

by Lara Pudwell

This July, I spent a week in Florence, Italy to attend the Seventh International Conference on Permutation Patterns. This combinatorics conference is the annual meeting for mathematicians who work in my graduate research area of permutation patterns. In recent years the topics have expanded from enumeration and asymptotic questions to more general combinatorial problems involving permutations. The conference rotates through such places as Iceland, Scotland, New Zealand, and occasionally the USA, visiting the universities where the regular attendees teach. There can be anywhere from 20 to 60 people in attendance, and this year's meeting, with 65 attendees, was the largest gathering to date!

This summer was my fourth time to attend the Permutation Patterns meeting, but my first as a faculty member. As always, it was a very productive meeting for me. I gave a 20 minute talk on "Avoiding the pattern $\{\bar{3}\{\bar{1}\}542$ ", listened to many interesting presentations, and reconnected with dozens of research colleagues. The open problems at the end of my presentation have generated a fair amount of email dialogue since I've returned to Indiana. In addition, a talk by a mathematician from Montreal inspired a new idea for an undergraduate research project I will direct this school year on finding the median permutation of a set of permutations. A collaborator from Minnesota State University and I have begun work on pattern avoidance in colored partitions in the weeks since this conference and made substantial progress too. As in the past, attending this conference has instigated more than enough new research ideas to keep me busy for another year.

If details about combinatorics lectures are not your cup of tea, rest assured, combinatorics conference groups know how to have fun too. On Wednesday afternoon, the conference boarded a bus to see a famous church on the south side of Florence and then to visit the small town of San Gimignano and have a wonderful multi-course conference dinner at a nice restaurant in the Tuscan hill country. I also stayed a few days after the meeting was over to see more of the cities of Florence and Lucca, and to climb the leaning tower of Pisa.

Thankfully my travel to this year's conference was funded by a competitive travel grant from the Association for Women in Mathematics and the National Science Foundation. Next year is another story. Then again, Permutation Patterns 2010 will be held at Dartmouth College in New Hampshire.