

Otto-von-Guericke-Universität Magdeburg
Fakultät für Mathematik

Auf Einladung des Institutes für Algebra und Geometrie spricht

Herr Sebastian Bischof, M.Sc.

(Justus-Liebig-Universität Giessen)

über das Thema

On the Extension theorem for twin buildings

Der Vortrag findet hybrid statt.

Entweder Zoom Meeting (ID 971 4945 5855, passcode 490213) oder G03-223

Zeit: Dienstag, 18. Januar 2022, 13.00 Uhr

Zu diesem Vortrag laden wir alle Interessierten herzlich ein.

Dr. Yuri Santos Rego

Abstract: Twin buildings were introduced by Ronan and Tits in the late 1980s. Their definition was motivated by the theory of Kac-Moody groups over fields. Each such group acts naturally on a pair of buildings and the action preserves an opposition relation between the chambers of the two buildings. This opposition relation shares many important properties with the opposition relation on the chambers of a spherical building. Thus, twin buildings appear to be natural generalizations of spherical buildings with infinite Weyl groups.

In 1974 Tits proved the Extension theorem for spherical buildings, i.e. a local isometry extends to the whole building. The question is whether one can obtain a similar result for twin buildings. In 1992 Tits proves several results that are inspired by his strategy in the spherical case and he discusses several obstacles for obtaining a similar Extension theorem for twin buildings. In this talk I will speak about the history and developments of the Extension theorem for twin buildings.