Emergent Research:
The PIMS Postdoctoral Fellow Seminar

March 08, 2023 | 9:30am Pacific

Pacific Institute *for the* Mathematical Sciences

Central Limit Theorems in Analytic Number Theory

ABSTRACT:
Central limit theorem is a significant result in probability. It states that under some assumptions, the behavior of the average of identically distributed independent random variables tends towards that of the standard Gaussian random variable as the number of variables tends to infinity. In number theory, Erdős-Kac theorem is an example of this which is about the distribution of an arithmetic function while Selberg's central limit theorem is about the distribution of the Riemann zeta-function. In this talk, we aim to provide some explanations toward the proofs of these results and mention some versions of Selberg's theorem.

For more information and registration:
https://www.pims.math.ca/seminars/PIMSPDF

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SPEAKER BIO:
Fatma Çiçek is a PIMS postdoctoral fellow at the University of Northern British Columbia. She will be working as a postdoctoral member of the PIMS Collaborative Research Group in L-functions in Analytic Number Theory. She is working with Alia Hamieh on applications of moment method to Dirichlet polynomials and to L-functions of automorphic forms. Fatma obtained her PhD degree from the University of Rochester in 2020 under the supervision of Steve Gonek. Her thesis was titled ''The Logarithm of the Riemann Zeta Function Near Nontrivial Zeros''. She obtained a master's degree in 2014 from Bogazici University in Turkey, under the supervision of Arzu Boysal and Burak Gurel. She completed her bachelor's degree in mathematics from the same institution.

ABOUT PIMS PDF SEMINARS:
PIMS ongoing lecture series featuring our Postdoctoral Fellows every three weeks. You will have the opportunity to connect with emerging research in the mathematical sciences from a PIMS Postdoctoral Fellow. PIMS PDFs are amongst the top young researchers in Canada, and this is an excellent opportunity to learn about them, and their work.