



## Mathematics and CS Seminar

# Hecke Größencharakteren and the L-Function Ratios Conjecture

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Host: Tim Browning

A Gaussian prime is a prime element in the ring of Gaussian integers  $\mathbb{Z}[i]$ . As the Gaussian integers lie on the plane, interesting questions about their geometric properties can be asked which have no classical analogue among the ordinary primes. Hecke proved that the Gaussian primes are equidistributed across sectors of the complex plane by making use of Hecke Größencharakteren characters and their associated L-functions. In this talk I will present several applications obtained upon applying the L-functions Ratios Conjecture to this family of L-functions. In particular, I will present a conjecture for the variance of Gaussian primes across sectors, and a conjecture for the one level density across this family. Time permitting, I will also discuss results related to super even characters, which are the the function field analogue to Hecke characters.

**Thursday, May 2, 2019 11:00am - 12:00pm**

Raiffeisen Lecture Hall, Central Building



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.

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<https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.