CITATION

February 25, 2023

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

Monique Chyba

as the recipient of its sectional award for a

DISTINGUISHED TEACHER OF COLLEGE OR UNIVERSITY MATHEMATICS

Since joining the faculty at the University of Hawai'i at Mānoa in 2002, Dr. Monique Chyba's classroom instruction, place-based pedagogy, student mentoring, and community outreach initiatives have impressed her students and colleagues. A colleague stated

> She not only shines individually through her clear and engaging style but also has worked tirelessly to make substantive changes in the teaching infrastructure at the University of Hawai'i. Her teaching often extends beyond the classroom both through her dedication to community engagement but also in using place-based knowledge to reform the quantitative reasoning curriculum.

Dr. Chyba obtained her Ph.D. from the University of Geneva in Switzerland. She held research assistant positions at Harvard and Princeton and a visiting assistant professor position at UC Santa Cruz before joining UH Mānoa. At UH, Dr. Chyba has brought her skills as an applied mathematician to create engaging research opportunities for her students, both at the undergraduate and graduate level. With her skill for forming new collaborations, Dr. Chyba's students have worked on projects spanning the sciences, from motion planning for underwater vehicles, medical imaging,

analyzing microbiome data, and pandemic modeling. Furthermore, Dr. Chyba has built opportunities for math students in a variety of ways. Prof. Chyba was the PI on the NSF grant *SUPER-M: School and University Partnership for Educational Renewal in Mathematics*. The goal was to train a cohort of mathematicians in science communication that could work with K-12 schools. Thirty-three graduate students were trained as educators and worked in 34 schools across the state, and the program led to long-lasting outreach programs such as Molokaʻi Math Days, Hawaiʻi Math Teacher Circle, and Be a Scientist Night. A former student states

> her mentorship continuously helped me grow as a young scientist. I watched her communicate advanced mathematical concepts to the public with ease. She also placed high value on STEM outreach, trying to get students still in elementary and high school enthusiastic and curious about math….Through this work, Dr. Chyba was a large part in my recognition of my own love for teaching.

In addition to mentoring, Dr. Chyba's key achievements include the development of the Learning Assistant program, a university-wide program that trains and employs undergraduates to aid in classroom active-learning activities and strategies, and the comprehensive redesign of her department's *Survey of Mathematics* course, a large multi-section quantitative reasoning general education course. Working with other scientists and community leaders, Dr. Chyba has been at the forefront of developing new, place-based quantitative reasoning material for the course topics relevant to the Hawaiian Islands, for example, the revitalization of Kahoʻolawe, hurricanes and other natural disasters, and climate change.

We are proud to present the 2023 Golden Section Award for a Distinguished College or University Mathematics Teacher to Dr. Monique Chyba, an exceptionally effective mathematics researcher, teacher, and educational leader.