



Smoothed Particle Hydrodynamics rEsearch and engineeRING International Community

Minutes of the Steering Committee meeting

15 November, 2019

Universidad Politécnica de Madrid

SC members present:

Benedict Rogers, University of Manchester, UK (chair)
Stefano Sibilla, Università di Pavia, Italy (secretary, via Skype)
Renato Vacondio, Università di Parma, Italy (newsletter editor)
Alex Crespo, Universidade de Vigo, Spain (webmaster)
Matthieu de Lefte, Nextflow Software, France
Xiangyu Hu, Technische Universität München, Germany
David Le Touzé, École Centrale de Nantes, France
Salvatore Marrone, CNR-INM, Italy
Nathan Quinlan, NUI Galway, Ireland
Antonio Souto-Iglesias, Universidad Politecnica de Madrid, Spain
Angelo Tafuni, New Jersey Institute of Technology, USA
Damien Violeau, EDF R&D, France

Also present:

Giuseppe Bilotta, INGV, Italy
Daniel Duque, Universidad Politecnica de Madrid, Spain

Apologies:

Jean-Christophe Marongiu, Andritz Hydro, Switzerland (via Skype)
Rade Vignjevic, Brunel University, UK

Specific Issues

1. Reflections on Exeter 2019 workshop

In general, the SC agrees that in the Exeter workshop:

- the average paper quality was good;
- it is good idea not to have many papers and to have a shorter day in the middle of the workshop;
- both keynote lectures by Southern and Bates were of good quality;
- the keynote lecture by Salvatore Marrone was also good and very interactive; about this keynote, Ben Rogers recalls that they started working on it several months before the workshop, in order to

have a successful panel discussion: this is a good practice which can be maintained in the future workshops;

- the number of submissions was lower than usual, possibly because of VISA issues in the UK or because the location appeared to be less attractive; another possible reason can be that SPHERIC, both in its workshop and its website, appears to be mostly focused on fluid mechanics rather and, therefore, attracts few solid mechanics works;
- it was positive and practical to have an accommodation directly in the campus;
- it has been noted that 2 students who were awarded Libersky prizes were not present at the final ceremony: it is agreed that, in the future, the presence of the awarded student shall be required, otherwise the prize will be assigned to the following student; this warning will be published also on the website.

Regarding other issues related to the Workshop:

- Xiangyu Hu proposes an analysis on how many new participants come to each SPHERIC workshop and on how many of them come back also to the following workshops;
- among the possible suggested speakers for future keynote lectures, there is consensus on the names of Ha Bui, Monash University, and Peter Eberhart, Stuttgart University;
- there are doubts in the SC about the online publishing of the conference presentations (even if finally this choice was not made for Exeter); on the other hand, the SC agrees that Training Day and Keynote Lectures can be put online on the website (as was the case for the Galway workshop);
- Renato Vacondio suggests including the workshop program in the proceedings, to serve as a memory for the organizers of the following workshops.

2. SPHERIC By-laws

The SC agrees that SPHERIC will go on with no financial issues or assets.

Everybody also agrees that the Newsletter and the Website shall not be liable for their content.

Nathan Quinlan is worried about legal aspects regarding personal liability and which country laws apply. He suggests strengthening the link with ERCOFTAC, in order to help to forward them possible suits.

Damian Violeau, Nathan Quinlan and Angelo Tafuni will ask advice to their legal team regarding the bylaws.

3. New SPHERIC Chair

The Chairman and the Secretary received one expression of interest for the new Chair position by Renato Vacondio.

Renato Vacondio is elected with unanimity approval by the SC. He will formally become the new SPHERIC Chairman in the next SPHERIC workshop in New York.

4. SPHERIC SC Membership

Following the election of Renato Vacondio as new Chairman, another SC member is required for the position of Newsletter Editor.

Before proceeding to this appointment, Ben Rogers asks the SC to agree to work following Article 3 of the By Laws. The proposal is approved with unanimity and, starting from now, the SC will follow the Article 3 of the By Laws for its internal procedures.

Xiangyu Hu expresses his availability to serve as Newsletter Editor. The SC agrees that Xiangyu Hu will be the Newsletter Editor, starting from next summer session.

Alex Crespo is also available to step down from his position as Webmaster: Angelo Tafuni expresses his interest and is in favour to take the position in the long term. It is therefore agreed that Alex Crespo will remain Webmaster until the end of his mandate.

The SC members who have been in charge for a longer time discuss on the way to step down according to the 15 years limit of participation to the SC. In general, they all agree to avoid quitting all at the same time.

However, Jean-Christophe Marongiu has communicated to the Chairman that he changed position recently and wants to step back from the SC. Besides him, Rade Vignjevic has missed a number of SC meeting recently and did not answer to the messages from the Chairman. Ben Rogers will contact him to ask him if he prefers to step back too.

Eventually, 2 new positions in the SC will be available in the next future. There is consensus in the SC that an industrial partner should take the place of Jean-Christophe Marongiu. All the members of the SC will think about possible candidate from industry.

The Candidates will pass a two-step procedure: first of all, their eligibility will be examined and then they shall provide an expression of interest.

