

Karlsruhe School of Optics & Photonics

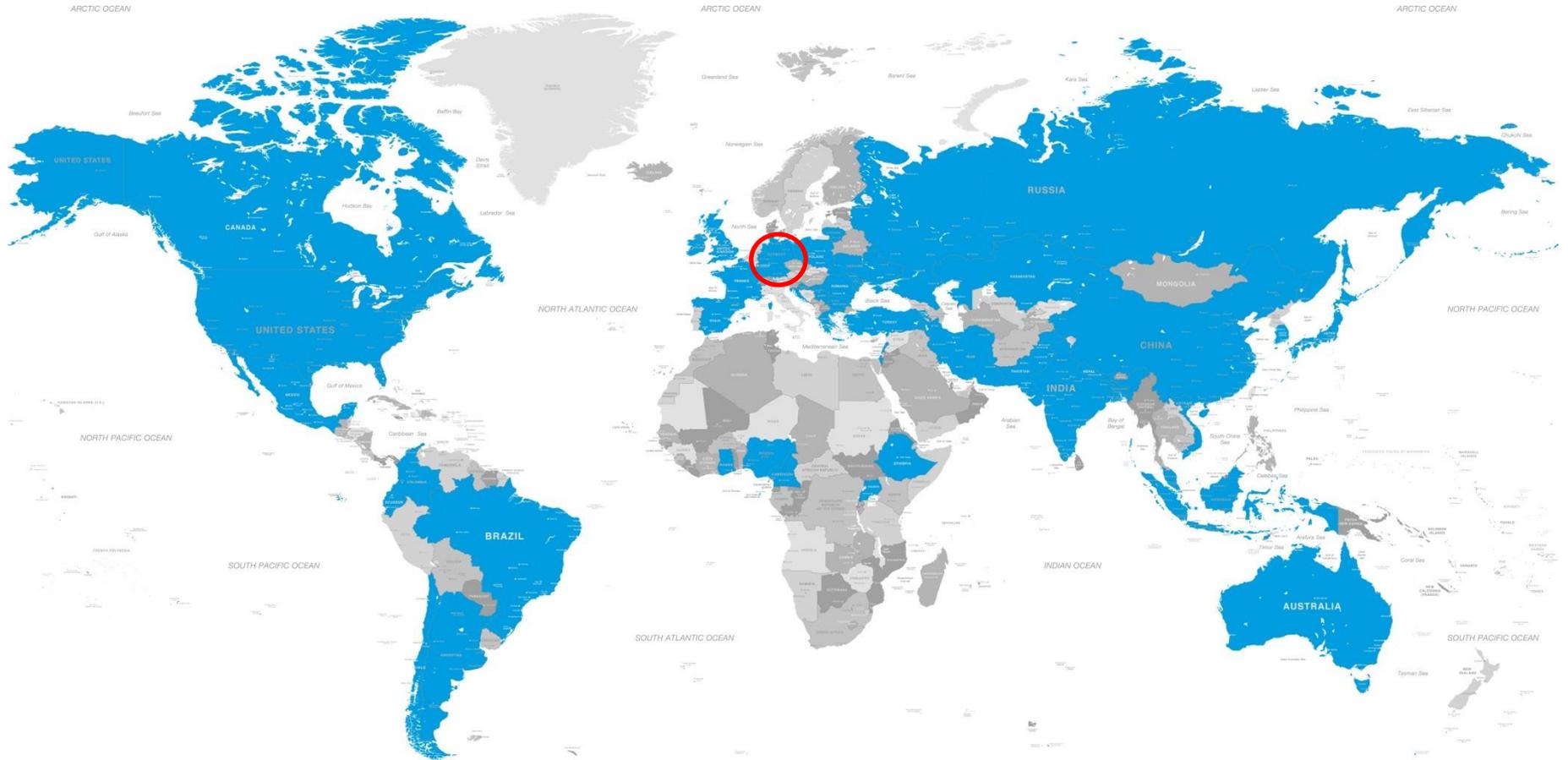
Afraid of the dark? Study Optics & Photonics in Germany!

Miriam Sonnenbichler | Feb. 1, 2016



KSOP in the Heart of Europe

Afraid of the dark? Study Optics & Photonics!



