

# JOM

## Rolls Out 2015 Technical Emphasis Calendar

Lynne Robinson



The 2015 *JOM* Technical Emphasis Calendar builds on the scope of topics reflected in this selection of *JOM* covers from 2014.



Maureen Byko

*JOM* continues its upward trend in the number of papers published and breadth of topics covered with the release of its Technical Emphasis Calendar for 2015. Maureen Byko, *JOM* Editor, credits the commitment and creativity of TMS's technical committees for the steady growth in *JOM*'s contents and corresponding rise in stature within the professional community. "As editor, I'm impressed to see the level of enthusiasm our volunteers put forward every year, but this coming year represents a new level of participation in *JOM*, to the benefit of all the minerals, metals, and materials professionals who look forward to its contents every month," said Byko.

Almost every TMS committee is publishing at least one technical topic, with several pursuing ambitious plans to organize two or even three topics during the year, Byko noted. "The Aluminum Committee has, for more than a decade

now, published four topics per year to properly cover that committee's interests," she said. "In 2015, the Pyrometallurgy Committee and Nanomechanical Materials Behavior Committee will follow close behind, with three topics each."

This high level of volunteer energy and engagement has generated a 2015 *JOM* editorial calendar that, Byko says, "is a true reflection of the diverse interests of TMS membership. It offers a strong presence for core technology areas such as extraction and processing, and also sheds new light on emerging topical areas, such as additive manufacturing."

In fact, the March 2015 issue is scheduled to feature three separate topics on additive manufacturing. "This strengthens *JOM*'s coverage of a growing area with many industrial and research possibilities of keen interest to the TMS community," said Byko. She also highlighted that materials at the nanoscale

will be examined from the perspective of four different committees, while topics ranging from furnaces, to refractory metals, to cast shop, to corrosion address the needs and interests of the industrial minerals and material applications communities. The topics for the year are organized according to the following themes: Applying Materials Science and Engineering; Upstream Materials: Extraction, Processing, and Characterization; Additive Manufacturing; Biomaterials and Thin Films; Metallurgy and Processing; Metals and Alloys; Interfaces and Surface Engineering; Advanced Modeling and

Characterization; Energy and Environment; Physical Metallurgy; Materials for Energy and Extreme Environments; and Materials: Past, Present, and Future.

An evolving role for *JOM* in the future, said Byko, is to serve as a publishing outlet for papers presented at TMS annual meetings. "This will require an intuitive path to participation by our volunteers," said Byko. "We will need to examine our paper submission and review processes to determine if any adjustments are necessary for this venture to succeed." In support of this effort, as well to better accommodate the growing volume of technical content,



Justin Scott

## Justin Scott Takes on *JOM* Technical Editor Role

"One of my first interactions with TMS came through reading *JOM* as a Material Advantage member," recalls Justin Scott, TMS Technical Project Leader and the new *JOM* Technical Editor. "Before I attended any TMS events, I felt like I knew a great deal about the society just from reading *JOM*. It provided the perfect snapshot of society activities and recent research by TMS members, all in one place. Since those days as a student member, I've looked forward to reading my copy of *JOM* each month and I feel privileged to join the hardworking staff and volunteers who produce it."

As Technical Project Leader, Scott currently leads the implementation of new products and services for TMS, working closely with TMS volunteers in the development of these initiatives. He notes that it's the collaboration with the many volunteers who contribute to *JOM* that he is looking forward to the most as the journal's Technical Editor. "TMS volunteers are a remarkable bunch," he said. "From the work that they do in their day jobs to the TMS events that they help organize, there are so many interesting projects to note and stories to tell, and I can't wait to help document them in the pages of *JOM*."

Listening and acting upon member feedback "to help *JOM* continue to grow and thrive as a publication" are priorities for Scott as he becomes familiar with the people and processes that go into producing the journal. "I'm eager to bring even more support to the network of *JOM* authors, guest editors, and advisors," he said. "I'll be looking to help lighten the load in everything from refining technical topics to soliciting papers and finding peer reviewers. I also plan to utilize my technical background in materials science and engineering to bring some efficiencies to the *JOM* submission and review process."

Scott's technical background includes serving as a research staff member with the IDA Science and Technology Policy Institute in Washington, D.C., prior to coming to TMS. He was also a Science and Technology Policy Fellow with the National Academy of Sciences, and has worked on research projects at the Lawrence Berkeley National Laboratory and Bell Labs, Alcatel-Lucent. He earned his B.S. in mechanical engineering and materials science and engineering from the University of California, Berkeley, and his Ph.D. in materials science and engineering from Northwestern University.

