



## Mathematics and CS Seminar

# Minimizing GCD sums, multiplicative energy and applications

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**Host: Tim Browning**

In recent years, the question of maximizing GCD sums regained interest due to its firm link with large values of L-functions, leading for instance to the breakthrough improvement of Bondarenko and Seip concerning the maximum of  $|\zeta(1/2+it)|$ . In this talk, we address the counterpart problem of minimizing weighted GCD sums and show that it appears naturally in some applications. We consider as well a related optimization question regarding the usual multiplicative energy of a subset of the first  $N$  integers. We derive from our results some consequences for short character sums and non-vanishing of theta functions.

**Thursday, April 4, 2019 11:00am - 12:00pm**

IST Austria Campus Raiffeisen Lecture Hall, Central Building



This invitation is valid as a ticket for the IST Shuttle from and to Heiligenstadt Station. Please find a schedule of the IST Shuttle on our webpage: <https://ist.ac.at/en/campus/how-to-get-here/> The IST Shuttle bus is marked IST Shuttle (#142) and has the Institute Logo printed on the side.