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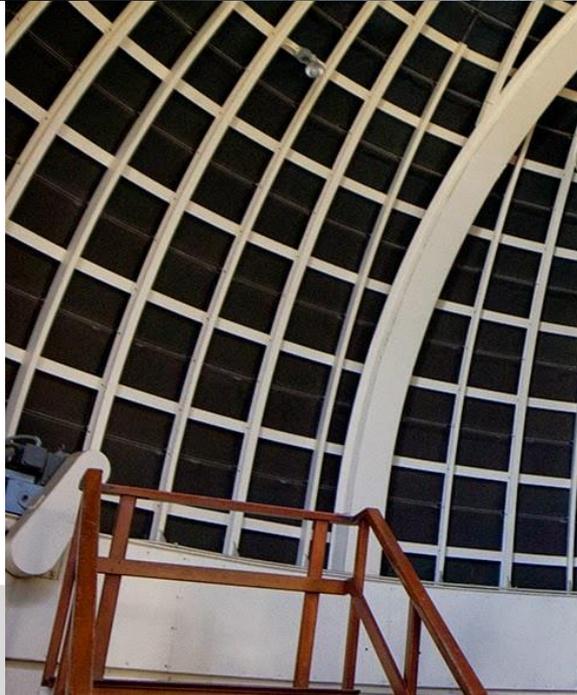
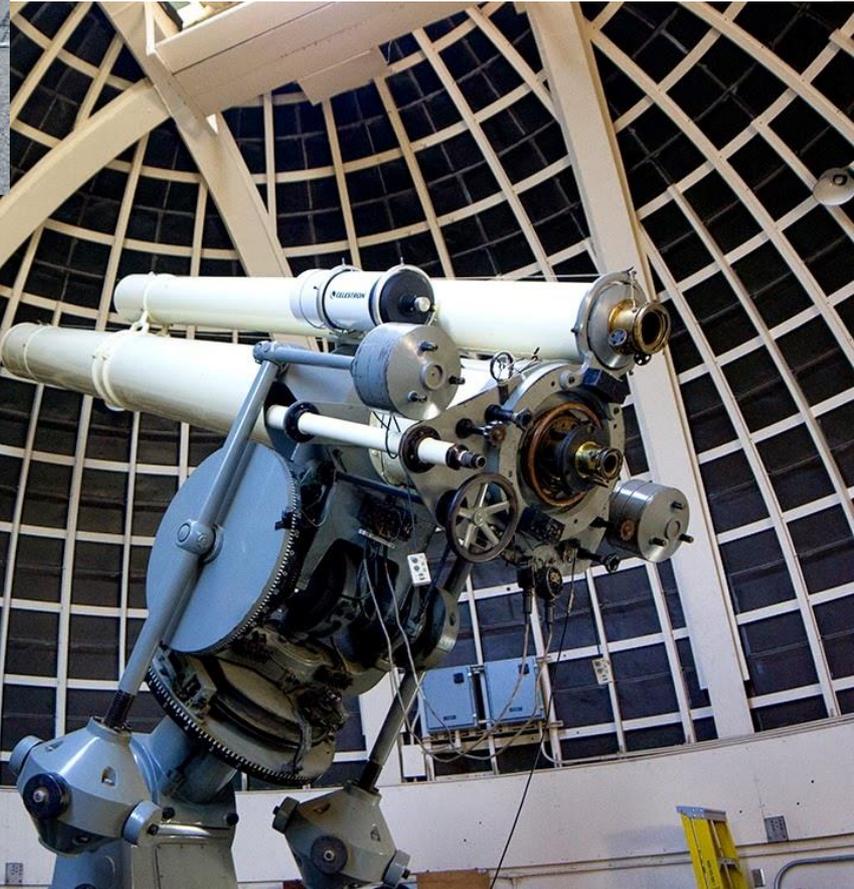


KSOP

Karlsruhe School of Optics & Photonics







KSOP in the Heart of Europe

Afraid of the dark? Study Optics & Photonics!



