

## **Call for Papers: Third Symposium on Fatigue and Fracture Metallic Medical Materials and Devices**

**Country:** United States

**State:** Georgia

**Date:** 5/16/2012

Call for Papers: Third Symposium on Fatigue and Fracture Metallic Medical Materials and Devices

Wednesday November 14, 2012 Atlanta, Georgia

Deadline for Abstract Submittal: Wednesday May 16, 2012

Papers are invited for the Third Symposium on Fatigue and Fracture Metallic Medical Materials and Devices, to be held Wednesday, November 14, 2012. Sponsored by ASTM Committees E08 on Fatigue and Fracture and F04 on Medical and Surgical Materials and Devices, the symposium will be held at the Hyatt Regency in Atlanta, GA, in conjunction with the November standards development meetings of Committee.

### **OBJECTIVES**

The intent of this conference is to provide an updated set of presentations on fatigue and fracture mechanics principles as applied to the fatigue, fracture and life predictive methodologies involved in metallic medical materials, such as Nitinol, 304, 316L, MP35N, and other commonly used stainless steels as well as Ti-6-4, Co-Cr, etc. and devices such as peripheral stents, prosthetics, etc. We intend to have several Invited Presentations from experts in this area of mechanics who will begin key sessions for this conference.

### **Specific objectives:**

It is our intent to illustrate with up-to-date presentations, what fatigue and fracture mechanics techniques developed within the past few years are now being applied successfully to the design and durability assessment of medical devices where fatigue initiation and crack propagation is of major consideration. We will also be soliciting presentations that address the utility of existing and proposed fatigue and fracture mechanics standards in analyzing medical devices and fatigue initiation and propagation-based methods for interpreting cyclic stress and strain tensor data from computational analysis for fatigue life predictions and analysis. Finally, given the criticality of the data, we will be soliciting presentations on medical device patient's duty cycles and the corresponding patient's medical device boundary conditions.

### **Who Should Attend?**

The symposium is intended for mechanical engineers, material scientists and metallurgists in medical device companies, material supplies industry, and in regulatory agencies. In addition, university professors and graduate students performing basic research in the medical device area are encouraged to attend.

The language of the symposium will be English.

## ABSTRACT SUBMITTAL

To participate in the symposium, presenters/authors must submit online the Abstract Submittal Form and attach a 250-300 word preliminary abstract no later than May 16, 2012. Scroll to the top of the page to "Go to Abstract Submittal Form". To ensure your abstract was received into the ASTM database system, please email [hsparks@astm.org](mailto:hsparks@astm.org) stating that your abstract was submitted.

The abstract must include a clear definition of the objective and approach of the work discussed, pointing out material that is new, and present sufficient details regarding results. The presentation and manuscript must not be of a commercial nature nor can it have been previously published. Because a limited number of abstracts will be accepted, be sure that the abstract is complete to allow for careful assessment of the paper's suitability for this symposium. The Symposium Co-Chairmen will notify you via postal mail by May 30, 2012 of your paper's acceptability for presentation at the symposium. If the preliminary abstract is accepted, the presenter/author will be requested to submit a final camera-ready abstract several months before the symposium. The final abstracts will be distributed in an abstract booklet at the symposium.

## PUBLICATION

Symposium presenters are required to submit their papers to the Selected Technical Paper (STP), an online and printed, peer-reviewed publication for the international scientific and engineering community. After the final selection of abstracts has been approved, the ASTM Editorial Office will send authors' instructions via email only. Manuscripts to be peer reviewed for the STP are due online no later than October 30, 2012 at the ASTM Editorial Office. The corresponding author (the author who is the main contact with ASTM Headquarters) will receive a copy of his/her paper in portable document format (PDF). All published authors will have the opportunity to purchase reprints of their papers at a nominal cost.

ASTM publishes individual paper(s) in the online STP as they are finalized ASTM also publishes a printed book as a Selected Technical Papers (STP). (A minimum of ten papers is required for a printed STP.) Only those papers submitted by the manuscript due date will be included in the STP.

## TECHNICAL CHAIR CONTACT INFORMATION

Additional information about the symposium is available from Symposium Co-Chairmen:

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**Audience:** Biomedical Engineer, Chemist, Technologist