SPIE. ADVANCED LITHOGRAPHY

San Jose Convention Center
San Jose, California, United States
24 - 28 February 2019

Extreme Ultraviolet (EUV) Lithography X

This conference has an open **call for papers:**

SUBMIT AN ABSTRACT
(SIGN IN REQUIRED)

Submission guidelines for Authors and Presenters

Important Dates

SHOW | HIDE

Abstract Due:
29 August 2018

Manuscript Due Date:
19 January 2019

Additional Conference Information

Conference Committee

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Kenneth A. Goldberg, Lawrence Berkeley National Lab. (United States)

Conference Co-Chair

Nelson M. Felix, IBM Corp. (United States)

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Kenneth A. Goldberg
Lawrence Berkeley National Lab.

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Nelson M. Felix

IBM Corp.

Call for Papers

In 2018, much of the focus on EUVL technology has been on driving the technology to meet HVM productivity and yield targets for the 7nm logic technology node and accelerating the extendibility of EUV lithography to meet the requirements of the 5nm node and below. Examples include:

- improving mask yield, inspection, review and repair infrastructure
- implementing pellicle options
- improving resist resolution, sensitivity and LER
- understanding the impact of stochastics on yield
- understanding how EUV patterning stacks integrate with process variability requirements.

Simultaneously, the semiconductor patterning community is looking toward the future with higher numerical aperture EUV imaging and EUV based multiple exposure techniques. Beyond the 7nm node, progress will require innovative approaches in EUV sources, for both higher power and availability, continued development of mask architecture and imaging materials, and consideration of the creation of imaging systems and masks for higher numerical apertures or magnifications. Through decades of work, new advances in all EUV lithography research areas demonstrate improvements that move EUVL closer to meeting manufacturing requirements.

The Extreme Ultraviolet Lithography conference continues to be the leading forum for scientists and engineers from around the world to present and discuss research on the advancement of EUV lithography technologies. This conference welcomes submissions of original papers that emphasize recent technological advances, demonstrations, and investigations in the many related research areas, including efforts toward commercialization.

Technical and scientific papers advancing the state of the art in EUV Lithography in the following areas are solicited:

Patterning

- integration learning and yield
- patterning defects
- resolution enhancement techniques
- EUV impact on design optimization
- in-fab inspection and control
- double-patterning EUVL
- imaging simulations and source-mask optimization
- OPC relevant effects, models and computational techniques
- extendibility and future of EUV lithography
- vote-taking and other methods for resolving defectivity.

Masks

- substrates and blanks
- aerial imaging, patterned and blank mask inspection
- actinic, e-beam, DUV inspection methods
- defect mitigation and repair
- absorber materials and patterning
- mask roughness
- flare-reduction technologies
- pellicle development and platform integration
- architectures for higher numerical apertures
- mask writing techniques.

Exposure Tools

- imaging performance
- focus, dose, and overlay control
- aberrations, flare, and out-of-band light
- high-NA or anamorphic imaging systems.

Sources

- power scaling
- efficiency and reliability
- source characterization
- source collectors, cleaning, and lifetime
- new concepts and pupil-fill technologies.

EUV Resists

- resolution
- ultimate limits of stochastics mitigation and line-edge roughness
- sensitivity improvement
- negative-tone platforms
- patterning stacks and etch transfer
- emerging organic and inorganic materials and novel chemistries
- exposure mechanistic studies.

Lifetime

- environment control
- surface contamination and cleaning
- capping layers.

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