

## Henry L. Alder Awards

The Henry L. Alder Award for Distinguished Teaching by a Beginning College or University Mathematics Faculty Member was established in January 2003 to honor beginning college or university faculty whose teaching has been extraordinarily successful and whose effectiveness in teaching undergraduate mathematics is shown to have influence beyond their own classrooms. An awardee must have taught full time in a mathematical science in the United States or Canada for at least two, but not more than seven, years since receiving the PhD. Henry Alder was MAA President in 1977 and 1978 and served as MAA Secretary from 1960 to 1974.

### Andrew Penland

*Western Carolina University*

Dr. Andrew Penland is a passionate and engaging educator. Returning to teach at his alma mater after receiving his PhD from Texas A&M, his “fun and entertaining” style has earned him teaching awards at both Texas A&M and Western Carolina University (WCU). His students appreciate his approach to teaching mathematics; he creates open-ended, relevant questions and fosters a collaborative environment to solve them. As a Project NExT Fellow in 2015–2016, he engaged with colleagues nationwide to learn about life as a mathematician and share his passion for teaching mathematics.

Dr. Penland is a university leader in undergraduate research. He is co-PI on a mini-grant from the Center for Undergraduate Research in Mathematics, which sponsors two research students for the year. He has supervised five students in the Learning Environment and Academic Research Network, an NSF project of which WCU is a member institution.

Dr. Penland also has a passion for mathematics outreach. He has a strong desire to help local students know that they can compete with anyone. He serves as coach of the Smoky Mountain High School Codebusters Team. In 2019, this team took 4th in their event at the North Carolina Science Olympiad, higher than any other non-magnet public school. He has coached WCU teams in Math Jeopardy (2019 MAA Southeastern Sectional champions), the Kryptos Challenge (several top 10 finishes, including 2 teams in the top 4 in 2018), the COMAP MCM, and the Putnam Competition. He engages directly with in-service mathematics teachers in the Smoky Mountain and Blue Ridge Math Teachers’ Circles. He administers the Math Puzzles Program for local high schools, and he serves as the chair for the WCU High School Mathematics Contest. He works to increase mathematical appreciation in the general community by giving general audience talks at local music venues and community colleges.

For his tireless advocacy for learning mathematics in fun and engaging ways, both at WCU and abroad, we are pleased to nominate Dr. Andrew Penland for the Henry L. Alder Award.

### Response

I am grateful and humbled to receive this award. When I received the news, I immediately thought of my parents, who filled my childhood home with learning opportunities. My wife and children should share in this honor, as well. They are integral to everything I do. In particular, my wife is an early childhood educator who continually brings joy, creativity, and conscientiousness to her classroom, inspiring me to strive for the same in mine.

When I enrolled as a nontraditional student at Haywood Community College in 2005, I did not know that I was beginning amazing journey full of wonderful teachers, students, and ideas. I owe a lot to the instructors at HCC and their tireless work. I am so thankful for the mentorship I received as an undergradu-

ate student from the professors at Western Carolina University, many of whom I now count as colleagues. I am fortunate that my Department embraces the Boyer model of scholarship, giving faculty members freedom to pursue meaningful work. I also want to acknowledge the professors at Texas A&M who presented challenging in an engaging way that made it seem approachable.

Obviously, a teacher can do nothing without students. Mine have been willing to show up, engage with the class, and accept me as an imperfect person also seeking to learn. They have shown me so much. Special thanks is due to my student research collaborators. Sometimes I have no idea how to mentor them, but they always persist, inspiring me to do the same. Together, we find our way.

### **Biographical Sketch**

Dr. Andrew Penland fell in love with the North Carolina mountains during his childhood visits to see extended family. He moved to the region as soon as he became an adult. A math-phobe throughout high school, he gradually felt drawn towards the subject based on a few synchronistic encounters at Haywood Community College. Initially, he was motivated by the seemingly impossible challenge of passing a Calculus I class.

Dr. Penland transferred from HCC to Western Carolina University in 2006, finishing Bachelor's degrees in mathematics and mathematics education in 2009. He continued to initial graduate studies at WCU, earning an MS degree in applied mathematics under the thesis guidance of Risto Atanasov. He earned his PhD at Texas A & M University, with the incomparable Zoran Sunik as his advisor, pushing to graduate a year ahead of schedule so he could pursue his dream of returning to work as a faculty member at WCU.

Dr. Penland's experience as a Project NeXT fellow in 2015–2016 introduced him to a wide variety of teaching techniques, and a newfound appreciation for the art. He shamelessly steals techniques from his colleagues in the mathematics department at Western Carolina University. He also credits youthful competition and later coaching experience in the sport of amateur wrestling with teaching him how to be mentally resilient, as well as how to break complicated skills down into simple and fun activities. He is forever thankful to the successful wrestling coach who taught him the "5 in 5" principle: in any game, an effective coach can use consistent growth to have their team in the top 5% within 5 years. He has used this principle when coaching student teams in various competitions.