Mathematisches Institut der Universität Bayreuth

Der Geschäftsführende Vorstand
Prof. Dr. Anton Schiela

D-95440 Bayreuth
Tel.: (0921) 55-3281
Fax: (0921) 55-3238
29. November 2019

Einladung

zum

Mathematischen Kolloquium

Am Donnerstag, dem 5. Dezember 2019, spricht

Herr Prof. Dr. Götz Pfander,
Katholische Universität Eichstätt-Ingolstadt
Gast am Lehrstuhl für Computeralgebra
bei Herrn Prof. Dr. Michael Stoll

über das Thema

Trigonometric series for partitions of intervals

Abstract

Abstract Fourier series form a cornerstone of analysis; it allows the expansion of a complex valued 1-periodic function in the orthogonal basis of integer frequency exponentials (for the space of square integrable functions on the unit interval). A simple rescaling argument shows that by splitting the integers into evens and odds, we obtain orthogonal bases for functions defined on the first, respectively the second half of the unit interval.

We shall generalize this curiosity and show that, given any finite partition of the unit interval into subintervals, we can split the integers into subsets, each of which forms a basis (not necessarily orthogonal) for functions on the respective subinterval.

In addition, novel fundamental results in the theory of Fourier series will be discussed.

Beginn: 16.30 Uhr (Kaffee/Tee ab 16.00 Uhr im Seminarraum 748)
Ort: Hörsaal H 19, Gebäude Naturwissenschaften II, Universitätsgelände

gez. A. Schiela