

Frontiers in Ultrafast Optics: Biomedical, Scientific, and Industrial Applications XIX

Saturday - Tuesday 2 - 5 February 2019

This conference is no longer accepting submissions.

Late submissions may be considered subject to chair approval. For more information, please contact [Jen Lowell](#).

Important Dates

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Abstract Due:
25 July 2018

Author Notification:
1 October 2018

Manuscript Due Date:
9 January 2019

Conference Cosponsors



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Call for Papers

Recent advances in ultrafast laser technology have resulted in widespread availability of robust, practical laser sources. As a result, useful applications for these sources have emerged in many different fields, from micromachining and THz-imaging to nonlinear microscopy and semiconductor testing to laser surgery and communications. Now in its eighteenth year, this conference is the premier venue for discussing the development of new ultrafast laser sources, the manipulation and characterization of ultrashort pulses as well as their use in biomedical, scientific and industrial applications. We anticipate a larger conference than ever that will bring together a multi-disciplinary group consisting of university researchers from diverse fields, as well as scientists and engineers from industry. A program that includes invited and tutorial presentations will provide the context for contributed talks and posters, and for stimulating discussions.

We encourage submission of papers on all aspects of applications of ultrafast lasers and on ultrafast laser technology development. In addition, all graduate and undergraduate students are encouraged to enter their submissions in the Student Competition for best presentation (see below).

General topics include, but are not limited to, the following areas:

- emerging ultrafast laser technologies and novel systems
- ultrafast laser source engineering for industrial and biomedical use
- characterization and measurement of ultrashort pulses
- ultrashort pulse delivery and beam manipulation
- ultrashort pulse propagation and nonlinear effects in materials
- interaction of ultrashort pulses with materials
- surface micromachining using ultrafast lasers
- ultrafast laser micromachining of transparent materials
- interactions and modification of biological tissues
- tissue and surgical applications of ultrashort pulse lasers
- optical manipulation of biological systems with ultrashort pulses
- micro and nano manipulation of cells and organelles, optical transfection
- ultrafast lasers in plasmonics, interaction with nanoparticles
- novel medical applications of ultrafast lasers
- generation and applications of x-ray ultrashort pulses.

CONFERENCE HIGHLIGHTS

In addition to the exciting technical program that has been the hallmark of previous years, we plan several highlights this year.

- Joint sessions with LA301, addressing the field of laser processing by ultrashort lasers
- Session hosting the best student competition, awarding the best student paper.

STUDENT COMPETITION

Thanks to generous corporate sponsorship, we are happy to announce that a student competition will be held again this year. Due to the great success in previous years, the competition will be a general best student award, taking posters and talks into account. The winner will be announced and awarded a \$1000 cash prize to the best student paper with the runner-up students receiving a cash prize as well.

Judging and Requirements

Contributions submitted by graduate and undergraduate students are eligible, both poster or talk. In order to ensure a fair evaluation the conference chairs and the program committee will judge the students within a special session held during the conference. Here, the students have to present a brief summary of their original talk or poster presented at our conference with a time limit of 5 minutes. Presentations will be judged based on content, scientific impact, organization, quality of presentation, and presenter's mastery of the subject. Candidates for the award need to be the presenting author; a full-time student, must have conducted the majority of the research presented in the paper.

Nominations

To be considered, submit your abstract online, select "Yes" when asked if you are a full-time student, and select yourself as the speaker. Note that prior first prize holders may participate, but will not be eligible for a cash prize.
