



**Smoothed Particle Hydrodynamics rEsearch and engineeRING International Community**

## **Minutes of the Steering Committee meeting**

**25 October, 2018**

**INSTITUTO SUPERIOR TECNICO, Lisbon**

### **SC members present:**

Benedict Rogers, University of Manchester, UK (chair)  
Stefano Sibilla, Università di Pavia, Italy (secretary)  
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  
Antonio Souto-Iglesias, Universidad Politecnica de Madrid, Spain  
Jean-Christophe Marongiu, Andritz Hydro, Switzerland (via Skype)  
Nathan Quinlan, NUI Galway, Ireland (via Skype)  
Damien Violeau, EDF R&D, France (via Skype)

### **Also present:**

Ricardo Canelas, IST-Lisbon, Portugal  
Salvatore Marrone, CNR-INM, Italy  
Angelo Tafuni, New Jersey Institute of Technology, USA  
Alexis Hérault, CNAM, France (via Skype)  
Pablo Loren-Aguilar, University of Exeter, UK (via Skype)

### **Apologies:**

Andrea Colagrossi, CNR-INM, Italy  
David Le Touzé, École Centrale de Nantes, France  
Thomas Rung, Technische Universität Hamburg-Harburg, Germany  
Rade Vignjevic, Brunel University, UK

## **Exeter 2019 workshop**

Pablo Loren-Aguilar updates the SC about the 2019 workshop organization.

The conference will take place on 24-27 June in the Peter Chalk campus centre, where 5 lecture theatres with different capacity (from 105 to 350) are available: the choice will be for the Newman Green theatre (160 persons).

The training day will take place in one of the computer rooms in the campus and will be run by Mathieu De Lefte. The estimated attendance is 30 students. The suggested speaker for the

introductory lecture at the Training Day is Guillaume Oger, while the second talk will be given by Ricardo Canelas, on the coupling of SPH codes with Chrono.

In-campus accommodation for 150 persons will be available at Holland Hall, which is just a 5-minute walk from the campus: all the delegates will be encouraged to book here to simplify the organization details. Different accommodation options will be anyway provided in the town centre, which is 25-minutes walking distance from the campus.

The welcome cocktail will consist in a barbecue held on Tuesday, while the banquet will take place on Wednesday at Reed Hall, University campus, which is a popular venue for wedding banquets in Devon. An excursion will be planned before the banquet: at present, the 2 options are either wine tasting or a visit of Exeter WW2 underground passages.

The 3 keynote speakers will be Matthew Bate (Exeter), Salvatore Marrone (INSEAN), who will give a 30-min talk on the Monaghan Prize winning paper, and Rouhollah Fatehi (Persian Gulf University, Iran). The SC agrees that, although the panel discussions in the previous workshops did not prove to be completely satisfactory because they basically involved only 4-5 people, a 20-minute panel discussion on  $\delta$ -SPH will be proposed also in Exeter, just after Salvatore Marrone's talk.

The overall budget for the workshop is £ 53,700, including accommodation for 150 attendees. The registration fees will be the same as Galway: 390 € for early registration (250 € for students); 480 € for regular registration (300 € for students); 530 € for on-site registration (350 € for students); the in-campus accommodation for 3 nights will cost € 250. The rate for the Training Day will be 40 €.

The workshop will be announced in December 2018, while the deadlines will be: February 18, 2019 (Abstract submission); March 25 (announcement of selected abstracts); April 5 (early registration); May 3 (final paper submission); May 10 (speakers' registration). The SC agrees to put no registration deadline: registrations should be possible also on-site.

Ben Rogers will provide VISA support letters for people coming outside EU, also because regulations after Brexit are not known yet.

## **New York 2020 workshop**

Angelo Tafuni updates the SC about the 2020 workshop organization. New Jersey IT, Newark College of Engineering, agreed to be the main sponsor of the event. Most venue fees will be waived or strongly reduced. Marketing will be provided by NCE.

