Even though 45 percent of undergraduate mathematics degrees now go to women, women make up less than 12 percent of full professors in such math-intensive fields as physics, engineering and computer science. Why are women bailing on these academic careers?

One main reason is that motherhood pulls them away, according to Wendy M. Williams, PhD, and Stephen Ceci, PhD, professors in Cornell University's department of human development (and the married parents of three daughters).

In a paper published in March in *American Scientist*, Williams and Ceci analyzed data on women's abilities and career preferences, as well as hiring, promotion and evaluations at U.S. universities.

They found that—despite what conventional wisdom might suggest—women rarely suffer from overt discrimination in hiring, promotion and funding. In fact, the opposite might be true: Only 20 percent of applicants for tenure-track math professorships are women, but 32 percent of those offered positions are.

Instead, Williams and Ceci say, what keeps women out of the top ranks of academe is the rigid timeline of the tenure system, in which they must work long hours and scramble to attain tenure during their peak childbearing years. The attrition is especially critical in math-intensive fields, they say, in which women are in shorter supply to begin with, so that further opting out leaves the academy with very small numbers of female professors in these fields.

"Motherhood, and the policies that make it incompatible with a tenure-track research career, take a toll on women that is detrimental to their professional lives," Williams and Ceci write.

To solve the problem, they say, universities should adopt policies that allow women—and men—to take a more flexible approach to their careers. Those policies might include offering part-time tenure-track positions, job-sharing arrangements and "stopping the tenure clock" for a set number of years while professors are raising young families.

"The world has changed," says Williams. "It's time to start solving the problems of today, not 30 years ago."

Former APA President Diane Halpern, PhD, who studies sex differences in cognition and education, says that this message is on target.

Motherhood is not the only factor that affects women's underrepresentation in math and science, she says—for example, women who are talented in math tend to choose more "people-centered" fields like medicine, a fact that Williams and Ceci also discuss. But allowing for more flexible academic career paths could go a long way toward encouraging more women to follow research careers, they say.

"The tenure system is very deeply entrenched," Halpern says. "And unfortunately the tenure clock and the biological clock run in the same time zone."

—L. Winerman
Math + science + motherhood = a tough combination

http://www.apa.org/monitor/2012/05/motherhood.aspx