Karlsruhe Institute of Technology (KIT)

Overview on Statistics and Subject Areas



Karlsruhe Institute of Technology

24,000

Students

360

Professors

9,200 from which 6,000

Employees

Researchers

KSOP

Karlsruhe School of Optics & Photonics

Physics

Chemistry & Lifesciences

Electrical Engineering and
Information Technology

Mechanical Engineering

Institute of Applied Physics

Institute of Biomedical Engineering

Institute for Information and Processing Technology

Institute of Inorganic Chemistry

Institute for Measurement and Control Systems

Institute for Meteorology and Climate Research

Institute of Micro- and Nanoelectronic Systems

Institute of Microstructure Technology

Institute of Nanotechnology

Institute of Organic Chemistry

Institute of Photonics and Quantum Electronics

Institute of Physical Chemistry

Institute for Theoretical Solid State Physics

Institute of Toxicology and Genetics

Light Technology Institute

Zoological Institute

German TU9 University



One of nine excellent, leading Universities in Engineering and Natural Sciences
High standard education and excellent job perspectives

QS World University Rankings (2016)



47 of 398 in Subject Area **Engineering and Technology**
34 of 400 in Subject Area **Natural Sciences**

Times Higher Education Ranking (2016)



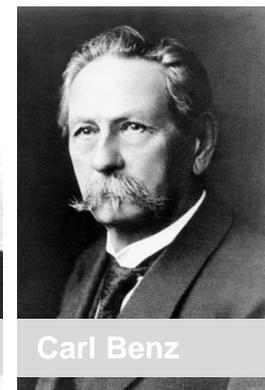
165 of 401 Universities Worldwide



Dietmar Hopp



Emil von Skoda



Carl Benz

An International Graduate School within KIT

Excellence for Optics & Photonics Research



Karlsruhe School of Optics & Photonics

Founded in 2006 within the German “Excellence Initiative”

Excellence status confirmed by the DFG in 2012



Cooperation of 16 KIT institutes and external partners

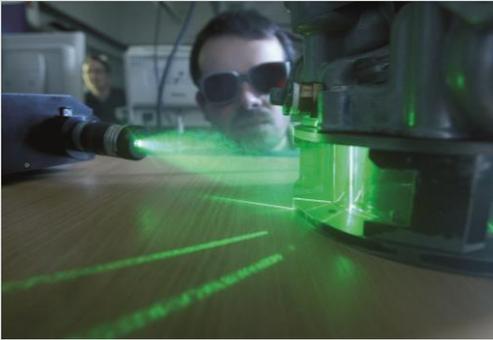


~ 100 Ph.D. candidates, ~120 Ph.D. Alumni

> 130 M.Sc. students, > 150 M.Sc. Alumni

KSOP Mission and Vision

Heading towards brilliant International Alumni



KSOP aims on:

Excellent graduate education

Multidisciplinary training concept

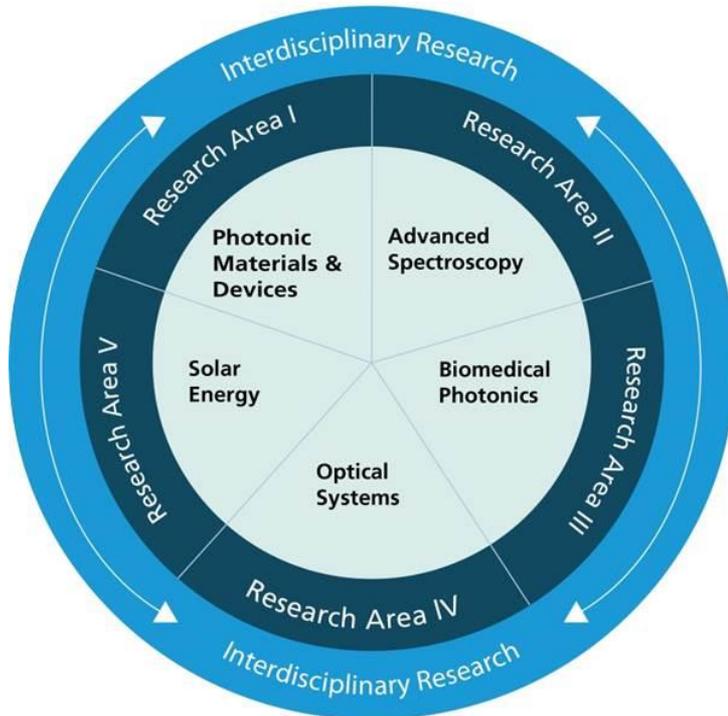
Excellent research through cooperation
with several institutes und faculties

