

Preface

The goal of the Education Symposium Planning Subcommittee is to provide oversight and guidance to support educational symposia, workshops and related activities at the MRS meetings.

The number of educational symposia at the MRS meetings has grown rapidly in the last decade, with an education symposium conducted at least one meeting per year since 2001.

With a healthy mix of formal and informal science education participants, as well as outreach and professional development activities, a more coordinated support program is needed for these symposia.

By developing a best-practices strategy for quality educational programming at MRS meetings, this subcommittee will help integrate the symposium with other technical and non-technical activities during meetings. In addition, a more coherent approach to providing subjects, topics and invited speakers will lead to an enhanced profile for the materials education community.

In particular, this subcommittee will help:

- Provide a better institutional mix of symposium organizers, including industry representation
- Assure a better geographical mix both nationally and internationally and open the possibility of a symposium series with support for high-profile invited speakers
- Maintain diversity in the background, experience and perspective of symposium organizers.

Contact Elizabeth Kupp (kupp@matse.psu.edu) or Dan Steinberg (dsteinbe@princeton.edu) if you are interested in more information or would like to help.

Introduction

This quick reference guide is meant to complement the [Spring Symposium Organizer Handbook](#) and [Fall Symposium Organizer Handbook](#) published by MRS for each meeting. It is intended to help you get the big picture and determine what the different responsibilities are.

The first section gives a generalized [timeline](#) that shows you how to begin planning your symposium a year in advance of your scheduled meeting.

Other information is divided into several sections: [Program](#), [Publicity](#), [MRS Advances](#) and [Finance](#).

Finally, a [History](#) of prior education symposium topics and organizers is appended for you to view.

Thank you,
Education and Symposium Planning Subcommittee

Writing Your Proposal

(Original text taken from the F2017 Call for Papers)

Guidelines for symposium title

- Does the title reflect the symposium description?
- Will the title capture the attention of the intended audience?

Guidelines for description of topical focus

- Does the topical focus describe a core or emerging area of materials research?
- Is the topic of sufficiently broad interest to attract an audience? For symposia with a prior history, please indicate in the Comments section.
- For core or historical topics, does the topical focus show evolution over time?
- If the topical focus is not concerned with recent technical advances in materials research, the organizers might consider a tutorial session or a contribution to the non-technical program.

Guidelines for symposium topics

- Does the list of topics reflect the topical focus?
- Is the list of topics sufficiently specific and comprehensive so that prospective authors can choose the best symposium for their abstracts?

Sample MRS Education Symposium Proposal

(Proposal Title)

SYMPOSIUM PROPOSAL FOR THE SPRING 2013 MEETING OF THE MATERIALS RESEARCH SOCIETY

Towards a Sustainable and Inclusive Materials Genome Initiative

December 2011

(Description of topical focus)

Synopsis:

Scientific innovation plays a major role on the economic landscape of the XXI century. Indeed, innovation leads to job creation in the technological era, and for this reason, the need exists to enhance the discovery-to-commercialization process, in an attempt to minimize effort and maximize output. To this end, the National Science and Technology Council launched the Materials Genome Initiative in June 2011. Having identified historically lengthy lab-to-market pathways, in particular, within the novel materials space, this initiative aims at optimizing efforts towards effective development and commercialization.

The design of effective translational research mechanisms is not a new concept, with the biomedical sciences already having developed a good understanding of the commercialization sequence in particular for their market segment. However, a more general framework is needed in preparation for prompt lab-to-market throughout all newly-designed materials. The central keystone in the Materials Genome Initiative resides in the possibility to design novel materials from *in computo* approaches, prior to conventional time and resource intensive *in vitro* approaches. Indeed, increased computing power and improved modeling tools are paving the way to enable the upcoming generation of new materials to be first conceived and then tested in a virtual environment; with the hope of reducing time from lab-to-market by 50%. An early example of this

initiative is the case of materials for batteries, with Prof. Ceder having first posed the challenge to first create materials from computational design.

