Journal of Humanistic Mathematics

Volume 6 | Issue 2 July 2016

Connections

Mark Huber
Claremont McKenna College

Gizem Karaali
Pomona College

Connections

Mark Huber

Department of Mathematical Sciences, Claremont McKenna College
mhuber@cmc.edu

Gizem Karaali

Department of Mathematics, Pomona College
gizem.karaali@pomona.edu

The connections we make have much influence on our lives. Mathematics is a wonderful tool for studying connections, but it works in the other direction as well. By forming strong connections we become stronger mathematicians as we are introduced to new ideas and ways of looking at the world.

In this summer issue we have five articles that explore various connections within mathematics and beyond. Miton Rosa and Daniel Orey lead off the issue by looking at mathematics from a holistic context, and explore how teaching using an ethnomodelling approach can help students connect mathematics to their lives outside school. Connecting with students has always been a challenge: Michael Matthews and Angela Hodge share their experiences and successes with Inquiry Based Learning in a history of mathematics course. Mathematical connections also appear in art forms: Terry Griggs counts the number of different sonnets based on how the lines are connected through different rhyming schemes.

Giang-Nguyen Nguyen and Joel Goodin take a look at research on how teachers motivate students to learn college-level mathematics and connect it to the experiences of five students in a course taught by Mr. Algebra, a thoughtful and realistic instructor who focuses on connecting with his teachers at a personal level. Regina Aragon and Indika Wickrmasinghe report on variables that affected success in an online class, including student-instructor communication and instructor-made videos.

Andrey Mishchenko offers us an exposition of circle packing; with ample illustration, he shows us how the mathematics of coins, circle packings, and disk configurations connects with graph theory.

In our World of Mathematics articles, our contributors continue exploring various mathematical connections. Asuman Aksoy introduces us to the story of Al-Khwārizmī and his work in the House of Wisdom, and considers the impact of his work through personal and hermeneutic perspectives. Rachel Steinig gives us a student's perspective on the best ways to drive students away from mathematics; there are many issues she brings up and not the least is about how teachers and parents often miss the opportunity to make real connections with students. The Fundamental Theorem of Calculus connects integrals and derivatives in a powerful way, and Dan McQuillan and Darlene Olsen present new ways to present this in the classroom.

Sarah Voss considers the use of fuzzy logic in health care settings, and Justus Riek explores how to better understand conditional probabilities through the Interrogator's Fallacy. Both point towards ways mathematics can help us make connections in contexts typically not considered as mathematical.

We have two book reviews in this issue, exploring two books where mathematics appears in unexpected contexts (ecology and law, respectively). JoAnne Growney considers *A New Index for Predicting Catastrophes: Poems* by Madhur Anand from several perspectives. Noah Giansiracusa reviews *Math on Trial* by Schneps and Colmez, and considers the broader question of how to teach statistical methods in jurisprudence.

Our poets have some great selections for us this issue, with Alanna Rae, Thomas Moore, E. Laura Golberg, Joshua Cooper, and Manya Rama-Sundström contributing. Hugh Culik gives us a conversation on infinity in his short story.

Brian Winkel closes our issue with an announcement of SIMIODE, the Systemic Initiative for Modeling Investigations and Opportunities with Differential Equations.

We hope you enjoy this summer issue!