Abstract

In this talk I will give a general description of the three main research projects on which I currently work. The projects are in the area of finite fields:

1) $p$-divisibility of exponential sums and their applications to solvability of polynomials, coding theory and cryptography;
2) permutations of finite fields;
3) linear complexity of periodic arrays.

I have re-visited some of these problems at different times in the last 30 years!

I will also talk about some of the challenges that I have faced as a student and as a professional.

Speaker’s bio

Prof. Rubio is involved in many activities to promote undergraduate research and minority participation in mathematics. She co-founded and co-directed the REU Summer Institute in Mathematics for Undergraduates (SIMU) (1998-2002) and the REU MSRI-UP (2007-2015). In 2006 SIMU received the American Mathematical Society’s award *Programs that make a difference*, being this the first time that this award was given by the AMS. For her research and other activities in mathematics she received the 2006 SACNAS Presidential Service Award and the 2010 Dr. Etta Z. Falconer Award for Mentoring and Commitment to Diversity. She is currently a member of the US National Committee for Mathematics.

This event is part of the program Women Doing Math funded by the Mathematical Association of America – Tensor Program for Women and Mathematics.

October 21, 11am – 12pm • UAC 310

Women Doing Math

*A program to encourage women to participate in creating Mathematics*

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