5. Dissemination: Community-driven events

Alex Crespo proposes a summer school on SPH as a way to respond to the increasing demand of SPH courses. Until recently, Manchester was the only place regularly offering courses. Renato Vacondio already organizes a school for PhD students in Parma but most delegates agree that the school should be a "SPHERIC" school.

David Le Touzé proposes a first Winter SPHERIC school in Nantes in February 2021. The target is around 30 participants, lasting 3-4 days, organized in half a day of lectures and half a day of hand-on sessions. ECN, CNR-INM, Ben Rogers, Renato Vacondio, Nathan Quinlan and Xiangyu Hu are willing to contribute. The announcement will be given during the New York workshop.

6. New benchmarks

The proposals by Valentin Heller and Peter Stansby are accepted with some revisions to be made:

- in Heller's proposal there are too many numerical details not of interest and repeatability must be addressed;
- in Stansby's proposal, more details for the test geometry are needed and repeatability must be addressed also in this case.

Matthieu de Leffe proposes a benchmark on ditching problems from the SARAH project.

David Le Touzé will look for a benchmark on surface tension problems.

Renato Vacondio asks about benchmarks on convergence; however, there is no consensus on which benchmark could be adequate: Antonio Souto proposes to forward the request to the Scientific Committee.

New York 2020 Workshop

Angelo Tafuni relates on the workshop organization.

ERCOFTAC will not economically support the organization, but its logo can nevertheless be used.

There are already 2 confirmed Keynote speakers: Dan Negrut on Coupling and Wenxiao Pan. Angelo Tafuni is waiting for a response from Peskin.

The Panel discussion will be on Coupling, following the keynote by Negrut (but depending also on the response by Peskin). Corrado Altomare will be added to the panel, which will include also one person from CNR-INM (probably Andrea Colagrossi) and/or David Le Touzé.

The Scientific Committee will be basically the same of last year, with the addition of Pengnan Sun and Dan Negrut as former SPHERIC Workshop organizers.

On Monday there will be the WIKIPEDIA edit-a-thon chaired by Daniel Duque.

During the Training Day, Daniel Duque will give a lecture on SPH fundamentals, while Xiangyu Hu will give a lecture on FSI (including solid with SPH).

A certificate of attendance will be given to all participants, while it is agreed that USB sticks are not practical to deliver the Proceedings and will be replaced by a link with a password.

Angelo Tafuni will be less available in the organization February due to family duties, but Ben Rogers and Renato Vacondio will be available for back-up if needed.

Angelo Tafuni will submit a request for support funding ERCOFTAC similar to previous years.

Next Workshops

Harbin 2020

There are at present 72 accepted abstracts. The issue of the overlapping with the NY workshop of the Training Day lecture by Xiangyu Hu must still be clarified. There are no news about the panel discussions.

Ben Rogers asks to be careful with session chairs, who shall prepare at least one question per speaker.

The New York Workshop will be announced there.

Catania 2021

The venue chosen for the workshop is the Monastero dei Benedittini (the availability of wi-fi and projectors has to be checked).

A Trip to Etna will be scheduled on the day after the end of SPHERIC.

Possible keynote speakers are Lorena Barba, Matteo Antuono and a person from Peridynamics,

Following years

Madrid is a possible candidate (the year is to be decided). Lunch breaks can be hosted in the canteen, and the costs will be cheaper than in 2008, so more money will be available for the Social Event. After a quick tour, the SC agrees on the old-style theatre as the possible workshop venue.

For the forthcoming 2022 workshop, other possible candidates to the organization are George Fourtakas in Greece, Steven Lind in Manchester and Sabrowsky in Berlin.

Regular issues

1. Sli.do

Damian Violeau proposes the tool SLI.DO for making questions during the workshops. Everybody agrees that it could foster the interaction and the questions. David Le Touzé proposes to look for something similar for free. Angelo Tafuni will check if he has already a similar tool available in his university and a first test will be possibly done at the panel discussion.

2. SPH special issues

Khayyer, Rogers and Zhang will be guest editors for a special issue on Advances and Applications of SPH in Ocean and Coastal Engineering, to be published in 2021 in Applied Ocean Research.

Nathan Quinlan will be guest editor for a special issue on the International Journal of Computational Fluid Dynamics on invitation, to be published in summer 2020.

Antonio Souto will be editor for a special issue on Computational Particle Mechanics on Coupling to be published in early 2021.

3. Wikipedia SPH page

Daniel Duque relates on the Wikipedia SPH page, which has had a peak of contributions in correspondence with the dates of the Exeter Workshop.

4. Bibliography

Daniel Duque reminds that CiteUlike is not active anymore. He has created a Zotero archive for the SPH literature: it is free and open and anyone can add. Mendeley seems not as accessible as Zotero.

5. Website

Alex Crespo reports that one image for each member has been added. There is a link to a playlist of Youtube channels of the SC members.

6. December issue of the newsletter

Renato Vacondio reports on the December 2019 issue of the newsletter on HPC: expected contributions are from SWIFT, GPUSPH, SPHERA, SPH-Flow, DUAL-SPHYSICS, AQUAGPU, PHANTOM, SPHYNX.

Renato Vacondio is also taking care of the Journal paper about Grand Challenges, which will be submitted by the end of the year.