

Jonathan J. Helmus, Ph.D.

CONTACT INFORMATION

9068 Westminster Dr.
Woodridge, IL 60517
(331) 444-3896

Website: www.nmrglue.com/jhelius
Email: jjhelius@gmail.com
Code: github.com/jjhelius

EMPLOYMENT

Anaconda, Inc (formerly Continuum Analytics)
Software Engineer, March 2017-Present.
Key member of the Anaconda Distribution team. Packaging of GPU libraries.

Argonne National Laboratory

Advanced Algorithms Engineer, January 2013-March 2017.
Software development and research on weather radar processing methods.

EDUCATION

University of Connecticut Health Center, Farmington, Connecticut.
Postdoctoral Fellow, July, 2011-January 2013.
Non-Fourier method for NMR data processing.

The Ohio State University, Columbus, Ohio.

Ph.D., Chemical Physics, June 2005-July 2011.
Solid State NMR on microcrystalline proteins, amyloid fibril and other biological solids.

Michigan Technological University, Houghton, Michigan.

B.S. Chemistry (Chemical Physics), Minor: Mathematics, May 2005.

SOFTWARE ENGINEERING

Programming Languages: Python, C, C++, and Fortran.

Python modules: NumPy, SciPy, matplotlib, Jupyter, Cython, Tensorflow, and conda.

Operating Systems: Linux, Windows, and macOS.

OPEN SOURCE SOFTWARE PROJECTS

conda-forge

conda-forge is a community-led collection of recipes, build infrastructure and packages for the conda package and environment management system. I am a member of the conda-forge core team.

Py-ART

The Python ARM Radar Toolkit is an module for reading, visualizing, correcting and analysis of weather radar data. I was the lead developer of the package while working at Argonne.

berryconda

Berryconda is a Python distribution similar to Anaconda for the Raspberry Pi single board computers. I am the creator of Berryconda and its main contributor.

pyfive

pyfive is an open source library for reading HDF5 files in pure Python. I am the creator and main contributor to pyfive.

nmrglue

nmrglue is a library for working with NMR data in Python. I created nmrglue during my Ph.D. and continue to maintain the package.

COURSES AND
TUTORIALS

The Sheer Joy of Packaging
SciPy 2018, Austin, Texas, July 9-15, 2018.

Open Source Radar Short Course
37th Conference on Radar Meteorology, Norman, Oklahoma, September 13, 2015.

PyART, Python ARM Radar Toolkit
2015 ARM/ASR Joint User Facility PI Meeting, Vienna, Virginia, March 18, 2015.

Open Source Radar Short Course
8th European Conference on Radar Meteorology and Hydrology, Garmisch-Partenkirchen, Germany, August 31, 2014.

PRESENTATIONS

Berryconda: Scientific Python on the Raspberry Pi
SciPy 2017, Austin, Texas, July 10-16, 2017.

Building and Distributing Python Software with Conda
DePy, Chicago, IL, May 7, 2016.

The Language, Libraries and Culture of Python in Meteorology
96th AMS Annual Meeting, New Orleans, Louisiana, January 10-14, 2016.

Keep calm and conda install,
ChiPy Monthly Meeting, Chicago, IL, August 13, 2015.

Exploring Open Access Weather Radar with the Python ARM Toolkit
Scipy 2015 Conference, Austin, TX, July, 10, 2015.

Speeding Up Python Data Analysis Using Cython
DePy, Chicago, IL, May 29, 2015.

Profiling Python code to improve memory usage and execution time
2015 SEA Software Engineering Conference. Boulder, CO, April 14, 2015.

Designing and implementing radar algorithms in Python
95th AMS Annual Meeting, Phoenix, AZ, January 5, 2014.

New Doppler Spectral Processing Technique for Identifying Atmospheric Signals from Radar Wind Profilers
8th European Conference on Radar in Meteorology and Hydrology, Garmisch-Partenkirchen, Germany, September 4, 2014.

Tools and Techniques for Developing Atmospheric Python Software: Insight from the Python ARM Radar Toolkit
94th AMS Annual Meeting, Atlanta, GA, February 3, 2014.

nmrglue: a Python Module for Working with NMR Data
Scipy 2012 Conference, Austin, TX, July, 19, 2012.