



Spintronics XVIII (OP111)

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For years the spin degree of freedom has been directly used as an information support in nanometer-scale devices. Today applications mostly concern the huge market of information storage, read heads, nonvolatile magnetic memories (MRAMs), or magnetic logic units. Recent developments are being considered for spin-based logic or quantum computing. New topics are emerging in frontier fields, e.g. topological spin structures, topological insulators, Majorana fermions, antiferromagnetic spintronics, spin photonics and spin optics, ultra-fast phenomena and THz emission or spin-caloric phenomena. These advances make use of the fascinating developments of new materials.

The purpose of the conference is to provide a broad overview of the state-of-the-art and perspectives, bringing together experts from different communities: fundamental physics (experimental and theoretical), materials science and chemistry, fabrication processes and industrial developments, etc. Contributions for this conference are encouraged in particular in the following areas:

- spin-coherence, semiconductor spin physics, quantum wells and quantum dots
- magnetic nanostructures, micromagnetism, spin-precession, and magnonics
- spin-injection, spin-transfer, spin-Hall and related effects
- new materials (graphene and chalcogenides, oxides, organics, etc.)
- topological matter, topological spin textures
- new structures and emerging applications (magnetoresistive devices, MRAMs, spin logic, ultra-fast memories, etc.)
- neuromorphic computing
- spin photonics, spin lasers, THz emission, and spin optics
- superconducting spintronics.

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Below are abstract submission instructions, the accompanying submission agreement, conference presentation guidelines, and guidelines for publishing in the Proceedings of SPIE on the SPIE Digital Library. Submissions subject to chair approval.

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Important dates

Abstracts due	5 February 2025
Authors notified and program posts online	14 April 2025
Registration opens	April 2025
Submission system opens for manuscripts and poster PDFs*	2 June 2025
Poster PDFs due for spie.org preview and publication	9 July 2025
Manuscripts due	16 July 2025
Advance upload deadline for oral presentation slides**	1 August 2025

*Contact author or speaker must register prior to uploading

**After this date slides must be uploaded onsite at Speaker Check-In

What you will need to submit

- Title
- Author(s) information
- Speaker biography (1000-character max including spaces)
- Abstract for technical review (200-300 words; text only)
- Summary of abstract for display in the program (50-150 words; text only)
- Keywords used in search for your paper (optional)
- Check the individual conference call for papers for additional requirements (i.e., special abstract requirements or instructions for award competitions)

Note: Only original material should be submitted. Commercial papers, papers with no new research/development content, and papers with proprietary restrictions will not be accepted for presentation.

- Submit a manuscript by the advertised due date for publication in the Proceedings of SPIE in the SPIE Digital Library
- Obtain funding for registration fees, travel, and accommodations
- Attend the meeting
- Present at the scheduled time

Review and program placement

- To ensure a high-quality conference, all submissions will be assessed by the conference chair/editor for technical merit and suitability of content
- Conference chairs/editors and/or SPIE staff reserve the right to reject for presentation any paper that does not meet content or presentation expectations
- Final placement in an oral or poster session is subject to chair discretion

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- Visit the conference page: www.spie.org/op111
- You may submit more than one abstract but submit each abstract only once
- Click the "Submit An Abstract" button on the conference page
- Sign in to your SPIE account or create an account if you do not already have one
- Follow the steps in the submission wizard until the submission process is completed
- If your submission is related to an application track below, indicate the appropriate track when prompted during the submission process.

Application tracks

- An application track is a grouping of presentations on a topic of interest across all conferences. During submission of the abstract, the submitting author should select an application track if it is relevant to their research. Learn more.
- **Sustainability:** Papers that feature solutions to achieving net zero energy consumption, waste, and carbon emissions within optics and photonics
- **AI/ML:** Papers that showcase the use of artificial intelligence, machine learning, and deep learning to create and implement intelligent systems

Submission agreement

All presenting authors, including keynote, invited, oral, and poster presenters, agree to the following by submitting an abstract:

- Register and pay the author registration fee
- Agree to receive email messaging for the conference series
- Oral presenters: agree to recording and publication of your onsite presentation (slides synched with voice) in the Proceedings of SPIE in the SPIE Digital Library
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