Key Data & Benefits

3-year International Doctorate Program
Prerequisites: M.Sc. Degree in Optics & Photonics, Natural or Engineering Sciences

Research Areas
Photonic Materials & Devices, Quantum Optics & Spectroscopy, Biomedical Photonics, Optical Systems, Solar Energy

Benefits | English working language, Supervision & Mentoring Concept, National and International Networking, Modular Training (Management, Technical, and Scientific)

KSOP Scholarship Program
Scholarships Available for Outstanding Applicants

Program Language **English** | Start **Individual** | Location **Karlsruhe, Germany**

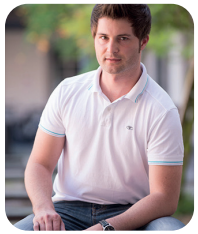
Voices of Alumni

»The reason why I joined KSOP was that I hoped to broaden my horizon. And that is exactly what happened:

During the Ph.D. seminars and the Management and Technical Modules, I gained insight into more applied approaches which I, as a scientist in basic research, would not have obtained so easily otherwise.

In plus, KSOP made it possible to attend various international conferences and also financed a visiting research fellowship at Peking University, allowing me to adopt a more global perspective.«

Dr. Ninette Stürzl



»KSOP has supported me from the beginning of my Ph.D., starting with a scholarship, which was a great financial help to start my research.

In addition, my work benefited from contacts to other young scientists in the optics field which were mediated by KSOP and lead to several fruitful collaborations with other institutes within KIT.«

Dr. Tobias Großmann

»Taking part in KSOP's Ph.D. program turned out to be an excellent opportunity to look beyond the frontiers of one's own studies.

KSOP offers a platform to get to know a variety of people from different disciplines and provides a broad program of advanced vocational training courses.

These courses are particularly valuable, and it is my experience that people in the industry share this opinion.«

Dr. Tolga Ergin

More Alumni Voices:
https://www.ksop.kit.edu/PhD_alumni.php

Contact Us & Apply

If you have any inquiries, you can reach us at:

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Apply Any Time!

KSOP
Karlsruhe School of Optics & Photonics

Looking for a Bright Future?

Do Research in Optics & Photonics
in the International Ph.D. Program at KSOP Graduate School at the Karlsruhe Institute of Technology (KIT)

Optics & Photonics

Optics & Photonics are key technologies of the 21st century. They form the basis for today's optical communications, environmental sensing, biomedical diagnostics in the life sciences, energy efficient lighting and solar energy harvesting.

Karlsruhe School of Optics & Photonics

In 2006, the Karlsruhe School of Optics & Photonics (KSOP) was founded as the first Graduate School of the Karlsruhe Institute of Technology (KIT) under the **German "Excellence Initiative"**. In 2021, KSOP became sustainably funded through the KIT by the Federal Ministry of Research and Education (BMBF) and the State of Baden-Württemberg.

KSOP provides a multidisciplinary environment for first-class research and education as well as for the generation of innovative technologies in Optics & Photonics. Comprising both Master's and Doctorate programs, the educational concept is designed to qualify graduates for accelerated careers at world leading academic institutions and in high-tech industries.

Today, KSOP's membership is comprised of over 900 Master students, doctoral researchers and alumni from 70 different countries.

