

Bryan Weber

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SELECT EXPERIENCES

Director of Undergraduate Studies | 2019–Present

Assistant Professor in Residence | 2014–Present

MECHANICAL ENGINEERING DEPARTMENT, UNIVERSITY OF CONNECTICUT

- Leading development of new curriculum for over 800 undergraduate students in Mechanical Engineering balancing needs of students, faculty, and industrial partners
- Manage 1-2 research students working on open-source Python packages plus 4-10 teaching assistants per year
- Support department administrative functions, including hiring staff and student communications
- Teach 200+ undergraduate students each semester, achieving median 5/5 rating on student evaluations
- Deployed JupyterHub to on-premises RedHat virtual machine via Docker and Docker Compose, used by 200+ students per semester
- Produced 150 lecture videos, viewed over 170,000 times over three years, with 1,000+ channel subscribers

Core Developer and Community Leader | 2014–Present

Steering Committee Member | 2017–Present

CANTERA SOFTWARE PROJECT | /Cantera

- Maintain SCons-based build system for macOS, Linux, and Windows, supporting GCC, Clang, MSVC, and MinGW compilers
- Migrate continuous integration infrastructure for automated tests and packaging from Travis CI and Appveyor to GitHub Actions
- Develop and automate build of Conda and PyPI wheel packages, downloaded 50,000+ times in 2 years
- Develop and automate build and deployment of the Cantera website to Linode hosting, enabling continuous deployment of new website features
- Received \$2.5M grant from NSF as part of multi-university research team to expand Cantera to novel scientific domains and develop sustainable communities

Author and Technical Reviewer | 2019–Present

REAL PYTHON | realpython.com

- Written six in-depth articles covering topics in the Python ecosystem, including Python `main` functions, using `datetime` and `dateutil`, and the `enumerate` function
- Articles are read by 30,000+ unique readers per week and were featured on the Python Bytes and Real Python podcasts

Co-Chair, Small Development Grants Committee | 2019–Present

NUMFOCUS

- Lead committee to award up to \$45,000 three times annually to applicants from NumFOCUS projects
- Organize and co-host decision meetings for 6-8 committee members, ensuring each application is discussed in the allotted time

EDUCATION

PH.D. IN MECHANICAL ENGINEERING University of Connecticut | 2014

M.S. IN MECHANICAL ENGINEERING University of Connecticut | 2010

B.S.E. IN AEROSPACE ENGINEERING Case Western Reserve University | 2009

OTHER PROJECTS

ThermoState

Used in thermodynamics classes and published in the Journal of Open Source Education

CanSen

Simplified input-file based user interface for Cantera

thermohw

Converts Jupyter Notebooks into homework assignments via a custom `nbconvert` template

conda-forge

Maintainer of 6 conda-forge packages