Colloquium

David Pengelley

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Friday, April 1, 2011 at 3pm in Bell Hall 143

Sophie Germain's grand plan to prove Fermat's Last Theorem

Sophie Germain (1776-1831) is the first woman known to have created important new mathematical research. She is best known in number theory for the first general result aimed at proving Fermat's Last Theorem, finally proven only 15 years ago. However, unpublished manuscripts, and a letter to Gauss, reveal that for her this result was only minor fallout from a multifaceted grand plan she pursued for proving the theorem outright, emphasizing new theoretical techniques of broad applicability. The scope of Germain's attempt remained unequaled for half a century, until her path was unknowingly trodden again by others. We will explore her grand plan and its side thrusts, including remarkable lower bounds on the size of possible solutions to Fermat's equation. Her work has likely lain unread for nigh 200 years. We argue for a substantial elevation of her stature as a number theorist.

For further information, please contact Dr. Emil Schwab, eschwab@utep.edu
Refreshments will be served in front of the colloquium room,
15 minutes before the start of the colloquium.