The aim of this session is to build upon the vision provided in the Materials Genome Initiative. We propose to assemble relevant stakeholders to develop a more profound understanding of the building blocks needed for execution. Stakeholders in the Materials Genome Initiative ecosystem include funding agencies, universities, education experts, scientists, students, business experts, and the general public at large, among others. In particular, we will discuss those aspects relevant to education towards a sustainable and inclusive Materials Genome Initiative. Indeed, preparation of the next-generation materials workforce will call for increased computational abilities for which modifications to the existing curricula are needed. As one example, educational initiatives must be developed to make computational materials science a more pervasive discipline. This session will welcome recommendations aiming at the revision of the undergraduate and K-12 curricula; mostly based in Classical Physics. At this junction, it would also be pertinent to ponder about the adequate discovery-to-text book time frame. Suitable funding platforms amenable to multidisciplinary, cross-national lab-to-market consortia will also be discussed.

(Symposium Topics)

Possible Topics:

- Review of education curriculum to support *in computo* materials design.
- K-12 Education: inclusion of computer science, nanotechnology, quantum mechanics and relativity concepts throughout the curriculum.
- How to train K-12 nonscience teachers to bring nanotechnology into their classrooms.
- Best practices towards the design of scientific programs: from basic research to early commercialization.
- Models for the assembly of scientific-commercial teams to execute a lab to market continuum.
- Anticipation of strategies to bring the general public into the equation: early dissemination of findings for adequate consumer adoption.
- Workforce development via experiential learning [e.g., Research Experiences for Undergraduates programs].
- Lessons learned from the Nanotechnology Initiative: bringing in the general public to the developmental framework, similarly, consider end-users as adequate stakeholders in the assembly of multidisciplinary teams.
- Parallelism with biomedical sciences: translational research, acceleration of “bench-to-market.”
- Program design and evaluation strategies; application of the logic model and beyond
- Ethical considerations in the accelerated models.
- Ethical considerations in novel materials for novel applications.
- The role of the media on the dissemination of scientific findings.
- How to bring along the third world not to increase the technology divide.
- How to bring along schools in disadvantages areas not to increase the education divide.
- Health and safety considerations: development of unified criteria for enhanced consumer adoption.

(You may want to include the following statement to allow for flexibility in planning the program.)

A tutorial complementing this symposium is tentatively planned. Further information will be included in the MRS Program that will be available online in September.

(Potential Invited Speakers)

Possible List of Invited Speakers:

- G. Ceder, MIT-Materials Genome Initiative: batteries as case study
- I. Robertson, NSF-Materials Genome Initiative
- E. Tomellini, European Commission (discuss best practices from FP7)
- W. Trochim, Cornell, (on design and evaluation: application of markers to physical sciences-lessons from the biomedical sciences to expedite lab-to-market)
- M. Farrrah, University of Pennsylvania (ethics in technology and cognitive freedom)
- UNESCO (inclusion of developing countries-through education)
- L. Jannah, Samasource (on creating development opportunities in the Third World)
- A.C. Golston, Bill and Melinda Gates Foundation (inclusion of underserved population in US)
- M. Rocco, NSF (Nano-Bio-Info-Cogni in the context of the Genome Project)
- *Consumer behavior???* (to determine best practices for early consumer adoption)
- A. Baccouche, Aziza Productions (to discuss role of media in scientific dissemination)
- NISE (to discuss best practices from nanotechnology)
- National Academy of Sciences (to discuss curriculum modification from grade school)
- Arthur R. Smith, Partnership for International Research and Education Grant (to discuss about international science)
- David A. Drabold, (to discuss about simulating properties of amorphous materials with ab initio techniques)

(Symposium Organizers)

Symposium Co-Organizers

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Organizer's Responsibilities

(Original text taken from <http://www.mrs.org/education-symposium-planning/organizers-responsibilities>)

Thinking about submitting a symposium proposal to an MRS Meeting? Perhaps serving as a Symposium Organizer? Hundreds of your colleagues have found that organizing an MRS symposium can be a professionally satisfying and rewarding experience, and all have had similar questions before taking the step! The following information is intended to answer those questions. It addresses the basics of submitting a proposal, what is expected of Symposium Organizers, and what help you will receive from MRS staff. If, after reviewing it, you still feel uncertainty, please contact Diane Rosenbaum at rosenbaum@mrs.org or 724-779-2720.

What's Expected of a Symposium Organizer?

