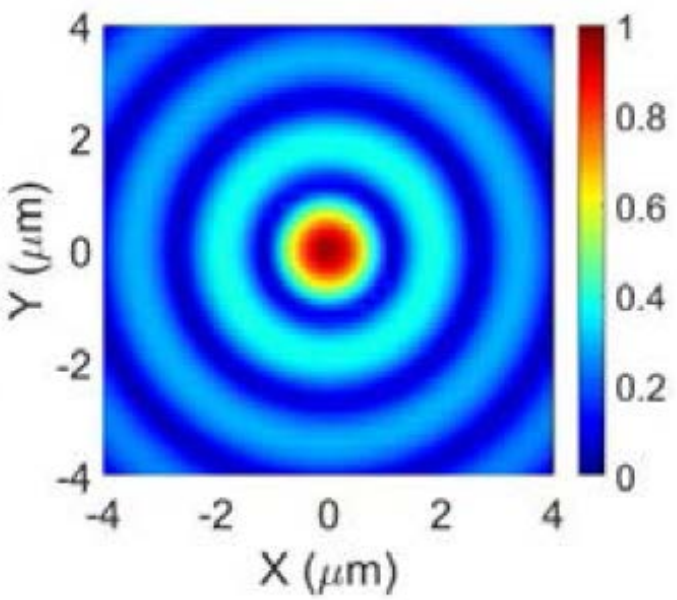
Bremen Workshop on Light Scattering 2024



18. + 19. March 2024

Leibniz Institute for Materials Engineering IWT
Bremen, Germany

Leibniz Institute for
Materials Engineering

IWT Bremen

Leibniz
Association

Programme

	Monday, 18. March 2024
8:45 - 9:00	***Opening***
9:00 - 9:30	*Jonas Gienger, Biomedical Optics, Physikalisch-Technische Bundesanstalt (PTB), Berlin, Germany* Glare Points in Laser Flow Cytometry
9:30 - 10:00	*Gerhard Kristensson, Department of Electrical and Information Technology, Lund, University, Sweden* Sum rules and physical bounds for a particulate slab
10:00 - 10:30	*Stuart C. Hawkin, School of Mathematical and Physical Sciences Macquarie University, Sydney, Australia* A numerically stable electromagnetic T-matrix algorithm
10:30 - 11:00	***Coffee break***
11:00 - 11:30	*Thomas Wriedt, Leibniz Institute for Materials Engineering IWT, Bremen, Germany* Null-Field Method with discrete sources, a review
11:30 - 12:00	*Ivan Fernandez Corbaton, Karlsruhe Institute of Technology (KIT) Institute of Nanotechnology, Karlsruhe, Germany* A polychromatic theory of thermal emission based on the T-matrix
12:00 - 13:30	***Lunch break***
13:30 - 14:00	*Christopher Wirth, Chemical and Biomolecular Engineering Case Western Reserve University, Cleveland, OH, USA* Azimuthally Resolved Evanescent Wave Scattering from a Colloidal Ellipsoid
14:00 - 14:30	*Dmitry Efremenko, German Aerospace Center (DLR), Germany* Light scattering imaging model for total internal reflection microscopy
14:30 - 15:00	*Alexander V. Kildishev, Purdue University, West Lafayette, IN, USA* Ultimate multipole expansion centers
15:00 - 15:30	***Coffee break***
15:30 - 16:00	*Evangelos Almpanis, National and Kapodistrian University of Athens, Athens, Greece* The Photonic Layer Multiple Scattering Method for Space-Time Periodic Structures
16:00 - 16:30	*Olga Kochanowska, University of Warsaw, Poland* Control of optical response of finite hyperbolic metamaterials
16:30 - 17:00	*Ivan Lopushenko, Biophotonics, University of Oulu, Finnland*

