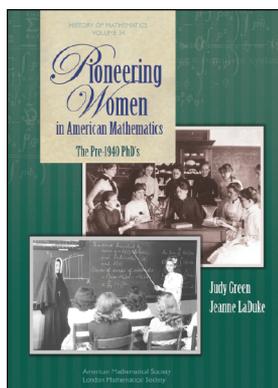


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Pioneering Women in American Mathematics: The Pre-1940 PhDs Judy Green and Jeanne LaDuke

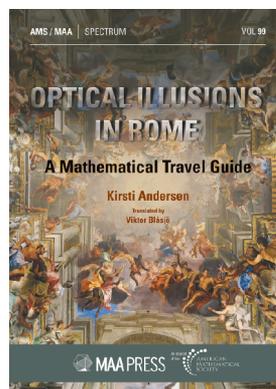
The first woman officially granted a PhD in mathematics in the US was Winifred Edgerton Merrill in 1886 from Columbia. She was, however, not the first woman to earn a PhD in mathematics; that was Christine Ladd Franklin at Johns Hopkins in 1882. Franklin's degree was not actually granted in 1882 because at that

time Johns Hopkins did not grant PhDs to women. In 1926, when Johns Hopkins offered Franklin an honorary degree for her work on human vision as part of their semicentennial celebration, Franklin declined the honor and requested instead the degree she had actually earned forty-four years earlier. She got it.

To celebrate Women's History Month we take the opportunity to remind you of this extraordinary 2009 publication. Two hundred and twenty-eight women earned PhDs in mathematics between 1882 and 1940. Green and LaDuke produced brief—roughly 750 words apiece—biographies of all of them. What an enormous work of research, and an incredible resource for us and future historians of mathematics, this is. In addition to revealing anecdotes, as above, there are patterns and trends and extensive historical analysis and commentary. As one might expect, women's colleges played an inordinate role both in awarding the undergraduate degrees of these woman and in employing them as faculty members. Just seven women's colleges account for the undergraduate degrees of 63 of the 228. There were similar concentrations of PhD awards by institution and thesis advisor. Chicago, Cornell, Bryn Mawr, and Catholic together granted 100 of these PhDs. Leonard Dickson at Chicago, Virgil Snyder at Cornell, and Aubrey Landry at Catholic combined to supervise the theses of 45 of these women. The 228 PhDs that went to women are 14% of the total number awarded in this period. In the

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1950s and 1960s the number of mathematics PhDs earned by women dropped to 5–6%. In the most recent Annual Survey that percentage was 29. The data about institutions and advisors above attest to the ability of committed individuals to make a difference. But these percentages make clear that social and institutional forces have a much greater effect. This book is a treasure trove of information about the individual women and about the social, cultural, and mathematical milieus in which they lived and worked. Nearly 140 years after Christine Ladd Franklin earned her PhD we are still arguing about the ways to increase access to and opportunity in mathematics. This book, by giving us the chance to study our own history and learn from it, could make that conversation more effective.



Optical Illusions in Rome: A Mathematical Travel Guide Kirsti Andersen, Translation from Danish by Viktor Blåsjö

Kirsti Andersen is a prominent Danish historian of mathematics with a special interest in the history of the theory of perspective. On a trip to Rome about a decade ago, she was fascinated by the many uses of tricks of perspective in art and architecture,

and was motivated to write this short book. In it Andersen explains instances of *trompe l'oeil* and anamorphosis (image distortion that is resolved when viewed from a particular spot, or with a particular lens) that one can encounter in the streets and museums of Rome. If you are planning a trip to Rome, it would be fun to take the book along and retrace Andersen's steps. If you happen to be teaching geometry, or a liberal arts mathematics course, the book would make a great resource for a unit on perspective. (There are a modest number of exercises included.) The ideal use, if you could pull it off, is to organize a course on perspective in Roman art and take your students to these sites! The translation from the Danish is by Viktor Blåsjö, who has won multiple awards from the MAA for expository writing. The exposition, as you might expect, is clear and vivid.