

Caroline Uhler



Already as a child, Caroline Uhler has been very fascinated by everything related to nature and its laws. For this reason, she decided to study mathematics and biology at the University of Zurich. In 2006 she graduated with a Masters degree in mathematics and a minor in biology. She earned a perfect GPA and received the best student's award from the University of Zurich for her excellent studies.

During her undergraduate studies at the University of Zurich, Caroline focused on algebra and algebraic geometry and took introductory lectures in all major fields of biology. She felt attracted by the abstract constructions and the clear structure in algebra. But at the same time, Caroline was convinced that the interconnectivity between mathematics and biology would be gaining an increasingly important role and she believed that statistics would represent an important interface between mathematics and biology. So she started to attend lectures in statistics and specialized in this field during her Master studies. She wrote her Master thesis under the supervision of Professor A. D. Barbour at the University of Zurich on mastitis in dairy production. Mastitis, being an endemic disease of dairy cows spread all over the world, is one of the main concerns for the dairy industry in Switzerland and worldwide. For her thesis Caroline deepened her knowledge in Bayesian statistics, and at the same time, she could apply her knowledge in biology and make a significant contribution to solving the problem of mastitis in dairy production in Switzerland.

Parallel to her academic career, Caroline taught mathematics at high school, which even more strengthened her passion for teaching. She also co-founded and managed the Thailand Volunteering Association, a non-profit institution organizing volunteering stays for Swiss students as English teachers in public schools in the northeastern part of Thailand. This was a very rewarding but also demanding experience. After graduating, Caroline worked as a research and teaching assistant at the University of Zurich for an year, also preparing for her Ph.D. studies in the US.

Caroline's decision for pursuing a Ph.D. was strongly influenced by a lecture on algebraic statistics in computational biology held by Professor B. Sturmfels, who was visiting Zurich for a semester. Caroline got very excited about the new and growing field of algebraic statistics because it combines statistics, algebraic geometry and biology, exactly the three fields she is most interested in. Although algebraic statistics is still a very young field, it has already led to important results. Caroline is convinced that algebraic statistics will make many further contributions to phylogenetics, lead to a better understanding of the human genome, and possibly also achieve interesting findings for medicine.

Since August 2007, Caroline is a Ph.D. student in the Statistics Department at the University of California, Berkeley, on a Fulbright Science and Technology grant. She looks forward to conduct research on algebraic statistics applied to computational biology under the supervision of Professor B. Sturmfels, who introduced her to this interesting field.