KSOP
Karlsruhe School of Optics & Photonics

KSOP Ph.D. Program

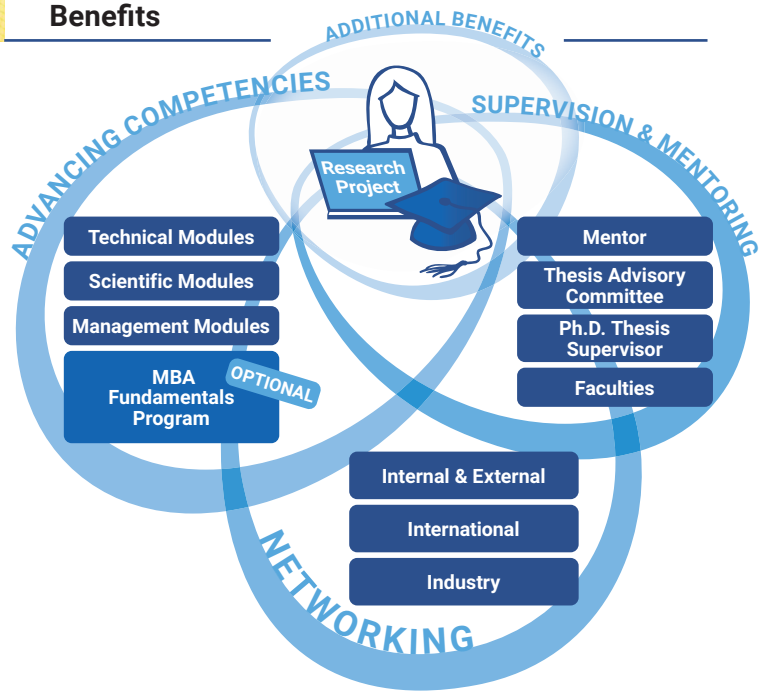
The Karlsruhe School of Optics & Photonics offers a **3-year Ph.D. program** in one of the research areas: Photonic Materials & Devices, Quantum Optics & Spectroscopy, Biomedical Photonics, Optical Systems, and Solar Energy.

KSOP provides Ph.D. candidates with an optimal research environment at the Karlsruhe Institute of Technology (KIT) to carry out first rank Ph.D. projects in the multidisciplinary field of Optics & Photonics. Integrated into the graduate school, doctoral researchers pursue their projects autonomously. To support their endeavor, a **Thesis Advisory Committee (TAC)** and a **Co-Supervisor** accompany the research work of the doctoral researcher. All Ph.D. positions are financed.

Since successful careers in industry and academia often require leadership and interdisciplinary knowledge, emphasis is laid on management skills, which are taught as **management modules** within KSOP, in addition to the **technical and scientific modules**.

In addition to that, KSOP fosters an active **network** amongst its members - active or alumni. A scientific exchange with international peers and leading scientists is facilitated through events and international conferences.

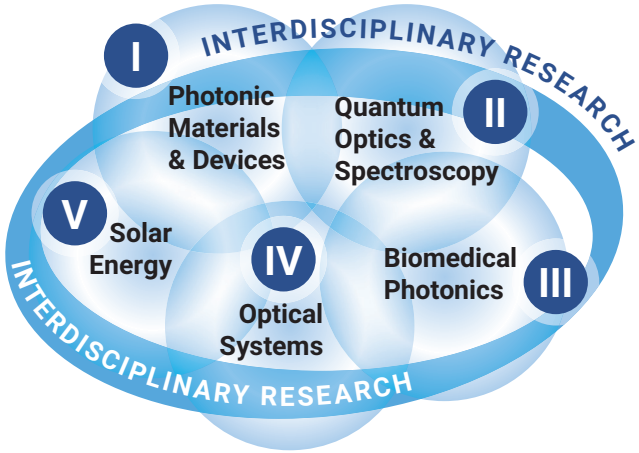
Benefits



More about the KSOP Ph.D. Program:
https://www.ksop.kit.edu/phd_program.php

Research Areas

There are five KSOP Research Areas:



I **Photonic Materials & Devices** | Research in new materials-, synthesis-, and deposition technologies fosters new designs of photonic materials and devices, e.g., luminescent nanoparticles, organic films, or photoresists.

II **Quantum Optics & Spectroscopy**
Spectroscopy plays a crucial role in uncovering and characterizing novel quantum and non-linear phenomena molecular photophysics or atmospheric chemistry.

III **Biomedical Photonics** | Biomedical photonic technologies are crucial for noninvasive clinical monitoring, molecular diagnostics, or imaging of physiological parameters in living cells, humans, and whole organisms.

IV **Optical Systems** | Sensing and machine perception systems, laserbased manufacturing, and production monitoring are examples where optical materials and devices are integrated into real-world applications.

V **Solar Energy** | The conversion of solar radiation into electrical energy might one day cover the major part of the electricity supply. Light management by means of tailored plasmonic or dielectric structures can reduce costs of the future solar electricity.

More about the KSOP Research Areas:
https://www.ksop.kit.edu/research_areas.php