

# Journal of Medical Imaging

## Call for Papers

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### Special Issue on Image-Guided Procedures, Robotic Interventions, and Modeling

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This special issue is a celebration of the 30 year history of the SPIE Medical Imaging Conference on Image-Guided Procedures, Robotic Interventions, and Modeling. While the conference has evolved over the last three decades, one of its hallmarks has been the considerable emphasis on the translation of imaging and instrumentation to the surgical and interventional environment.

Similar to its long history, this special issue of the *Journal of Medical Imaging* will be focused on applications of medical imaging data in the engineering of therapeutic systems. Original papers are requested in the following topic areas:

- Image-guided procedures
- Minimally invasive surgery and intervention
- Computer-assisted therapy and therapy planning
- Robotic interventions and surgical tools
- Localization technologies and navigation systems
- Tracking and calibration
- Intraoperative/interventional imaging (including molecular)
- Image-to-physical registration
- Modeling for therapy planning, guidance, and assessment
- Techniques in population-specific and patient-specific model generation
- Tissue/Disease characterization
- Therapeutic modalities (mechanical, electrical, chemical, and radiation)
- Medical image-based simulation and training
- Validation & evaluation
- 3D visualization
- Novel interfaces
- Augmented, virtual, and enhanced reality
- Clinical applications and technology integration
- Real-time computing for surgery and intervention
- Data science and visualization
- Safety and standards for image-guided and robotic procedures
- Other related areas.

Members from the conference committee for the Medical Imaging Conference on Image-Guided Procedures, Robotic Interventions, and Modeling will act as associate editors for submitted manuscripts.

For more information on submission, please see the journal web site at <http://spie.org/JMIauthorinfo>. Please indicate in your cover letter that the submission is for this special issue. All submissions will be peer-reviewed. Peer review will commence immediately upon manuscript submission, with a goal of making a first decision within 6 weeks of manuscript submission. Special issues are opened online once a minimum of four papers have been accepted. Each paper is published as soon as the copyedited and typeset proofs are approved by the author.

**Submissions due 1 September 2017.**

**Role of Special Issue with regards to SPIE Medical Imaging 2018: Image-Guided Procedures, Robotic Interventions, and Modeling Conference:** Manuscripts for the JMI special issue should be submitted online at <https://jmi.msubmit.net>. As an additional benefit, all papers accepted to the special issue will be invited to participate at SPIE Medical Imaging 2018 (participation is optional). Invited authors will be provided the opportunity to write a 'Technical Note' about their accepted paper which will be published in the conference proceedings. In addition, with sufficient submissions, a special evening of platform presentations from accepted papers will be held during the conference. Other accepted papers will be provided platform or poster presentations in the standard conference tracks designated with high distinction.

For information on how to prepare a manuscript for JMI, please visit our website [www.spie.org/JMIauthorinfo](http://www.spie.org/JMIauthorinfo).

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