SC16 Call for Tutorials

Version 2.1

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As part of its Technical Program, SC16 will host a collection of tutorials that offer attendees the opportunity to learn from, and interact with, knowledgeable and frequent users of high performance computing (HPC), networking, storage, and analysis. The SC tutorial program is one of the largest available at any computing conference, and consistently rates as one of the most popular and valuable parts of the Technical Program. This year, we will give special focus to tutorials that emphasize the *state of the practice*—ways of doing things that aren't at the leading edge nor widely accepted, but instead are reliable best practices of top-tier organizations and users.

The SC16 tutorials committee is soliciting proposals for tutorials to be offered at the conference. Please read the following carefully for details about desired tutorial topics, format and organization, available support for tutorial presenters, the required and suggested contents of a proposal, and how to submit a proposal.

Important dates:
- **Submission site opens:** February 16, 2016.
- **Submission deadline:** April 17, 2016. (Automatic 1 week extension to April 24, no further extensions will be given.)
- **Notification of acceptance:** June 15, 2016 (tentative).
- **Submission of tutorial materials:** September 1, 2016 (tentative).

Topics of interest: Desired tutorial topics include (but are not limited to):
- Parallel programming methods, models, languages and environments
- High-productivity programming languages and runtimes for HPC
- Scalability and performance portability
- Use of compute accelerators (e.g., GPU, Xeon Phi, FPGA)
- Debugging and correctness tools
- Performance evaluation and/or optimization tools
- High performance I/O, storage, archive, and file systems
- Applications and application frameworks
- Algorithms, numerical methods, and libraries
- Scalable data mining and machine learning
- High performance networking
- Scientific and information visualization
- Power use monitoring and optimization
- Systems administration and/or resource management of HPC systems
- Computer and network security
- Fault-tolerance, reliability, maintainability, and adaptability
- Embedded and/or reconfigurable systems
- "Hot Topics" of current interest to the SC community

The SC16 technical program committee is placing an emphasis on the *state of the practice*, as described earlier in this call. Tutorials that have a substantial focus on the state of the practice will be given special consideration in acceptance and scheduling decisions. Also, submissions for "hands-on" tutorials are highly encouraged. These are tutorials that give attendees an opportunity to work through pre-prepared demos or

exercises during the tutorial. A well-done hands-on tutorial can provide a much richer learning experience to attendees than a non-interactive, lecture-only tutorial.

Schedule and organization: SC16 tutorials will be offered Sunday, November 13 and Monday, November 14, 2016. Tutorials are either a full day (six hours) or half day (three hours) in length. Full day tutorials may have up to six presenters, with up to four designated as *primary presenters* that are eligible to receive reimbursement for travel expenses and part of a shared honorarium. Half day tutorials may list up to three presenters, with up to two primary presenters. The tutorial schedule includes morning and afternoon refreshment breaks, and a lunch break with conference-provided break food and lunch for registered tutorial attendees.

Conference support: SC16 will provide each accepted tutorial a room with its standard audio-visual configuration (projector, microphone, sound amplification).

SC16 will host tutorial presentation materials on a password-protected download site for registered tutorial attendees, and will sell a USB stick containing the presentation materials at the SC store (available for purchase by anyone, but at a reduced price to registered tutorial attendees). Organizers must also explicitly agree to the release of tutorial presentations for this purpose as part of tutorial proposal submission. We will not produce hard copies of tutorial presentations.

We encourage organizers of accepted tutorials to submit a short promotional video, and SC16 will make available to its attendees a web site aggregating links to these videos.

For each full-day tutorial, a US$1,600 honorarium will be shared among primary presenters; this amount will be raised to $2,000 if the organizers submit a promotional video. Primary presenters of a half-day tutorial will receive a $800 with an increase to $1,000 with submission of a promotional video.

Tutorial primary presenters will be eligible to receive reimbursement for travel and accommodation expenses. Primary presenters of full-day tutorials may request reimbursement for up to $900, and primary presenters of half-day tutorials may request a reimbursement for up to $700. **Receipts will be required** for reimbursement. Tutorial organizers will have to specify their list of primary and secondary presenters before the conference, but changes will be allowed in exceptional circumstances.

