8th BSC Doctoral Symposium 2021

Objectives

Register as an attendee to the 8th BSC Doctoral Symposium 2021
Registrations to present at the 8th BSC Doctoral Symposium 2021 are closed

The aim of the BSC Doctoral Symposium is to provide a forum in which PhD students and PostDoc researchers can present the results of their research work. To reach these goals, PhD students and PostDoc researchers will share their experience and findings through talks, poster sessions and discussions.

Authors are invited to submit manuscripts regarding original research and recent developments, as well as position and strategic papers in the remit of the Symposium. All accepted abstracts will be given either a presentation or a poster slot.

The tutorials of the Symposium focus on career development with lectures on research and functioning skills: presentation, academic writing, IPR issues etc.

IMPORTANT DATES

Abstract submission deadline: April 1st, 2021
Notification of acceptance: April 13th, 2021

To submit presentations and posters (only for selected presenters): April 27th, 2021 via email to education@bsc.es

Attendee registration deadline (only for non-presenters): May 5th, 2021

How to Submit

1. For the Extended abstract, please use the BSC-IDS format (2 or less pages, approx. 800 words including references, diagrams and illustrations). Link to Extended abstract template in MS Word and LaTex is in the **submit link.** Please **create a PDF file** and upload it. **Make sure the size of the page is A4 (210mm x 297mm)** and not letter (215,9mm x 279,4mm).

2. The abstract should have as a main author a PhD candidate or a PostDoc researcher. In the case of the abstracts of the PhD candidates, no more than 3 authors are allowed, including the applicant's main supervisor.
3. Include your short bio with recent photo at the end of the Extended Abstract as per the template.
4. Please take the time to spell check carefully your paper and bio.
5. Please follow exactly the IEEE templates provided and do not omit or add additional type of affiliation information and do not change the outline or formatting.
    - For BSC affiliated applicants, please use the document **"Guidelines for expressing BSC Affiliation in Publications"**
6. Fill in the registration form. Please indicate whether you would like to present a talk or a poster.

The submitted abstracts must be formatted according to the Doctoral Symposium "How to Submit" regulations and not exceeding the maximum length. Submission implies the willingness of the main author to register and present the talk/poster.

Requirements for the Extended Research Abstract

Your Abstract should contain:

- Title
- Your name, affiliation and e-mail address
- Your supervisor's name, affiliation and e-mail address
- The content of your abstract should relate to your research work and include at least one of the following :
    - Description of the research problem you are investigating with justification of its importance and expected contributions of your thesis
    - Results so far and their analysis and/or plans for future development
    - Outline of prior unsuccessful work with proposed approaches for solution
    - Short bio as formated in the IEEE template

Evaluation Criteria

The applications will be evaluated and the accepted ones will be given a presentation or a poster slot. The reviewers will be looking at the quality of the research work and its relevance to the scope of the event and the quality of the Extended Abstract.

When the Selection Committee is allocating a presentation or a poster slot, the stage of the research will be taken into account.

Key Note Speaker

Tuesday May 11th

"Redesigning Computing Systems in the Age of Huge Data and Sparse Computation"

Abstract: We have been experiencing two very important developments in computing. On the one hand, a tremendous amount of resources have been invested into innovative applications such as first-principle based models, deep learning and cognitive computing. On the other hand, the industry has been taking a

technological path where traditional scaling is coming to an end and application performance and power efficiency vary by more than two orders of magnitude depending on their parallelism, heterogeneity, and locality. A “perfect storm” has been formed from the fact that data movement has become the dominating factor for both power and performance of high-valued applications. It will be critical to match the compute throughput to the data access bandwidth and to locate the compute at where the data is. Much has been and continuously needs to be learned about of algorithms, languages, compilers and hardware architecture in this movement. What are the killer applications that may become the new driver for future technology development? How hard is it to program existing systems to address the date movement issues today? How will we program future systems? How will innovations in memory devices present further opportunities and challenges in designing new systems? What is the impact on long-term software engineering cost on applications (and legacy applications in particular)? In this talk, I will present our vision for and initial results from the IBM-Illinois C3SR Erudite system inside this perfect storm.

Dr. Wen-mei W. Hwu

Senior Distinguished Research Scientist, NVIDIA
Professor and Sanders-AMD Chair Emeritus, ECE
University of Illinois at Urbana-Champaign

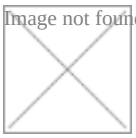
Wen-mei W. Hwu is a Senior Distinguished Research Scientist and Senior Director of Research at NVIDIA. He is also a Professor Emeritus and the Sanders-AMD Endowed Chair Emeritus of ECE at the University of Illinois at Urbana-Champaign. His research is in the architecture, algorithms, and infrastructure software for data intensive and computational intelligence applications. He directed the IBM-Illinois Center for Cognitive Computing Systems Research Center (c3sr.com) from 2016 to 2020. He was a PI of the NSF Blue Waters supercomputer project. He received the ACM SigArch Maurice Wilkes Award, the ACM Grace Murray Hopper Award, the IEEE Computer Society Charles Babbage Award, the ISCA Influential Paper Award, the MICRO Test-of-Time Award, the IEEE Computer Society B. R. Rau Award, the CGO Test-of-Time Award, numerous best paper awards, numerous teaching awards, and the Distinguished Alumni Award in CS of the University of California, Berkeley. He is a Fellow of IEEE and ACM.

Other information:

Download the Guidelines for participants

Download the Guidelines for presenters

Further information



The final program will be defined once the presenters are selected. It will be available under the **AGENDA** section.

Please note that the tutorial sessions are **limited to a certain number of attendees**.

Barcelona Supercomputing Center - Centro Nacional de Supercomputación

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