Drawing upon its years of experience, the MRS staff and volunteer leadership offers a wealth of advice and assistance for the Society's Symposium Organizers. MRS handles much of the day-to-day communications with authors, session chairs, symposium assistants, and others. They produce the Call for Papers and announce its availability to more than 40,000 potential meeting attendees. They collect the resulting abstracts and distribute them to the Symposium Organizers, and provide them with detailed instructions and guidance for preparing their programs. MRS also develops the Program and Abstract Books, advises authors whether their papers have been accepted, manages the onsite operation of the Meeting, and more.

So what's the Symposium Organizers' role in all of this? Obviously, as the true experts in materials science, the Organizers must assume responsibility for matters that can benefit from an intimate knowledge of their field of research. Organizers draft a single-page Call for Papers that clearly explains the symposium's focus. They select invited speakers, review and reject abstracts, develop the program, raise funds, edit the proceedings, and so forth. To assist the Organizers in these tasks, MRS staff provides guidance and suggestions based upon prior experience.

How Should a Symposium Proposal Be Prepared and Submitted?

The first step in the overall process is to prepare a proposal and submit it to the Chairs of the Meeting in which you would like to take part. Generally, proposals are accepted from approximately 21-15 months before the meeting. If you've organized an MRS symposium in the past three years, you'll receive an email reminder from MRS when proposals are now being taken for an upcoming Meeting.

Early proposals generally consist of a brief summary of the intended focus of your symposium, the names and affiliations of the Symposium Organizers, and a review of any history of the symposium at previous MRS Meetings. If you haven't organized a recent MRS symposium--and, therefore, will not receive the standard email reminder that proposals are due--Meeting Chair names and contact information are posted on the MRS Web site about two years before the event. You can find them in the Future MRS Meetings section of this website. [Download Example of online submission form](#)

Just direct your proposals to the Chairs of the meeting for which you would like to be a part.

How Will I Know if My Proposal Is Accepted?

The Meeting Chairs determine the topical areas that will comprise their overall programs. About 15-18 months before their meeting, the Chairs select those proposals that are most appropriate to their intended program. At that time they will likely ask the associated symposium organizers to further develop their initial proposals into a document that more closely resembles a Call for Papers. This would include a tentative list of potential invited speakers as well as the names, affiliations and complete contact information for all co-organizers. Samples of previous Calls for Papers are posted in the MRS Meeting Archives section of the MRS website.

Has My Proposed Topic Been Covered at Earlier MRS Meetings?

The Calls for Papers at the above URL will list the symposium topics that have comprised these earlier MRS Meetings -- many of which may be related to your intended proposal. They are, therefore, a good source of information on who has organized similar symposia in the past. These former organizers can be a useful source of information to your planning efforts, and many would be willing to discuss their experiences as former MRS symposium organizers. Their names and contact information are included in the symposium descriptions within the Calls for Papers.

We'd Welcome Your Talents as an Organizer!

We hope that this information has adequately addressed your questions, and that you will seriously consider becoming a symposium organizer for an upcoming MRS Meeting. MRS staff and volunteer leadership would welcome the opportunity to work with you, and to count you among the hundreds of researchers who have offered their time and experience to fulfill one of the most important positions within the Society—the MRS Symposium Organizer.

Meeting Timetable

13 months prior	Program	Symposium organizers confirmed; topics defined.
12 months prior	Meeting Call for Papers	First planning meeting Nearly final one-page general call for papers due.
11 months prior	Call for Papers Publicity	Final one-page general call for papers text due. Submit mailing lists, e-mail addresses, for general call for papers announcements
10 months prior	Handbook Funding Call for Papers Finance	Symposium Organizer Handbook uploaded Solicit corporate support. Call for papers uploaded. Responsibility chart due.
9 months prior	Call for Papers	Symposium-specific call for papers due.
7 months prior	Publicity	Final requests for mail/email blasts due
6 months prior	<i>MRS Advances</i> Program Tutorials	<i>MRS Advances</i> Publishing Proposal due. Abstracts available to organizers for review. Tutorial proposals due.
5 months prior	Program	Arrange abstracts into sessions, choose session chairs, submit session sheets, session details due.
4 months prior	Meeting	Program Planning Meeting, final program changes due.
3 months prior	Program <i>MRS Advances</i> Funding	Program uploaded, symposium assistant recommendations due. Referees assigned. Funding info due.
1 month prior	Finance Publicity	AV and food requests due, pre-reg and travel reimbursement list due. Symposium highlights questionnaire due.
3 weeks prior At Symposium	<i>MRS Advances</i> <i>MRS Advances</i> Meeting	Electronic papers due. Meeting Tie-down Editor demo Wrap-up
3 weeks after	MRS Bulletin	Short summary of symposium due.

