Daniel Micah Bergey

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Experience

Diagrams — http://projects.haskell.org/diagrams
Co-maintainer — 2013-present

- Contributed >5000 lines of code, including path interpolation algorithms and 3D primitives
- Supervised releases to Hackage (Haskell-specific community package server)
- Supervising an undergraduate to integrate constraint-solving, through Google Summer of Code

The Hacktory — Philadelphia, PA
Instructor & Volunteer — 2012-2013

- Designed and built open-hardware data logger used in middle school science class
- Developed curriculum for and taught 10-week middle school class *How Things Work*
- Taught and TA'd classes for adults on sensors, Python data visualization, Arduino

Building Science Corporation — Somerville, MA
Engineer — 2008--2013

- Designed & executed field study on distribution effectiveness of single-point heating
- Wrote Python and Fortran code for HVAC simulations as part of ASHRAE RP-1449
- Analyzed sensor data on thermal distribution and moisture removal ($\sim$5 years & $\sim$2 million lines)
- Recommended design parameters for net zero energy homes, including NIST test facility
- Sized residential HVAC systems and designed duct layouts for builders from Louisiana to Maine

Education

Massachusetts Institute of Technology — Cambridge, MA
Bachelor of Science in Art and Design — 2008

- Studies emphasized sustainability and energy in buildings
- Coursework: Basic Structural Design, Thermal Fluids Engineering II, Construction Ecology, Analysis and Design of HVAC Systems

Skills

Programming	Haskell, Python, C, CSS, Fortran, HTML, Java, Javascript, Lisp, Perl, Scala, SQL
Modeling	AutoCAD, BeOpt, EnergyGauge, EnergyPlus, RemRate, SketchUp, TRNSYS
Construction	Drywall, Plastering, Plumbing, Soldering, Wiring
Mechanical	Hand Forging, Machining, Welding, Wood Joinery
Languages	Hebrew, Hindi

Publications

Daniel Bergey and Christalee Bieber. "Teaching with Open Boxes: Datalogging in the Classroom," *Open Hardware Summit* (2013). (project website)

Armin Rudd and Daniel Bergey. *Ventilation System Effectiveness and Tested Indoor Air Quality Impacts.* Building Science Corporation, 2013. (PDF)

A. Rudd, H. Henderson, D. Bergey, D. Shirey. *RP-1449: Energy Efficient and Cost Assessment of Humidity Control Options for Residential Buildings.* ASHRAE, 2012. (PDF behind paywall)

Daniel Bergey and Kohta Ueno. "New England Net Zero Production Houses," *ASHRAE Transactions* 117(2) (2011). (PDF)