After helping assemble the 2015 editorial calendar, Scott believes *JOM* is heading into a particularly strong publishing year. "The 2015 Technical Emphasis Calendar continues to be a terrific example of the work of our members," he said. "From mainstay topics, such as aluminum and lead-free solders, to some notable additions such as additive manufacturing and archaeomaterials, it's going to be tough to top in 2016."

"We also have a near record number of first-time guest editors joining *JOM* in 2015, which demonstrates the growing enthusiasm that our volunteers have for working with the journal," Scott continued. "I encourage others who would like to participate as authors, reviewers, or future guest editors, to get in touch with us to learn more about these opportunities."

*"I'm eager to bring even more support to the network of JOM authors, guest editors, and advisors."*

**—Justin Scott,  
JOM Technical  
Editor**



Justin Scott, TMS Technical Project Leader, will expand his expertise to the *JOM* editorial team as Technical Editor (see sidebar).

“Justin’s work for *JOM* builds logically on the foundation that he has already established in his position at TMS,” said Byko. “He comes to *JOM* with strong connections within our volunteer network and a keen understanding of the strategic interests of the society. That knowledge, I’m sure, will prove to be of benefit to *JOM* advisors, authors, readers, and TMS as a professional society.”

Another new initiative for *JOM* in 2015 is to build on the popularity of its occasional articles presenting a combination of archeological and metallurgical studies by offering three invited archaeomaterials topics, organized by Vilupanur A. Ravi, California State Polytechnic University. “Dr. Ravi has a strong interest in the metal and material working techniques of long ago, which, combined with his enthusiasm to share this knowledge, promises an interesting new staple on *JOM*’s editorial calendar,” said Byko. Michael Notis from Lehigh University, a TMS volunteer who has reviewed many archaeo-themed papers over the years, will continue to do so, working with Ravi to help produce high-quality topics on the work of those earliest

scientists and engineers.

James J. Robinson, TMS Executive Director, is confident that the changes ahead for *JOM* as it implements its 2015 editorial plans will have a significant, positive impact on both the journal and the many communities that it serves. “As the former *JOM* editor and its current publisher on behalf of TMS, I am naturally very committed to assuring that *JOM* is an elite publication in the science and engineering community,” he said. “I believe that we have added strength upon strength by expanding our already excellent editorial team via the engagement of both Drs. Scott and Ravi. They bring with them exceptional editorial sensibilities and contagious enthusiasm for our premier member journal. Their imprimatur on *JOM* will be clear and, I believe, well-appreciated by readers worldwide.”

The *JOM* Technical Emphasis Calendar for 2015 is presented on the next two pages. An interactive version is also available at the *JOM* website at [jom.tms.org](http://jom.tms.org). After reviewing the Technical Emphasis Calendar for a topic match for your paper, visit the *JOM* website’s Authors Tools section for checklists, style guides, and quick access to the resources necessary for successful completion of the *JOM* manuscript submission process.

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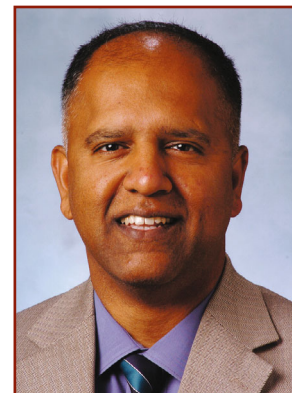
**— Maureen Byko,  
JOM Editor**

## Archaeomaterials Topics Shed Light on Current Issues

As a metallurgist, Vilupanur A. Ravi had long been fascinated by the origin and development of Damascus swords, particularly ones utilizing wootz steel from South India. It was his work on a project with an anthropologist on the use of materials by the Chumash people, however, that drew him into the wider realm of archaeomaterials. “The creativity and skill of the Chumash in utilizing locally available materials to build high quality canoes for traversing the California coast made a lasting impression on me,” said Ravi, Professor and Chair, Department of Chemical and Materials Engineering, California State Polytechnic University, Pomona. Ravi further deepened his knowledge about archaeomaterials while working with a local museum on an exhibition of engineered ceramics, leading to “interactions and opportunities for me to learn about the historical and cultural influences on ceramic art.”