The suggested date is the second week of June (8 June 2020 for the TD and 9-11 June 2020 for the workshop), when classes are over and no overlapping with other NCE events occurs. There is the possibility to postpone it one week (15-18 June), but not later. Ben Rogers suggests checking other main events (e.g. IAHR Europe will be 30/6-2/7/2020, OMAE 2020 in Fort Lauderdale 7-12 June 2020) to avoid overlapping.

The Training Day venue will consist in a computer lab hosting 36 workstations with GPU. The access to NCE labs for the Training day will be free of charge. It is suggested to invite someone from NJIT to introduce (normally, the Dean) and to add a few passes for NJIT students to attend the TD.

The venue for talks and lunches suggested by Angelo Tafuni is the Campus Center Atrium, but Ben Rogers proposes instead a lecture theatre, which is usually better than a flat room. As the alternative location of the Jim Wise Theater at NJIT is more costly and oversized (about 420 persons), Angelo Tafuni will check for other venues.

The welcome cocktail, with a buffet dinner and drinks, will be held on the early evening of June 9 in a sports environment (football field, basketball court, bowling alley) within the campus.

For the banquet venue there are at present 3 different options: the Newark Museum (which is at walking distance from the campus, is within budget and hosts 250 persons); a rooftop bar in New York City (at higher costs and a 30-minute travel); a 3-hour dinner cruise around Manhattan.

If the Newark Museum option is chosen, tourist activities can be arranged in the weekend before or after the WS (boat rides around NYC or Statue of Liberty, visit of One WTC, Empire or Top of the Rock, helicopter tours, etc..).

For transportation around Newark and to/from NYC, Angelo Tafuni plans to contact NJ Transit to ask for a pass, which will be possibly included in the registration fee according to the WS budget.

Angelo Tafuni proposes to select a number of valuable contributions to the WS and to propose to the authors a Special Issue on a scientific journal. The SC agrees: if the idea works, it may be proposed again in the following WSs. Renato vacondio reminds also the importance to provide an ISBN code to the regular proceedings.

## **Harbin 2020 workshop**

Ben Rogers, after a meeting with Aman Zhang, updates the SC on the Harbin 2020 Asian Workshop, which is quickly going on with the organization.

The WS will be held in the week around January 12, 2020. The WS date has been moved to the beginning of January, because the original plan of holding the WS in December was too close to Christmas. In any case, the WS will coincide with the Harbin Ice Festival as planned.

The choice of the venue is strongly related to the problem of weather, because the standard temperature in January in Harbin is -20 °C, so even walking from the hotel to the venue is a problem. Ben Rogers suggested Aman Zhang to organize the WS directly in the hotel.

Aman Zhang plans to produce, as in Beijing 2017, both WS Proceedings and a Special Issue on a Scientific Journal.

The invited speakers have not been chosen yet: the SC suggestion is to select one speaker from China and one from Australia or New Zealand or Japan

The Training Day could be run on SPH-Flow by NextFlow (either by Mathieu de Leffe himself, or by Chinese people sent by his company), but there is nothing defined yet. In Beijing, problems related to the English language were encountered: a possibility may be to let the company which sells SPH-Flow products in China to run the TD in Chinese, or else to split the TD in a Chinese-speaking and an English-speaking course.

Aman Zhang plans to offer free registration to everybody coming from outside China. The SC suggests asking the organizers to send an invitation letter or a free registration letter, to justify travel costs to European institutions.

Ben Rogers says that it is necessary that at least half of the SC will be present: Mathieu de Leffe, Xiangju Hu, Salvatore Marrone or Andrea Colagrossi and Ben Rogers himself will certainly attend, while Stefano Sibilla and Antonio Souto-Iglesias are considering the participation.

## Specific Issues

### 1. Reflections on Galway 2018 workshop

Nathan Quinlan comments with the SC the positive feedback of the Galway workshop.

### 2. Membership of SC

Ben Rogers contacted Thomas Rung, who did not attend the WS and the SC meetings in the last two years, and he said he is not able to be part of the SC any more. In the meanwhile, also Andrea Colagrossi sent an email expressing his will to resign from the SC.

