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Journal Interviews : 2009 : Smart Materials & Structures

JOURNAL INTERVIEWS - 2009

August 2009



Smart Materials & Structures

Featured Journal Interview

A recent analysis of **Essential Science IndicatorsSM** from *Thomson Reuters* noted an **increasing impact** of the journal *Smart Materials & Structures* in the field of Engineering. The journal's current record includes 1,719 papers cited a total of 10,240 times between January 1, 1999 and April 30, 2009, placing it among the top 100 journals in this field.

Founded in 1992, *Smart Materials & Structures* is published by *IOP Publishing*, and its Editor-in-Chief is *Dr. Ephrahim Garcia*.

In the interview below, Publisher Mrs. Natasha Leeper talks with ScienceWatch.com on behalf of Dr. Garcia about the journal's history and citation record.

SW: Did you expect *Smart Materials & Structures* to become highly cited, or is this surprising to you?

We had been keeping an eye on citations of recently published articles and so were cautiously optimistic before the 2008 *Journal Citation Report[®]* Impact Factors were published by Thomson Reuters. Of course we were delighted by the increase in Impact Factor of 15% to 1.743 this year—the culmination of a great deal of hard work to raise the quality of the journal.

We are confident that the rigor of our peer-review process which, coupled with proactive editorial activity aimed at attracting articles in the most cutting-edge areas of smart materials, systems, and structures, has ensured this journal is top in its field.

SW: How would you account for the increased citation rate of *Smart Materials & Structures*?

Since its launch in 1992, the journal has enjoyed a leading position in the field of smart materials, systems, and structures, with a steady flow of articles. However, a few years ago we at IOP Publishing made several changes to the way we managed the journal. We brought the management of submitted articles in-house to use our sophisticated editorial management system in line with our other successful journals. The administration of the peer-review process is now conducted by the publisher. The Editor-in-Chief and Associate Editors are able to assess submissions, choose referees, read reports, and make editorial decisions via an online facility.

This had a significant effect on our publication times, which now average four or five months from submission to online publication—much quicker than most of our competitors and very much appreciated by our authors. This significant improvement in the all-important publication time has attracted leading researchers to publish their research.

We have also embarked on several campaigns to market the journal and raise the visibility of its papers, including an increased presence at conferences and improved contact with authors and readers.

SW: Was there a change in policy or editorial direction that might account for this?

Two years ago, Dr. Ephraim Garcia at Cornell University took on the role of Editor-in-Chief. Under his guidance, we encouraged the Associate Editors on the Editorial Board to play a much more active role in making editorial decisions on articles in their area of expertise. The greater involvement of the Board has been invaluable. The Associate Editors are an excellent source of advice for this multidisciplinary journal, and we thank them for their professionalism and integrity.

The knock-on effect of these recent improvements has been a year-on-year growth in submissions. As a result of this, the journal doubled in frequency in 2009 to 12 issues, while at the same time increasing its rejection rate to almost 60%.

SW: What historical factors have contributed to the success of *Smart Materials & Structures*?

We can not forget the dedication and contribution of the previous Editors-in-Chief, Professor V.K. Varadan and Professor R. Claus, who launched the journal 17 years ago, and under whose leadership the journal established itself in the community and maintained a recognized high standard.

SW: Have there been specific developments in the fields served by *Smart Materials & Structures* that may have contributed?

The journal's contribution to the fields of energy harvesting (conversion of ambient energy into useful electrical energy), structural health monitoring (the damage detection and active monitoring of structural integrity in the aerospace and civil engineering industries), shape memory materials (which have numerous wide-ranging applications), and wireless sensor networks has remained strong—and indeed it is research in these areas that has been well cited.

What, in your view, is this journal's main significance or contribution in the field of Engineering?

The journal offers a platform to publish all areas of "smart" design, including structures integrating sensors and actuators, control systems, smart electronics, optics and electromagnetics, as well as smart materials, like shape memory alloys, magnetorheological fluids, piezoelectric materials, and electroactive polymers, such as ionic polymer-metal composites, to name but a few.

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How do you see your field(s) evolving in the next few years?

This is an exciting time for this area of engineering. Researchers continue to create new materials, methods of transduction, controls and systems, and all manner of devices which react intelligently to their environment. Emerging topics such as bio-inspired engineering, energy harvesting, and structures encompassing new technologies, such as micro- and nanotechnology will be the hot areas to watch.

What role do you see for your journal?

Our editorial activity is aimed at continuing to position ourselves at the very state-of-the-art of smart materials, systems, and structures, and to be the first place that our diverse community of researchers visits for the most cutting-edge research in the field. Occasionally the journal will publish topical special issues linked to high-quality conferences as well as invited topical reviews in areas of particular interest and importance.

The multidisciplinary element of this journal is unique and we will continue to embrace this perspective in the journal by welcoming papers on material science, micro- and nanotechnology, and controls and systems engineering. ■

Smart Materials and Structures

Dr. Ephraim Garcia, Editor-in-Chief

Mrs. Natasha Leeper, Publisher


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Smart Materials & Structures' current most-cited paper in Essential Science Indicators, with 131 cites:

Shahinpoor M, Kim KJ, "Ionic polymer-metal composites I: Fundamentals," *Smart Mater. Struct.* 10 (4): 819-33, August 2001. Source: *Essential Science Indicators* from Thomson Reuters.

KEYWORDS: SMART MATERIALS, STRUCTURES, ENERGY HARVESTING, STRUCTURAL HEALTH MONITORING, SHAPE MEMORY MATERIALS, WIRELESS SENSOR NETWORKS, SENSORS, ACTUATORS, MEGNETORHEOLOGICAL FLUIDS, PIEZOELECTRIC MATERIALS, ELECTROACTIVE POLYMERS, IONIC POLYMER-METAL COMPOSITES, BIO-INSPIRED ENGINEERING, NANOTECHNOLOGY, MICROTECHNOLOGY, PUBLICATION PROCESS, IMPACT FACTOR, PUBLICATION TIMES.

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