What to include in a proposal: A successful proposal will clearly describe (in English) the tutorial topic, the target audience, why it is of relevance to that audience, and the content, schedule, and organization of the tutorial in a detailed course outline. The "detailed course outline" is the most critical part of the submission. To better understand the content and format of a submission, we encourage potential submitters to view a sample submission form well before the submission deadline by visiting `http://submissions.supercomputing.org`, and clicking on the "sample submission forms" link.

The proposal file should contain the following sections, each beginning on a separate page:

1. Abstract (200-word maximum).
2. A detailed description of the proposed tutorial (2 pages maximum) with the following sections:
   - General description of tutorial content;
   - Targeted audience (researchers, students, developers, practitioners, etc.);
   - Why the topic is relevant to SC16 attendees;
   - Tutorial goals, including how attendees will benefit;
   - If the tutorial has a state of the practice component, a clear description of what and how those parts involve state of the practice;
   - Content level (% beginner, % intermediate, % advanced);
   - Audience prerequisites;
   - If there are multiple presenters, how presenters will ensure presentations form a cohesive whole as opposed to a sequence of disparate talks; and
   - If your tutorial has been presented previously, a list of when and where it has been presented and how it will be updated for SC16.
3. Detailed outline of the tutorial (1 page maximum).
4. A description of "hands on" demos/exercises.
5. Curriculum vitae or résumé for each presenter (2-pages maximum each). Each should include a list of tutorials/courses the presenter has taught.

Submission of samples of visual aids is strongly recommended, either as an appendix to the tutorial proposal file, a separate file uploaded with the tutorial proposal file, or in the form of URLs in the main proposal file that point to materials hosted elsewhere.

If the proposed tutorial includes hands-on demos and/or exercises, the proposal should include detailed evidence that the computing and networking resources needed for the demos/exercises will be available during the tutorial, and that the demos/exercises will work for attendees on those resources (i.e., they have been fully tested and debugged). SC16 will provide SCinet wireless network access to all tutorial rooms, and may provide wired network and power to classroom-style seating for "hands-on" tutorials upon request. (Tutorials requesting wired network and power must include a clear justification for the request in their proposal.) Demos and exercises may target common attendee laptop configurations (e.g., using a bootable "live cd"), but should provide a fallback configuration for attendees without access to such a laptop during the tutorial.

How to submit: Proposals must be submitted electronically via the SC16 submission web site at `http://submissions.supercomputing.org`. Submission involves filling out a web form and uploading files. The web form includes a field for the tutorial abstract, a list of presenters, a list of reviewer conflicts, fields for describing desired tutorial length, a statement agreeing that SC16 can submit tutorial presentation materials (required for a tutorial to be accepted), and upload fields for the main proposal file and optional sample visual aid file.

Selection: Members of the SC16 tutorials committee will review the submitted tutorial proposals, grading them on factors such as:
- Breadth and/or depth of insights offered
- Relevance and potential appeal to the SC audience
- Timeliness of the topic
- Appropriateness of the topic for a tutorial
- Degree of interactivity
- Coherence of presentation across multiple presenters
- Degree of presenters' teaching/speaking experience
- Quality of the proposal, including visual aids (e.g., clarity, completeness, and cohesiveness)
- Expected quality and appeal of optional promotional video, if planned

Additionally, for "hands-on" tutorials, factors include:
- Evidence that demos/exercises have been thoroughly tested
- Evidence that resources required for completing demos/exercises will be available to attendees during the tutorial

Each submission will receive at least three reviews. After the reviews are received, the tutorials committee will discuss these reviews and select the tutorials to be offered at the conference. A tutorial may be conditionally accepted, pending modifications requested by the tutorials committee.

Organizers of accepted tutorials will be required to submit their presentation materials to the conference approximately two and a half months before the conference for the USB stick, and optional promotional videos at least one month before the conference so that they have the potential to attract attendees. Tutorial organizers will have opportunity to update their materials after the initial submission for the download site.

For more information: See the SC16 tutorials frequently-asked-questions page at `http://sc16.supercomputing.org/submitters/tutorials/tutorials-faq/`, or send email to tutorials@info.supercomputing.org. Be sure to send questions well before the submission deadline so that you have time to factor the response into your submission.

Organizers:
SC16 Tutorials Chair: Philip C. Roth, Oak Ridge National Laboratory
SC16 Tutorials Vice-Chair: Naoya Maruyama, RIKEN