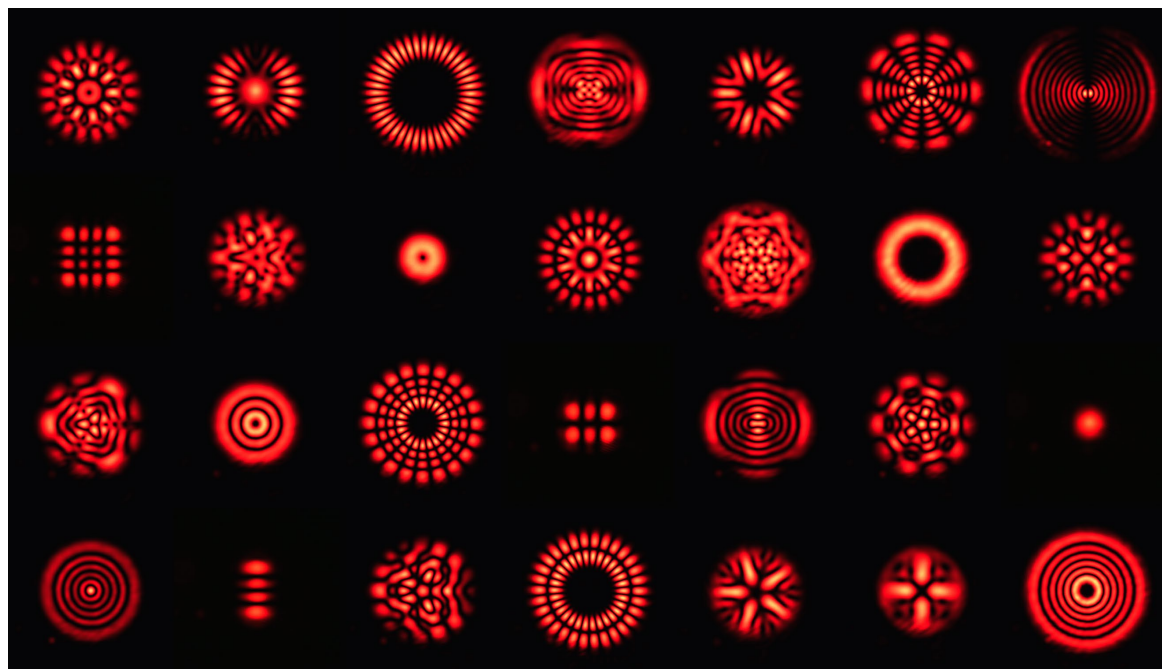


MSc Studentship Opportunity



Project title: Structured waves for probing diamond

Period: Jan 2022 – Dec 2023 (2 years)

Supervisor: Prof. Andrew Forbes (U. Witwatersrand) www.structured-light.org

Co-supervisor: Dr Garry Morrison (De Beers) www.debeersgroup.com

Description:

We are seeking applications from candidates for a 2 year MSc studentship in the area of structured waves for probing diamond, to be supervised by Distinguished Professor Andrew Forbes and industry leader Garry Morrison. The ideal candidate will have a good Honours degree in Physics and an interest in applied photonics.

Project:

Optical waves can be tailored in all degrees of freedom for what is now referred to as [Structured Light](http://www.structured-light.org). The principle of control only needs the wave nature of light, allowing the principles to be extended to other waves too, for instance, to shape and control [matter waves](#). In this project, we wish to spatially structure x-ray waves for enhanced efficacy in probing and detecting diamond. The project has experimental, theoretical and numerical components, and is a blend between fundamental and applied physics. The successful candidate will work at both the University of the Witwatersrand in the diamond research facilities of De Beers, and will join a vibrant team of approximately 15 students and several industry collaborators. We are looking for an enthusiastic candidate who wishes to learn about this new exciting field.

Applications with a full CV and academic record should be sent by **Monday 4th October 2021** to either Andrew.forbes@wits.ac.za or Garry.Morrison@debeersgroup.com