International visibility of research and teaching

Close cooperation with industry

KSOP Research Structure

Covering the most promising Optics Fields



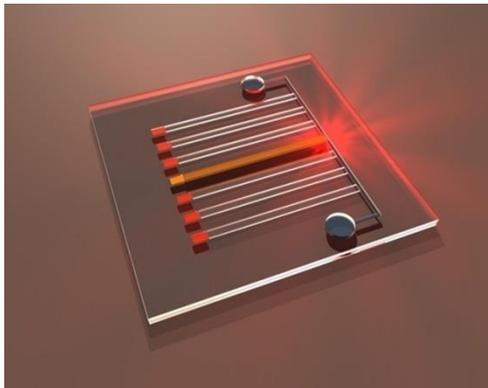
- RA I**
 - Metamaterials
 - Telecommunication Devices
 - Luminescent Nanoparticles
- RA II**
 - Micro-photoluminescence Spectroscopy
 - Time-resolved Spectroscopy
 - Environmental Spectroscopy
- RA III**
 - Super-resolution Microscopy
 - Optical Biosensing
 - Tailored three-dimensional Scaffolds for Cell Culture
- RA IV**
 - Autonomous Vehicles
 - High Bit-rate Optical Communications
 - Lab-on-a-chip Systems
- RA V**
 - Thin Film Photovoltaics
 - Organic Solar Cells
 - Light Management

KSOP Research Structure

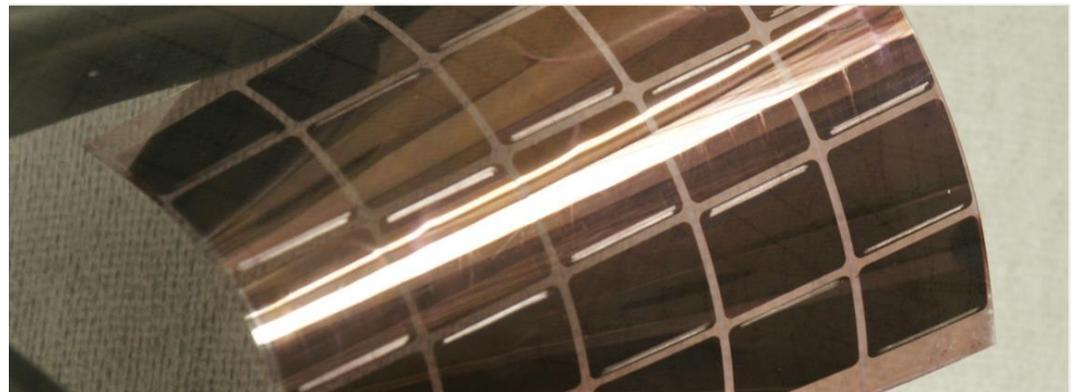
Covering the most promising Optics Fields