1 month after	JMR	MRS invited feature paper nominations due.
2 months after	<i>MRS Advances</i>	Editorial work done.
3 months after	Finance <i>MRS Advances</i>	Final disbursement of symposium funds due. <i>MRS Advances</i> articles published.

The due dates given above are approximate. Refer to the website for your MRS meeting (Fall or Spring) during which your symposium will be held and/or your Spring Symposium Organizer Handbook and the Fall Symposium Organizer Handbook for specific information (e.g., submission deadlines).

Program

One of the symposium co-organizers will be the point of contact for MRS concerning programming and will keep track of deadlines related to programming, but much of the work involved should be done by the organizers as a group.

The tasks related to programming include developing the topics and scope of the symposium, writing a call for papers, inviting speakers, accepting/rejecting abstracts and organizing the talks into coherent sessions.

Each education symposium will have an online Dropbox, accessible by the organizers, that contains useful information, reference material and examples of calls for papers, etc. from previous symposia.

Before the Meeting

1. Organizers decide on a theme and list of potential session topics which will be used to develop a symposium proposal, including a list of potential invited speakers (due ~18 months prior to the symposium)
2. After symposium is accepted, invite speakers
3. Write up a call for papers, including confirmed invited speakers (due one year prior to symposium)
4. MRS will collect abstracts, which are available online to the symposium organizers. Keep track of abstracts for invited speakers and remind them to submit them to MRS (~six months before the symposium).
5. Accept/reject abstracts and arrange into sessions; choose session chairs and submit session sheets to MRS (due ~two weeks after abstract deadline; ~five months before symposium). Forms are available in the [Spring Symposium Organizer Handbook](#) and the [Fall Symposium Organizer Handbook](#) that make the process smooth and easy to follow.

During the Meeting

1. For each session, make sure the session chairs have what they need and that speakers load up their presentations before the session in which they will be speaking.
2. Be there to keep the symposium running smoothly and handle any last minute changes or problems.

After the Meeting

1. Programming duties end with the meeting!

Useful Websites

The due dates given above are approximate. Refer to the website for your MRS meeting (Fall or Spring) during which your symposium will be held and/or your symposium organizers handbook for specific information (e.g., submission deadlines).

Publicity

Call for Papers Example

Today's Teaching and Learning in Materials Science—Challenges and Advances Symposium BI1 at the 2016 MRS Fall Meeting

Call for Papers

A major factor affecting the success of your symposium is the effective distribution of information to those active in your field.

1. Put symposium description and general information on website, and send out emails eight to nine months before the meeting. Contact MRSECs, NISE.net and others.
2. The web pages for the meetings on the [MRS Website](#) are the primary medium for disseminating information about the meeting.
3. In addition to the full-meeting Call for Papers, a single-page call for papers announcement for individual symposia is a particularly effective marketing tool, and symposium is encouraged to send an individual Call for Papers announcement.
4. The call for papers should include:
 - a. Alpha letter and symposium title (i.e., Symposium A: Amorphous Silicon)
 - b. Focus of symposium (1-2 paragraphs)
 - c. List of invited speakers and their affiliations spelled out (Note: It is inappropriate for symposium organizers to be invited speakers within their own program.)
 - d. Symposium organizers' names and complete addresses (including department, telephone and fax numbers, and e-mail addresses)
 - e. Tutorial reference, if applicable (MRS will provide a generic phrase, ex: spring 2011 had education tutorial Steinberg/Doherty)
5. Send a copy of the Call for Papers to symposium organizers a few weeks before posting it online for final corrections and approval
6. Information not directly associated with the meeting or your individual symposium is not appropriate to include with this mailing

Mailing List

One organizer will be responsible for collecting names, addresses, and emails of colleagues publishing research in this field.

Suggested sources:

1. Attendee list from a conference or topical seminar
2. Names and addresses from business card files
3. Authors and co-authors from current research files
4. Other listings of researchers in a particular field

Lists should not be more than two years old.

