

CITATION

February 27, 2021

In keeping with the resolve of the Mathematical Association of America to take substantive action each year to honor extraordinarily successful teaching at all post-secondary levels, its Golden Section is pleased to identify

ALISON G. LYNCH

as the recipient of its sectional award for a

DISTINGUISHED BEGINNING TEACHER OF COLLEGE OR UNIVERSITY MATHEMATICS

As a graduate student, Alison learned the discipline of scientific research and teaching, applied to the purely mathematical field of linear algebra and to the study of mathematics education. She has built both into her career as a professor. A close colleague reports,

Her research-based teaching methods encourage students to take ownership of their own learning and do more of the intellectual work, rather than simply listen to the instructor. Her classes have high student engagement, with students spending the majority of class time working on problems in groups. When she brings the class together she often asks, "What do you wonder?"

After undergraduate study at the University of Delaware, Alison earned the doctorate in mathematics in 2015 at the University of Wisconsin and published her results in a leading research journal. She then joined the Department of Mathematics and Statistics at California State University, Monterey Bay, where she quickly earned the appreciation and respect of both students and colleagues.

To a former student, now pursuing graduate study,

the first thing she mentioned was that she recognizes that students come into the classroom with different backgrounds and different levels of interest and that it is her job to design her courses so that there is something for everyone.

A senior colleague observed that Dr. Lynch was applying in her calculus class instructional techniques called “Reading Apprenticeship and Complex Instruction” now under development, and

every single student was engaged throughout the class session—actively making notes, talking with other students, and listening.

One of these students wrote,

teaching ... is her passion and she really cares ... a teacher who is so attentive is extremely motivating.

Dr. Lynch guided curricular redesign of the Calculus I and Pre-calculus courses to incorporate these techniques, which require major shifts in practices and beliefs about how students learn mathematics. She has organized professional development for the instructors. Since 2018 eleven precalculus and seven calculus instructors have used her materials. The department reports significant decreases in the numbers of enrolled students not succeeding in these courses: 30% to 20% and 50% to 30%, respectively. More recently, she has led her department’s adaptation to the restraints imposed by the COVID-19 pandemic.

Dr. Lynch has successfully applied some of these methods to more advanced courses, and has guided some of those students in detailed studies of the effectiveness of these techniques. Other faculty have adopted them, and at least three of the student researchers have proceeded to doctoral studies in mathematics and mathematics education.

We are proud to present the 2020 Golden Section Award for a Distinguished Beginning College or University Mathematics Teacher to Alison Lynch, an exceptionally effective mathematics teacher and educational leader.