	Thuesday, 19. March 2024
9:00 - 9:30	*Christof Holzer, Institut für Theoretische Festkörperphysik Karlsruher Institut für Technologie (KIT), Germany* Quantum mechanics meets T-matrix: Linear and non-linear models
9:30 - 10:00	*Maxim Vavilin, Institut für Theoretische Festkörperphysik Karlsruher Institut für Technologie (KIT), Germany* Polychromatic T-Matrix: Computing interaction between light pulses and moving objects
10:00 - 10:30	*Marvin Degen, Universität Duisburg-Essen, Germany* An accurate and efficient recursive T-matrix algorithm without violating the addition theorem
10:30 - 11:00	***Coffee break***
11:00 - 11:30	*Franz Kanngießer, GEOMAR, Kiel, Germany* Calculating multi-wavelength depolarisation ratios of mineral dust using spheroids
11:30 - 12:00	*Nicolas Brosseau-Habert, FEMTO-ST Institute, Besançon, France* DADI and reverse-DADI methods: computation of the UV-visible spectra of two coalesced soot particles from atomistic information
12:00 - 12:30	*Gennadiy Derkachov, Institute of Physics, Polish Academy of Sciences Group of Optical Characterization of Micro and Nanobjects, Warsaw, Poland* Possible scenarios of nanoparticles aggregation in an evaporating droplet of suspension: a numerical model helps to understand the scattered light intensity evolution
12:30 - 14:00	***Lunch break***
14:00 - 14:30	*Yuri Eremin, Moscow State University, Russia* Influence of surface quantum effects on the optical characteristics of alkali and noble metal nanoparticles
14:30 - 15:00	*Jiajie Wang, School of Physics, Xidian University, Xi'an, China* Light scattering by non-spherical particles and its application in detection of single dust particle
15:00 - 15:30	*Anastasiya Derkachova, Institute of Physics, Polish Academy of Sciences, Warsaw, Poland* Accurate Refractive index measurements - chromatic dispersion and thermal coefficient - for Mie theory-based scatterometry
16:00 - 16:30	*Ludmila Prokopeva, Purdue University, IN, USA* Wave propagation in dispersive media with inhomogeneous broadening: analytical models and numerical implementation
16:30 – 17:00	*Gerard Berginc, Thales Optronique, Guyancourt, France* Theoretical formalism of coherent and incoherent scattering and transport of electromagnetic waves in nanoscale discrete disordered media bounded by randomly rough surfaces
17:00 – 17:30	*Ege Şükrü Tahmaz*, Boğaziçi Üniversitesi, İstanbul Türkiye Verification of Thermal Discrete Dipole Approximation Module BUTDDA with Surface Interactions

Web page of the workshop including hotel and travel information

http://www.ScattPort.org

Talks
Duration of talks: 20 mins + 10 mins discussion.

Presentations
A beamer with notebook will be available.
Please bring your Power Point presentation on USB stick for easy transfer of presentations.

Preregistration meeting
To go sight-seeing around the city if the weather is fine or just to have some beer at the Schlachte Embankment we arranged a meeting on the evening of Sunday 17.3.2024 at 19.00h. The meeting place will be the Roland statue on the Marktplatz (no. 6 on map) near the Rathaus at 19.00h.

After the city walk we will go to this pub: Schüttinger Gasthausbrauerei, Hinter dem Schütting 12/13, http://www.schuettinger.de/

Travel information
Tram Line 6 connects the Campus to the city, the central railway station and the airport.
From the central railway station, the ride to the campus is about 15 minutes.
There is a tram every 5 - 10 mins. Please use tram line 6 direction **Universität.**
Please step off at the last but one tram stop **Universität Zentralbereich.**
You may buy tickets (each € 3,00) at a ticket vending machine at the tram stop, or a machine inside the tram, please have coins available.

Fee There will be no fee.
Registration We still have some space at the workshop. If you like to register, send an email to Thomas Wriedt thw@iwt.uni-bremen.de.

Map of the campus

Venue
Room 1250

Leibniz Institute for Materials Engineering IWT
(Leibniz-Institut für Werkstofforientierte Technologien - IWT)
Badgasteiner Str. 3
28259 Bremen
Germany

We will post signs such that you will find your way.

Organizing Committee
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