

A U S H A N G

FREIE UNIVERSITÄT BERLIN

Fachbereich Mathematik und Informatik

Promotionsbüro, Arnimallee 14, 14195 Berlin

DISPUTATION

Mittwoch, 23. September 2020, 11:00 Uhr

[WebEx](#)

Disputation über die Doktorarbeit von

Frau Anna Maria Hartkopf

Thema der Dissertation:

Mathematical Science Communication a Study and a Case Study

Thema der Disputation:

Pentagonal Tilings of the Plane

Die Arbeit wurde unter der Betreuung von **Prof. Dr. G. M. Ziegler** durchgeführt.

Abstract: The discovery of the 15 types of convex pentagons that monohedrally tile the plane started in 1918 when the first five types were described by Reinhardt. Fifty years later Kershner added three more types to this list and claimed that it was complete. Since then, amateur and professional mathematicians have found seven more pentagonal prototiles.

In this talk, we want to retrace the discovery by looking at the actors involved and their methods. The search for a new tile culminated when Michael Rao announced a computer-based proof of completeness in 2017. We will briefly present the core ideas of his exhaustive search

Die Disputation besteht aus dem o. g. Vortrag, danach der Vorstellung der Dissertation einschließlich jeweils anschließenden Aussprachen.

Interessierte werden hiermit herzlich eingeladen

Der Vorsitzende der Promotionskommission
Prof. Dr. G. M. Ziegler