Autonomous driving



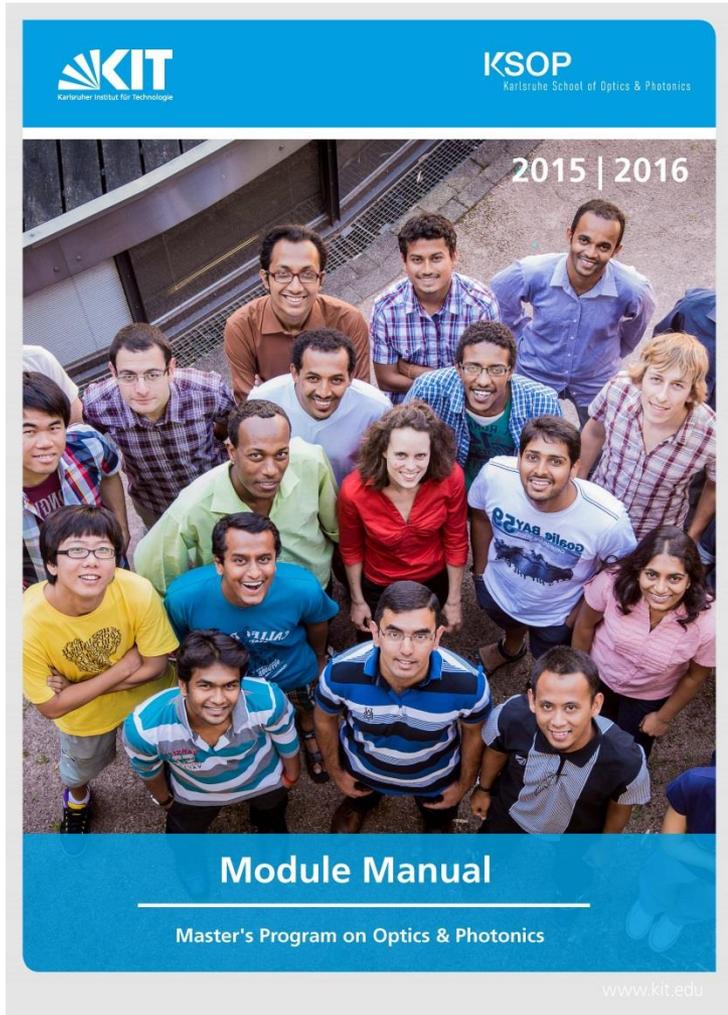
Lab-on-a-chip system for biomedical analysis using an organic semiconductor laser



Flexible photovoltaic module based on organic semiconductors

KSOP Master Program

An Interdisciplinary Study Program



2-years M.Sc. Course in Optics & Photonics

40 Students per intake

International Flair: Over 30 Nationalities

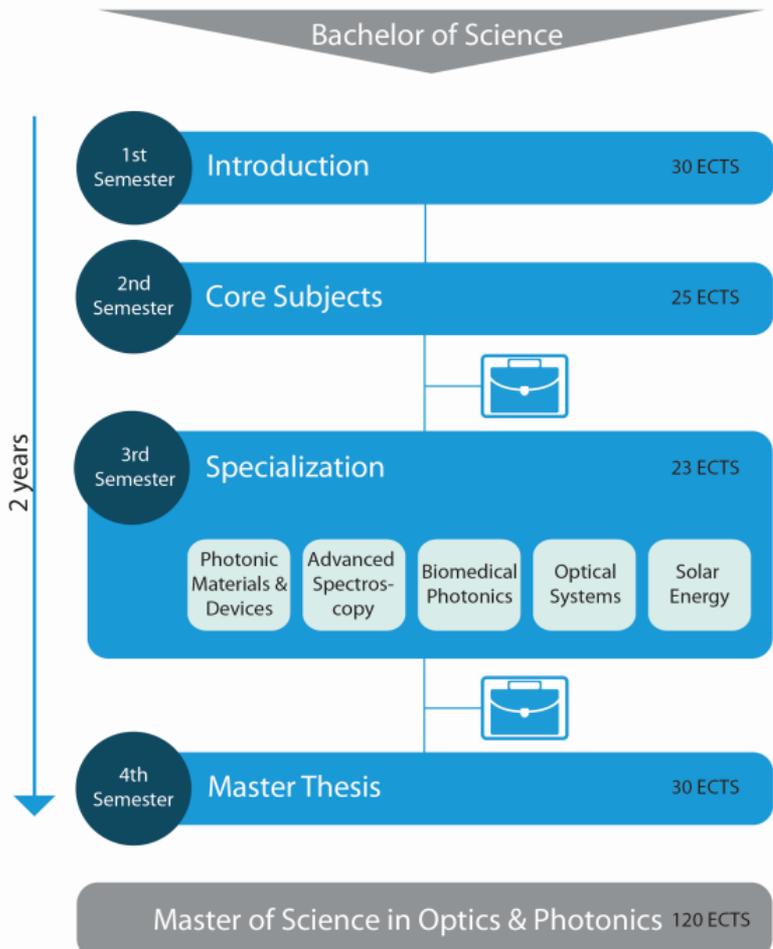
Completely Taught in English

No Tuition Fees

Scholarships available

KSOP Master Program

An Interdisciplinary Study Program



* An eight-week internship will take place either between the 2nd and 3rd semester or between the 3rd and 4th semester. This internship is credited with 12 ECTS.