Press Coverage

Before the symposium

1. Furnish reporters and editors with a suggested list of topics and specific presentations worth attending; MRS prepares a Press Tip Sheet based on symposium highlights furnished by symposium organizers.
2. Highlights should be selected principally for the novelty of the work to be presented, or because they would help give reporters a handle on the symposium and fields affected.
3. The first emphasis for press coverage at MRS Meetings is on veteran correspondents from [Science](#), [Nature](#), [Science News](#), [Physics Today](#), [Chemical & Engineering News](#), and other major technical publications.
4. Science editors at the [Wall Street Journal](#), [Boston Globe](#), [New York Times](#), [CNN](#), [Newsweek](#) and [Time](#) pay attention to the MRS Meeting although coverage in these publications is rare.

After the Symposium

1. Publish highlights
2. The reports should cover newsworthy science that [MRS Bulletin](#) readers (your colleagues) who missed your symposium would like to know
3. Do not simply list speakers or topics since this information is in the meeting program.
4. Coverage will come from your reports, editors and lay language abstracts written by authors for the press.

MRS Advances

It's best to assign one symposium organizer to handle the manuscripts. The duties include soliciting articles from symposium participants, assigning reviewers for the papers, and interfacing with MRS staff to ensure timely publication and address any other issues that may arise.

In general, although the process for generating the papers begins before the meeting your symposium is being held in, the majority of the work occurs AFTER the meeting. Plan accordingly.

Before the meeting

1. Submit an *MRS Advances* Publishing Proposal and sign a Publication Agreement
2. Solicit articles for your symposium –start early!
3. Assign referees (reviewers) for papers

During the meeting

1. Attend demonstration of electronic *MRS Advances* manuscript submission and review website
2. Remind authors of submission deadline; continue to solicit articles (it is helpful to put up a slide or make mention of deadline at the start AND end of your symposium sessions)

After the meeting

1. Follow up with any “stragglers”; the submission deadline is typically one week after the meeting ends so this will be a busy period for you
2. Assign reviewers for these last-minute manuscripts; check review progress and send reminders as needed.
3. Keep in mind you may end up reviewing a paper (or two!) yourself
4. Read reviews and make a final decision on a paper's acceptability for ALL manuscript papers submitted
5. Work with *MRS Advances* editors to complete issues.

[Information for *MRS Advances* authors with templates, style guide and FAQ](#)

Refer to the website for your MRS meeting (Fall or Spring) during which your symposium will be held for specific information (e.g., submission deadlines).

Symposium Financing

MRS Funding: A Short Guide for Symposium Organizers

Important notes:

- MRS supplies \$1500 as a seed grant to the organizers of each symposia.
 - This money may be used to support speakers, student travel or special AV needs (beyond the projector, screen, pointer and lapel microphone supplied by MRS).
 - The seed money may not be used by the symposium organizers to support their own travel or for supplemental food/beverage (MRS supplies morning and afternoon coffee breaks).
 - It is not necessary to raise additional funds, but it can be useful in attracting invited speakers and/or providing additional value to the symposium.
- One or all members of the organizing committee may be involved in raising funds for your symposium, but one person must be designated as the financial chair.
- Do not offer support to speakers until funding has been secured.
- Once funding has been secured, MRS will handle the administrative details such as invoicing, filing financial reports, etc.
- Specific information concerning preparing funding proposals is included in the [Spring Symposium Organizer Handbook](#) or the [Fall Symposium Organizer Handbook](#) (Sections 7F), including sample letters and a list of the corporate affiliate benefits and opportunities.
- [Example of a Funding Proposal](#)

Before the meeting

- A budget must be submitted to [Mr. Gopi Kalavar](#) at MRS headquarters.
- Any funds raised for support of the symposium must be deposited at MRS HQ in an account specifically set aside for your symposium. Disbursements will be made upon written request from the symposium financial chair.
- Contact government agencies or companies to discuss potential support of your symposium, generally at least 6 month prior to the meeting. All funding proposals must be submitted to [Donna Gillespie](#) at MRS HQ for processing.

After the meeting

- For government grants, a final technical report must be prepared by the financial chair within 60 days and submitted to Mr. Gopi Kalavar, who will forward the report to the sponsoring agency.

Useful Websites

- Refer to Section 7 of the symposium organizers handbook on the MRS website for general information on symposium funding.
- Each education symposium will have an online Dropbox, accessible by the organizers of that symposium, that contains useful information, resources and a list of industry and government organizations that have supported previous education symposia.