



universität
wien

Fakultät für Mathematik

EINLADUNG
Mathematisches Kolloquium
und
Junior Kolloquium

Krishnaswami Alladi (*University of Florida*)
Mittwoch, 4. Mai 2016

15.00 Uhr – Junior Kolloquium:

“The number of prime factors of integers - a selection of charming results both old and new”

15.45 Uhr – Kaffeepause

16.15 Uhr – Vortrag:

“Partitions with non-repeating odd parts - q-hypergeometric and combinatorial identities”

Anschließend vinum cum pane

Ort: Fakultät für Mathematik, Oskar Morgenstern-Platz 1,
Sky Lounge

Junior Kolloquium:

“The number of prime factors of integers - a selection of charming results both old and new”

Abstract:

The first systematic study of the number of prime factors was due to Hardy and Ramanujan in 1917. This eventually gave rise to probabilistic number theory with the work of Turan, and Erdos-Kac. We will provide a selection of beautiful classical results on the number of prime factors and discuss many newer results for which restrictions are placed on the sizes of the prime factors. These lead to surprising twists of the classical theme.

Vortrag:

“Partitions with non-repeating odd parts - q-hypergeometric and combinatorial identities”

Abstract:

By representing partitions with non-repeating odd parts in terms of 2-modular graphs, we first show how these lead to nice derivations of various q-hypergeometric identities. Next we establish new weighted partition identities with free parameters. By special choices of these parameters, we connect them with the famous Göllnitz-Gordon partitions, and combinatorially establish a modular identity and parity results, as well a shifted partition identity mod 32 of Andrews. Finally we give a glimpse at a theory of basis partitions using these 2-modular graphs.

Christian Krattenthaler
Harald Rindler