Matthew R.V. Ross

Assistant Professor of Water Quality
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EDUCATION

Duke University, Ph.D. Ecology   2017

University of Colorado at Boulder, B.A. Ecology and Evolutionary Biology with a Minor in French   2010

EMPLOYMENT

Colorado State University Department of Ecosystem Science and Sustainability

    Assistant Professor of water quality   2018–present

University of North Carolina at Chapel Hill

    Post-doctoral researcher in the Global Hydrology Lab with Tamlin Pavelsky   2017–2018

PUBLICATIONS

Journal Articles

M.R.V.Ross, F. Nippgen, B.A. Hassett, B.L. McGlynn, E.S. Bernhardt. "*Pyrite oxidation drives exceptionally high weathering rates and geologic CO_2.*" Global Biogeochemical Cycles. doi: [10.1029/2017GB005798](10.1029/2017GB005798)

PUBLIC MEDIA

"Nano-seconds" lecture by Grace Hopper. https://www.youtube.com/watch?v=JEpsKnWZrJ8

TEACHING

Associate Professor, Mathematics, Vassar   1931–1941

    Teach students about math, began career in programming and largely developed design and implementation of a computer compiler.

Director, Navy Programming Languages Group   1967–1977

    She developed validation software for COBOL and its compiler as part of a COBOL standardization program for the entire Navy. Hopper advocated for the Defense Department to replace large, centralized systems with networks of small, distributed computers. Any user on any computer node could access common databases located on the network. She developed the implementation of standards for testing computer systems and components, most significantly for early programming languages such as FORTRAN and COBOL. The Navy tests for conformance to these standards led to significant convergence among the programming language dialects of the major computer vendors. In the 1980s, these tests (and their official administration) were assumed by the National Bureau of Standards (NBS), known today as the National Institute of Standards and Technology (NIST). (Source: https://en.wikipedia.org/wiki/Grace_Hopper) # AWARDS

1964 *Society of Women Engineers Achievement Award*, the Society's highest honor, "In recognition of her significant contributions to the burgeoning computer industry as an engineering manager and originator of automatic programming systems."

1969 *Data Processing Management Association Man of the Year* (now called the Distinguished Information Sciences Award)

1973 *Distinguished Fellow of the British Computer Society*. First American and the first woman of any nationality to be given award.

1982 *American Association of University Women Achievement Award*

1987 *Computer History Museum Fellow Award Recipient* First to receive this award, for contributions to the development of programming languages, for standardization efforts, and for lifelong naval service.

1991: *National Medal of Technology*

1996: *USS Hopper (DDG-70) was launched*. Nicknamed Amazing Grace, it is on a very short list of U.S. military vessels named after women.

2009: The Department of Energy's National Energy Research Scientific Computing Center named its flagship system "Hopper"

2016: Posthumously awarded a *Presidential Medal of Freedom* for her accomplishments in the field of computer science