

CITATION OF
ROSE BOHRER
FOR THE
ROMEO L. MORUZZI YOUNG FACULTY AWARD FOR
INNOVATION IN UNDERGRADUATE EDUCATION

Computer Science can be an intimidating discipline, and Programming Languages is steeped in theory, abstract concepts, and formal modeling. Students can feel alienated as they struggle with understanding the technical content. Into this field comes Professor Rose Bohrer, who “breaks the silo in which most programming languages research and teaching historically lives.” In an amazing redesign of Programming Languages courses, Professor Bohrer created curricula in which theory-driven content is integrated with human-oriented concerns, social and ethical considerations, and belonging in computing.

Professor Bohrer’s undergraduate Programming Languages class is filtered through the lens of human-computer interaction. The students implement core language technologies, practice skills from the humanities through reflective statements and design user studies to answer self-chosen questions about language design. Her assessment strategy is also innovative, incorporating traditional structure, external accountability, and peer motivation. A colleague reflects that her work presents mathematical foundations in a more motivating and approachable context. Another colleague effuses, “CS 4536 is now, to my knowledge, the only course in the world with this depth of integration of both theoretical computer science and human-centered design.”

With such an innovative approach to Programming Languages, it is not surprising that a suitable text did not exist. Professor Bohrer created her own, a work rich in research and based on her own conceptualization, teaching, and student feedback. Her open-access textbook is available to the CS community, and she has shared her research and teaching approach through conferences and publications.

The impact on students has been swift. Her class has seen increased participation of students in minority groups who have found a space to learn in an inclusive environment. A colleague has heard from students about “their unexpected love” of the course. As another colleague summarizes so eloquently: “Through both her writings and her curriculum design, Dr. Bohrer, in two short years, has already changed Computer Science at WPI for the better.”

For her creation of an inclusive and human-centered approach to Programming Languages, we are proud to present the 2024 Romeo L. Moruzzi Young Faculty Award for Innovation in Undergraduate Education to Professor Rose Bohrer.

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