

E I N L A D U N G

im Rahmen des [Seminars in Geometric Analysis and Physics](#)
([GAP Seminar](#))

zum Vortrag
von

Alex Gottlieb

(WPI, Vienna)

über

*Geometry of the Hilbert space for three
fermions with six single-particle states*

Abstract: The Hilbert space for a single particle with six basic quantum states is the standard 6-dimensional complex space V , and the Hilbert space for a system of three fermions with six single-particle states is the (alternating) tensor product space $V^{\wedge}V^{\wedge}V$, a 20-dimensional space. The simplest vectors in $V^{\wedge}V^{\wedge}V$ are "decomposable" wedge products of three vectors from V . Every vector in $V^{\wedge}V^{\wedge}V$ can be written as a sum of three decomposables, and most can be written as a sum of just two. Every vector in $V^{\wedge}V^{\wedge}V$ can be written -- in various ways -- as a linear combination of at most five decomposable wedge products of vectors drawn from a single orthonormal basis of V . These multilinear algebraic properties of vectors in $V^{\wedge}V^{\wedge}V$ are related to the geometry of that space.

Zeit: Freitag, 08.04.2016, 11:30 – 13:00

Ort: SR 11, 2. Stock

Oskar-Morgenstern-Platz 1, 1090 Wien

gez.: M. Bauer, V. Branding (Fak. Math, TU)

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