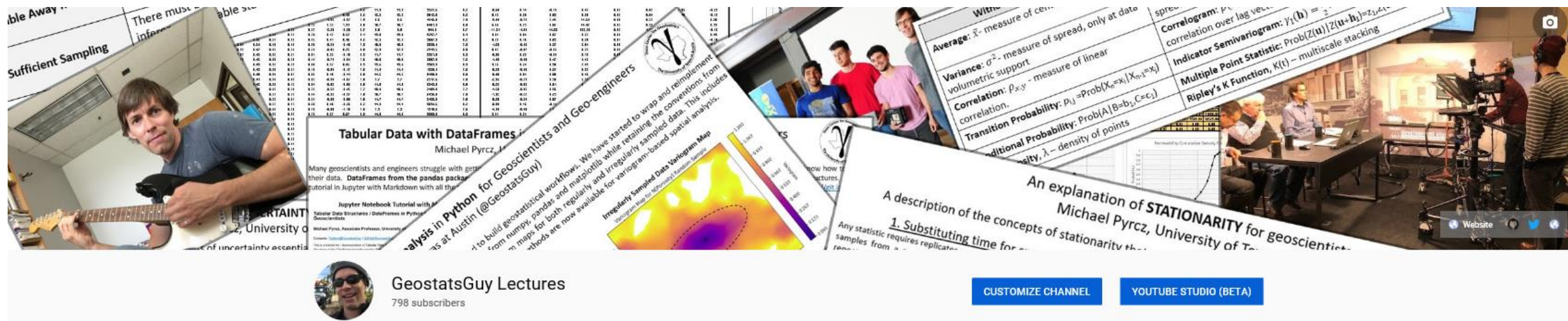


- **Current Activities:**

- **Associate Editor**, Computers and Geosciences, International Association for Mathematical Geosciences
- **Program Chair**, Petroleum Data Driven Analytics Technical section (PD²A), Society of Petroleum Engineers
- **Editorial Board Member**, Mathematical Geosciences, International Association for Mathematical Geosciences
- **Co-Principle Investigator**, UT DIRECT, Digital Reservoir Change Technology, kick-off May, 2018
- **Principle Investigator**, ConocoPhillips Undergraduate Research and Invention Program, initiative for Oil and Gas Data Analytics in Engineering and Natural Sciences

Michael's Outreach

- **YouTube Channel, GeostatsGuy Lectures:** online lectures



- **Twitter, GeostatsGuy,** posts on data analytics, geostatistics and machine learning



Michael's Outreach

- **GitHub, GeostatsGuy:** numerical examples, demonstrations in Python, R, Excel
- Energy Big Data Analytics Webinar
- Agile Geoscience Hackathon Judge
- Undersampled Radio Guest



Set your status

Michael Pyrcz

GeostatsGuy

Associate Professor at the University of Texas at Austin in the Petroleum and Geosystems Engineering Department working in Geostatistics, Data Science & AI.

@UT_PGE

Austin, TX, USA

mpyrcz@austin.utexas.edu

http://www.michaelpyrcz.com/

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2DayCourse

2 day short course.

★ 30 🍴 6

PythonNumericalDemos

A collection of Python demos for geostatistical methods.

🍴 Jupyter Notebook ★ 20 🍴 7

GeostatsPy

Reimplementation of GSLIB, Spatial Data Analytics and Geostatistics in a Python package.

🍴 Jupyter Notebook ★ 14 🍴 4

ExcelNumericalDemos

A set of numerical demonstrations in Excel to assist with teaching / learning concepts in statistics and geostatistics.

★ 13 🍴 4

2DayCourse_Exercises

🍴 Jupyter Notebook ★ 8 🍴 1

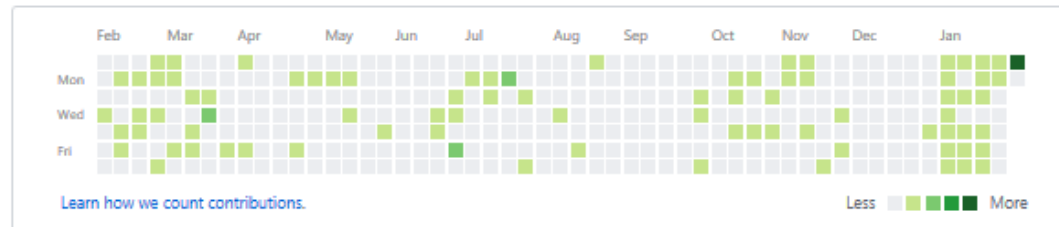
PGE383_SubsurfaceModeling

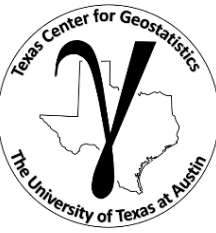
Graduate course on subsurface modeling

★ 8

277 contributions in the last year

Contribution settings ▾





Want to Work Together?

My work and research combines data analytics, stochastic modeling and machine learning theory with practice to develop novel methods and workflows to add value. We are solving challenging subsurface problems!

- Want to invite me to visit your company for training, mentoring, project review, workflow design and consulting, I'd be happy to drop by and work with you!
- Interested in partnering, supporting my graduate student research or my Subsurface Data Analytics and Machine Learning consortium (co-PIs including Profs. Foster, Torres-Verdin and van Oort)?
- I can be reached at mpyrcz@austin.utexas.edu.

I'm always happy to discuss,

Michael