Technische Universität Braunschweig | Institut für Analysis und Algebra
Universitätsplatz 2 | 38106 Braunschweig | Deutschland

Technische Universität
Braunschweig
Institut für Analysis und Algebra

Prof Dr. Timo de Wolff

Universitätsplatz 2
38106 Braunschweig
Deutschland

Job Advertisement
Scientific Research Assistant
at the Institute for Analysis and Algebra

Scientific Research Assistant (m/f/d) (75%) to obtain a **PhD-degree**
Salary grade EG 13 TV-L
anticipated starting at **Nov. 1st 2022** (or later), initially limited for 3 years.

Working Area:
The position is opened in the research group **„Applied Algebra"**. The topic of of the PhD-project will be **"Nonnegativity and Polynomial Optimization**" with a particular focus on **Quantum Computing**.

Polynomial optimization is a thriving research area with countless applications. Solving problems in this area crucially buils on certifying nonnegativity of multivariate real polynomials, a key problem in real algebraic geometry. The goal of the project is the investigation of certificates of nonnegativity, especially sums of squares (SOS) and sums of nonnegative circuit polynomials (SONC). Besides theoretical questions real world applications will be investigated, especially in the field of quantum computing.

The position of part of the BMWK Clusterproject **„Quantum Readiness for Optimization Providers - ProvideQ"** located at the intersection of optimization, software developments and quantum computing.

Requrements:
- Masters degree in Mathematics (or a related field) with very good grades. Very good English skills.
- Knowledge in at least one of the following areas is desired: real algebraic geometry, convex optimization (e.g. SDPs), quantum computing.
- Knowledge in the following areas are a plus: SONCs, geometric / relative entropy programming, SOS/SDP, programming skills.

> Note that German skills are **not** requirred for this position. International applicants will be encouraged and supported to learn German while holding the position.

Additional information regarding the position will be provided by Prof. Dr. Timo de Wolff via the address **applied_algebra@tu-bs.de**.

For the purpose of the application process your personal data will be stored. To ensure equal opportunities, applications by women and members of minority groups are explicitly desired. Their applications will be favored in case of equally qualified candidates. Qualified applicants with disabilities will be favored if a certificate is provided. Applications by persons of all nationalities are welcome. Technische Universität Braunschweig is dedicated to ensure equal opportunites based on the Niedersächsischen Gleichberechtigungsgesetz (NGG).

The deadline for applications is **September 18th, 2022**

> Please send your application containing of a **cover letter**, a **CV**, copies of **degree certificates** (or preliminary certificates), and **up to two letters of recommendation** (if available) by email to: **applied_algebra@tu-bs.de**.