Ravi will bring his considerable passion and expertise in archaeomaterials to bear for *JOM* as the guest editor of three archaeomaterials topics scheduled for 2015. As a reflection of his own experience, Ravi will be inviting articles from “all areas of archaeomaterials. Not only metals, but other materials, will be covered. These papers will provide readers with a look back at creative advances in the utilization of materials, and hopefully stimulate new ideas to current problems.”

The scope and reputation of *JOM*, Ravi believes, makes the journal “an ideal vehicle to provide the materials community with a window to the materials advancements of the past. I am very much looking forward to interacting with the community of researchers in the archaeomaterials area and presenting *JOM* readers with interesting articles on how ancient civilizations utilized materials.”



Vilupanur A. Ravi

# 2015 JOM Technical Emphasis Calendar

## January 2015

**Theme: Applying Materials Science and Engineering**

*Manuscripts Due: September 15, 2014*

**Topics:**

- Scalable Nanomanufacturing
- Corrosion Fatigue

## February 2015

**Theme: Upstream Materials: Extraction, Processing and Characterization**

*Manuscripts Due: October 15, 2014*

**Topics:**

- Aluminum: Bauxite-Alumina-Carbon-Reduction
- Characterization of Advanced Mineral Materials
- Lithium Metal and Chemical Extraction and Processing

## March 2015

**Theme: Additive Manufacturing**

*Manuscripts Due: November 15, 2014*

**Topics:**

- Modeling of Microstructure Evolution during Additive Manufacturing
- Metal Powder for Additive Manufacturing (3D Printing)
- Progress in Additive Manufacturing

## April 2015

**Theme: Biomaterials and Thin Films**

*Manuscripts Due: December 15, 2014*

**Topics:**

- Nanomechanical Behaviors of Biomaterials
- Surfaces and Biointerfaces
- Electronic, Biological, and Functional Thin Films
- Archaeomaterials

## May 2015

**Theme: Metallurgy and Processing**

*Manuscripts Due: January 15, 2015*

**Topics:**

- Aluminum: Shaping and Forming
- Friction Stir Welding and Processing
- Metallurgy: Energy and Environmental Issues

## June 2015

**Theme: Metals and Alloys**

*Manuscripts Due: February 15, 2015*

**Topics:**

- Beta-Titanium Alloys
- Permanent Magnets beyond Nd-Dy-Fe-B
- Critical Materials: Strategies for Achieving Sustainability
- TMS2015 Bladesmithing Project



**July 2015****Theme: Interfaces and Surface Engineering***Manuscripts Due: March 15, 2015***Topics:**

- Control of Interfacial Phenomena during Processing: Modeling and Technology Developments
- Effects of Interfaces on Mechanical Properties of Composites
- Surface Engineering for Extreme Conditions
- Archaeomaterials

**August 2015****Theme: Advanced Modeling and Characterization***Manuscripts Due: April 15, 2015***Topics:**

- Integrated Computational Materials Engineering (ICME): Bridging Interfaces
- In-Situ Mechanical Testing in Electron Microscopes
- Advances in Modeling of Solidification Microstructures
- New Horizons in Mechanical Spectroscopy

**September 2015****Theme: Energy and Environment***Manuscripts Due: May 15, 2015***Topics:**

- Sustainability in Metallurgy
- Materials for Solar Applications
- Lead and Zinc Metallurgy
- Energy Materials: Synthesis, Characterization, and Applications
- Aluminum: Recycling and Environmental Issues

**October 2015****Theme: Physical Metallurgy***Manuscripts Due: June 15, 2015***Topics:**

- Phase Transformations and Microstructural Evolution
- Progress in High-Entropy Alloys
- Progress with Lead-Free Solders
- Age-Hardenable Microalloying in Magnesium

**November 2015****Theme: Materials for Energy and Extreme Environments***Manuscripts Due: July 15, 2015***Topics:**

- Materials Degradation in Light-Water Reactors
- Optimizing Energy in Industrial Furnaces
- High-Temperature Corrosion of Superalloys
- Advances in Refractory Metals

**December 2015****Theme: Materials: Past, Present and Future***Manuscripts Due: August 15, 2015***Topics:**

- Stability of Nanomaterials
- Futuristic Nanomaterials and Composites
- Nanomechanical Measurements in Harsh Environments
- Aluminum: Cast Shop and Alloys
- Archaeomaterials