Start: every winter term

Bachelor degree in natural or engineering sciences:

- ✓ Physics
- ✓ Chemistry
- ✓ Electrical Engineering
- ✓ Mechanical Engineering
- ✓ Mathematics (with minor in physics)
- ✓ Computer Science (with minor in mathematics)
- ✓ Biology, Biotechnology, Biomedical Engineering (with minor in physics)

Apply until
April 30
every year

Scholarship & Industry Internship Program

Outstanding Scholarship Program

for approx. **five** of the most promising students per year
up to **800 €** for a max. duration of two years

Cooperative Initiative

German Federal Government (BMBF),
10 companies from the optics & photonics industry

Objective

Attract students to study in the field of O&P
and **qualify** them in the best way

Industry Internship Program

 http://www.berlinerglas.de/en/home/	 http://www.osram.com/osram_com/
 http://www.jenoptik.com/en_home/	 www.polytec.com
 http://www.karlstorz.com/cps/rde/xchg/karlstorz-en/hs.xml/mdex.htm	 www.trumpf.com
 http://www.novaLED.com/	 We make it visible. http://www.zeiss.de/en/
 Agilent Technologies http://www.agilent.com/	 Sensor Intelligence. www.sick.com/



Erasmus Mundus Europhotonics

Around the World at almost the Speed of Light

Marseille/ France



Karlsruhe/ Germany



Barcelona/ Spain



European Master Program

2-years study of Optics & Photonics

Studies at three excellent universities in
Marseille, Karlsruhe and Barcelona

Multiple M.Sc. Degrees possible

Industry Internship Program

Scholarships available

Start: Every Winter Term

Apply until
March 1st
2016

www.europhotonics.org

Looking for a bright future? Do Research in Optics & Photonics!



3-years Doctorate Program in Optics & Photonics

Scholarship Program

Working Language: English

Mentoring Program

Additional Management, Technical, Scientific & Key Competency Modules, Networking

Optional: MBA Fundamentals Program



Management Modules

- Entrepreneurship
- Human Resource Management
- Business Strategies

Technical Modules

- Micro and Nanotechnology Laboratory
- Laser Laboratory Work
- Laser Materials Processing

Personal Key Competence Modules

- Scientific Writing & Presentation

Scientific Modules

- Summer Schools
- Conferences
- Symposia

Looking for a bright future?

Job Perspectives after Graduation at KSOP



For example, our graduates work as...

Post-docs in academia

Application & Development Engineers

Optical Designers

International Project Managers

Software Developers and System Architects

Quality and Product Managers

Technical Sales & Service Engineers

KSOP Support for International Students

Accommodation, Orientation, Consultation



KSOP Support for International Students

Accommodation, Orientation, Consultation



Students support and services include...

Campus Accommodation (rooms, apartments)

Consultation on visa, bank account, insurances, etc.

Company excursions

Application workshops, intercultural trainings

Organized get-togethers

Active Student Life in Karlsruhe

Student Networks



www.optics-karlsruhe.de

Part of worldwide network of student chapters

Optical Society of America (OSA)

International Society for Optics & Photonics (SPIE)

Optics Students Karlsruhe: OSKar

Support, Networking, Events, Excursions

Life in Karlsruhe and Germany

Leisure Time and German Culture



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Why KSOP?

Our students & alumni say:



Taught in English
Excellent Research
No Tuition Fees • Scholarships
Strong Link to German Industry

International Environment
Interdisciplinary
Excellent Professors
Awesome Labs
Internship Program

Apply now for your European experience and excellent education in optics & photonics!

Let's keep in touch:



KSOP Team

Your contact for everything further.

KSOP

Karlsruhe School of Optics & Photonics



Miriam Sonnenbichler
M.Sc. Program Manager
sonnenbichler@ksop.de



Stefanie Peer
Ph.D. Program Manager
peer@ksop.de

www.ksop.de

www.europhotonics.org

<https://www.intl.kit.edu/english/index.php>

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Karlsruhe School of Optics & Photonics



Karlsruher Institut für Technologie