

# *NFM*

## **NASA Formal Methods Symposium**

### **Charter**

#### **Symposium Purpose and Form**

The NASA Formal Methods Symposium is a forum for theoreticians and practitioners from academia, government and industry, with the goals of identifying challenges and providing solutions to achieving assurance in mission- and safety-critical systems. The focus of the symposium is on formal methods, and aims to foster collaboration between NASA researchers and engineers and the wider aerospace and academic formal methods communities. The symposium is normally comprised of a mixture of invited talks by leading researchers and practitioners, presentation of accepted papers, and panels.

#### **External Website**

The formal externally visible website for the NFM symposium series is:

<http://shemesh.larc.nasa.gov/NFM/>

It is hosted at NASA Langley, maintained by Cesar Munoz and web programmer Raymond V. Meyer: raymond.v.meyer@nasa.gov.

#### **Steering Committee Composition**

The steering committee (SC) is fixed for now.

The organizers of one year's NFM will be included in the steering committee mailing list for the subsequent year, but they will not have voting rights.

The SC chair will serve for a one-year term, after which we will elect a new chair via nominations over email. There is strong preference that consecutive different chairs should be drawn from different centers, but it is not a hard constraint. A chair can be re-elected at most once.

#### **Discussions and Decisions**

Discussions will usually take place over email. Discussions can lead to one or more topics being brought up for voting. Members of the SC email the current SC chair with their vote within one week of deciding to have a vote. The majority of the votes cast decides the vote; if there's a tie we discuss the decision further and re-vote until we get a majority.

## **Planning The Next NFM**

Every year the SC will hold a telecon to discuss the organization of the next NFM. Alternatively this discussion could happen at the current year's NFM symposium.

NFM rotates from center to center and should preferably shift between east coast and west coast.

The current centers are - with the year(s) they have organized/helped organize NFM so far:

- East:
  - Goddard Space Flight Center (2010, GC/2014)
  - Johnson Space Center (2014)
  - Langley Research Center (PCchair/2010, 2012)
- West:
  - Ames Research Center (2009, 2013)
  - Dryden Flight Research Center
  - Jet Propulsion Laboratory (2011,2015)

Other candidate centers (for which we currently do not have formal methods contacts) are:

- Kennedy Space Center
- Marshall Space Flight center
- Glenn Research Center

## **Organizing an NFM**

### **Organization structure:**

The organizing center is free to organize the symposium as seen fit. However, it might appear better if the organizational structure is somewhat consistent across years. It is recommended to have: a general chair, one or more PC chairs, and one or more organization chairs to handle all the practical matters. This structure would give the conference a single point of contact (general chair) and divide the work.

The risk of having a general chair and PC chairs only is that the general chair may end up with a lot of practical details, which can be rather time consuming. Therefore the suggestion of organization chairs. Some conferences even have a much more detailed breakdown of organization chairs, such "web chair", "publicity chair", etc.

## **PC Composition:**

Recommendations:

- carry over at least  $\frac{1}{3}$  of previous year's PC
- attempt to have a balanced distribution wrt. research areas, countries, and gender.
- be conscious about the balance between NASA associated and academic PC members. The exact composition should depend on the general goals of NFM.

The steering committee should have a chance to comment on the PC before it is sealed.

## **Timeline:**

Keeping the timeline (getting things done in time) is usually the biggest challenge. There are a couple of main drivers:

1. The first call for papers should probably go out as early as 5-6 months before the submission deadline. This can of course be debated. However, by sending it out early, and sending out at least 3 additional calls down the road creates awareness.
2. Springer wants an electronic version of the proceedings no later than 9-10 weeks before the event if the proceedings are to be available at the conference in paper form (8 weeks for events in Europe and 1-2 extra weeks for events outside Europe). If proceedings are in electronic format only then 4 weeks are sufficient.

In addition to these harder constraints, there are the following softer constraints:

1. The PC should be given at least 5 weeks to review the papers, plus 1 week for bidding.
2. The authors should be given approximately 4 weeks to edit their papers based on the reviews.

The time line below takes a starting point at time 0 when the symposium takes place and calculates back in weeks. From this it can be seen that it takes about a year to organize a symposium.

<b>TASK</b>	<b>DEADLINES (weeks before time 0)</b>
Choosing organizational structure, location and dates	50
PC invited	46
Website created	44
Send out first call for papers	43
Invited speakers arranged (to go on CFP 2)	36

Send out second call for papers	35
Send out third call for papers	29
Send out fourth call for papers	25
Submission deadline	23
Paper assignment	22
Reviews done (discussion begins)	17
Notification	15
Camera ready copies deadline	11
submission of proceedings to Springer	10
Symposium	0