

## Elizabeth Ruth Goeke

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### EDUCATION

*University of Iowa, Iowa City, Iowa, 2002-2007*

Ph.D. in Geological Sciences, *exp. 2008*

“Quantitative Textural Modeling of a High-Pressure Metapelites from Alp de Confin, Adula Nappe, Switzerland” (Adviser: Dr. Charles Thomas Foster)

*Indiana University, Bloomington, Indiana, 1999-2001*

M.S. in Geological Sciences, 2003

“Approach to equilibrium: a case study of the Bronson Hill Terrane, New England” (Adviser: Dr. Robert P. Wintsch)

*Middlebury College, Middlebury, Vermont, 1995-1999*

B.A. in Geology and Music, minor in German

“Pressure and temperature studies in the eastern contact aureole of the Victory Pluton, northeastern Vermont” (Adviser: Dr. Kimberly Hannula)

### TEACHING EXPERIENCE

*Visiting Assistant Professor: Vassar College, 2007-present*

ESCI 201-Earth Materials (Spring 2008)

- giving lecture and teaching lab
- material includes mineralogy, optical, igneous and metamorphic petrology

ESCI 380-Volcanology (Spring 2008)

- designing senior seminar-style class

ESCI 105-Volcanoes and Civilization (Spring 2008)

- designing a new introductory six-week course
- integration of science and literary descriptions of volcanic events

ESCI 271-Structural Geology (Fall 2007)

- gave lecture and taught lab

*Teaching Assistant: University of Iowa, 2002-2004*

12:041-Mineralogy (Fall 2006)

- gave lecture for the first three weeks of class

12.052-Petrology (Spring 2003, 2004)

12.041-Mineralogy (Fall 2002, 2003)

*Instructor:* Western Kentucky University, 2001-2002

Summer 2002: Geol 102-Introduction to Geology

- gave lecture to non-majors

Spring 2002: Geol 350-Petrology

- gave lecture and taught lab

Fall 2001/Spring 2002: Geol 111-Physical Geology

- gave lecture for majors, civil engineering, and education majors
- supervised lab taught by graduate student

Fall 2001: Geol 330-Mineralogy

- gave lecture and taught lab

*Assistant Instructor:* Indiana University, 1999-2001

Spring 2001: H205-Geology of Sculptor's Materials

Spring 2001: G417-Optical Mineralogy

Spring 2000/2001: E105-Meteorites and Planets

Fall 2001: G221-Mineralogy

Fall 1999: G225-Earth Materials

### TEACHING INTERESTS

Metamorphic and igneous petrology, mineralogy, optical mineralogy, structure, tectonics, introductory physical geology, non-major courses

### RESEARCH EXPERIENCE

*Doctoral Research:* Department of Geosciences, University of Iowa, 2002-present (research adviser: Dr. Charles Thomas Foster)

- Field collection of pelitic eclogite-facies samples from Alp de Confin, Adula Nappe, Switzerland (Summer 2004, 2005)
- Constraining tectonic exhumation pressure-temperature paths *via* bulk-composition specific phase diagram modeling
- 3D garnet crystal size distribution studies using high-resolution X-ray computer tomography at the University of Lausanne, Switzerland
- Quantitative 3D nucleation, growth and dissolution computer modeling of metamorphic textures

*Masters Research:* Department of Geosciences, Indiana University, 1999-2001 (research adviser: Dr. Robert P. Wintsch)

- Field collection of amphibolites from the Bronson Hill Terrane in Connecticut, Massachusetts, and New Hampshire (Summer 1999, 2000)
- Pressure-temperature study to quantify the Pennsylvanian overprint on amphibolites originally metamorphosed during the Devonian Acadian orogeny
- Electron microprobe, microstructural and petrographic analysis

*Bachelors Research:* Department of Geology, Middlebury College, 1998-1999 (research adviser: Dr. Kimberly Hannula)

- Field collection of pelites from the eastern contact aureole of the Victory Pluton, Vermont (Summer 1998)
- Pressure-temperature study to determine time relationship between the emplacement of the Victory Pluton and movement along the Monroe Thrust Fault
- Quantitative analysis with scanning electron microscope and petrographic analysis

### RESEARCH INTERESTS

- Constraining tectonic processes with the use of detailed pressure-temperature-time paths
- Advancing our understanding of the three-dimensional relationships between the crystal size distribution of porphyroblasts and the metamorphic history of the sample

### AWARDS and HONORS

- Geological Society of America Student Research Grant, 2005: “Garnet grain distribution along a pelitic eclogite to amphibolite path: Adula Nappe, Switzerland”
- Mineralogical Society of America Grant for Student Research in Mineralogy and Petrology, 2005: “Quantitative textural modeling along a strong decompression path: Example from the Adula Nappe, Central Alps”
- Geological Society of America Student Research Grant, 2000: “Metamorphic overprinting: influence of Alleghanian metamorphism on Acadian rocks on the Bronson Hill Terrane”
- Howard Hughes Medical Institute Research Grant, 1998: “Pressure and temperature studies in the eastern contact aureole of the Victory Pluton, northeastern Vermont”

### PROFESSIONAL SOCIETIES

- American Geophysical Union (1999 – present)
- Association for Women Geoscientist (1999 – present)
  - liaison to the Girl Scouts of the United States (2001 – present)
- Geological Society of America (1998 – present)
- Mineralogical Society of America (2001 – present)

### DEPARTMENTAL SERVICE

- Search committee for Mineralogy/Petrology tenure-track position at Western Kentucky University, 2001-2002

## ABSTRACTS

Goeke, E.R., and Foster, C.T., 2007, Bimodal garnet nucleation and growth patterns in metapelites from Alp de Confin, Adula Nappe, Switzerland: Geological Society of America Abstracts with Programs, 39.

Goeke, E.R., 2007, Badges, activity fairs and Destinations—Forming links between Girl Scouts and AWG: Geological Society of America Abstracts with Programs, 39, 2, 92.

Goeke, E.R., and Foster, C.T., 2006, Evidence for late-stage heating during exhumation of eclogite-facies metapelites from Alp de Confin, Adula Nappe, Switzerland: Geological Society of America Abstracts with Programs, 38, 7, 208.

Goeke, E.R., and Foster, C.T., 2005, Pseudosection modeling of high pressure metapelites in the NCKFMASH system: Comparison to samples from Alp de Confin, Central Alps: Geological Society of America Abstracts with Programs, 37, 7, 227.

Goeke, E.R., Foster, C.T., and Baumgartner, L.P., 2005, Garnet grain distribution along a pelitic eclogite to amphibolite path: Adula Nappe, Switzerland: *Geochimica et Cosmochimica Acta*, 69, 10, 406.

Goeke, E.R., and Yi, Keewock, 2001, Polymetamorphism and disequilibrium in the Bronson Hill Terrane, New England: Geological Society of America Abstracts with Programs, 33, 7, 381-382.

Goeke, E.R., Boyd, J., and Wintsch, R.P., 2000, Hinged Alleghanian uplift of the Bronson Hill terrane in Connecticut and Massachusetts: Geological Society of America Abstracts with Programs, 32, 7, 31-32.

Goeke, E.R., and Hannula, K., 1999, Cordierite reaction textures in the eastern aureole of the Victory Pluton, northeastern Vermont: Geological Society of America Abstracts with Programs, 30, 1, 18.