

Emma Lehmer - 100 not out

Emma Markovna Trotskaia Lehmer was born in Samara, Russia on 6 November 1906 to Motvey and Nadejda Trotsky.

She got into Berkeley by a circuitous route, and there her favourite mathematics lecturer was Derrick Norman Lehmer. As well as taking several of his courses she did a research project with him on finding pseudosquares. It was at this time that she met his son Derrick ('Dick') Lehmer. In 1928 they married.

They received their B.A.s together and went to Brown to do masters degrees, but Emma spent most of her time helping Dick, and typing his thesis, so he was able to go on for a Ph.D. while she was still working on her masters. This she received in 1930 for A Numerical Function Applied to Cyclotomy.

She never did a Ph.D. and so was barred from academia, but she didn't mind too much as the Lehmers wanted to work together and it was not possible for a husband and wife to lecture at the same institution. They moved from one place to another (these were the depression years) and she was always welcome in the mathematics faculties, and in their libraries, and a small bonus of not having a doctorate, in her own words, was that 'First of all there are lower expectations. If one happens to discover something new, one's peers are pleasantly surprised and generous in their praise. This is good for the morale ... '.

They came to England, to Cambridge and Manchester, and met Hardy, Littlewood, Davenport, Erdős and others. Back in America for the war Emma was allowed to do a little teaching, and then Dick was recruited to help design and work on ENIAC. Some weekends the Lehmers used it to solve certain number theory problems using the sieve methods that they were working on, in particular to research Fermat's Last Theorem. Emma was pleased that ENIAC (when it was not broken down) could search a million or so numbers in only three minutes.

J. Brillhart in Acta Arith. 62 (1992), 207-213 writes about the Lehmers as a team. 'In the sixty years during which they collaborated, the Lehmers were a research team who personally influenced a large number of people with their knowledge, their courtesy and sociability, and their fine mathematical work. There is little doubt that one of their most enduring contributions to the world of mathematicians is their founding of the West Coast Number Theory Meeting [an annual event] in 1969.'

'Emma...still goes each day, expectantly, to the mail box. Her address is still 1180 Miller Avenue, Berkeley CA 94708.' - Constance Reid.

So why not send her a card? says Ms Reid.

(see photographs at the University of St Andrews website
http://www-history.mcs.st-andrews.ac.uk/PictDisplay/Lehmer_Emma.html)

Eddie Kent – M500 Society