The SC approve the SC membership of Salvatore Marrone (in substitution of Andrea Colagrossi) because he is very active in SPH, he represents one of the prominent research groups in SPH and he participated in the organization of the Prato 2012 workshop.

Regarding the position left by Thomas Rung, the SC agrees to test a new selection method: an advertisement for the position in the SC will be published on the SPHERIC website, asking for an expression of interest to be part of the SC. The SC will then choose among the applicants, asking for a written application in which the applicants will indicate their motivation to be part of the SC, together with a CV demonstrating how they are active in SPH (locally or internationally) or in the organization of workshops/conferences.

Ben Rogers will write the application request for the new SC position in this sense and will modify the by-laws draft accordingly, removing the part about SC elections. As a rule, SC members will be required to attend 66% of the SC meetings in 3 years and will be allowed to be replaced by a delegate once in 3 years.

### 3. Wikipedia entry on SPH

The Wikipedia page on SPH is now online and accessible. A link to the SPHERIC web page is also present. Damien Violeau suggests that the  $\delta$ -SPH section in the page be completed by Salvatore Marrone. The wave picture in the Fluid Dynamics section is not suitable and absolutely under-resolved: Alex Crespo and/or Damien Violeau will provide a more representative picture to replace it.

The page will be mentioned at the beginning of the next SC and people will be encouraged to contribute to it.

### 4. Special Issues on SPH

The virtual Special Issue on Computer & Fluids is taking long times for the revision process: some papers have been already published, while others are still waiting for the evaluation. Ben Rogers will send an email to David Le Touzé as Guest Editor to get more information about the Special Issue status.

Another virtual Special Issue on “Particle-Based Methods: Fundamentals and Applications” has been promoted by Moubin Liu on Engineering Analysis with Boundary Elements.

## **Regular issues**

### **1. Update on ERCOFTAC**

Although the impact of the ERCOFTAC keynote lecture in Galway was not judged to be very high, Antonio Souto-Iglesias thinks that an official, strong link with ERCOFTAC should nevertheless be maintained, possibly proposing a new ERCOFTAC keynote lecture in the future on a theme which is of interest to the SPH community (e.g. turbulence, LES, combustion, multiphase).

In any case, the SC agrees to ask ERCOFTAC for a possible list of speakers also for the Exeter WS, to be included in the backup list for a keynote in the case that Rouhollah Fatehi is not able to come from Iran.

An advertisement for the ERCOFTAC Da Vinci prize will be added by Renato Vacondio to the next Newsletter.

### **2. New benchmarks**

Alex Crespo reports that Peter Stansby suggested a new benchmark case on the damping of oscillations of floating bodies. The SC will ask the authors to fill the template and will examine it in its next meeting.

### **3. Website**

Alex Crespo reports that SC meeting minutes are missing from the Ourense WS onwards. He will send an email to Ben Rogers and Stefano Sibilla to collect the final version of all the minutes.

### **4. December issue of the newsletter**

The SC appreciates the new format of the Newsletter, whose mailing list has reached 536 addresses.

For the next issue, the idea is to dedicate it to the Grand Challenges, with two-page articles on each GC (or at least on some of them) by the related leaders, in order to relaunch the importance of the GCs. The deadline would be the beginning of December, in order to publish the Newsletter in January.

### **5. SPH success stories**

Ben Rogers proposes that SPHERIC should advertise SPH success stories (on the Newsletter, either on regular or special issues, and/or on the Website). Renato Vacondio suggests to use the Newsletter to collect these success stories, leaving to a following decision of the SC which ones should be promoted through the website.

Ben Rogers is also examining the idea to propose Joe Monaghan as a candidate to the Nobel prize in physics.

## **6. Female participation to SPHERIC**

Ben Rogers says that female participation to SPHERIC should be encouraged by the SC and that it would be appropriate to identify a person to promote female involvement in SPH. One possible candidate may be Agnes Leroy, although Damien Violeau says that she is going to step down from SPH research soon because she will be moving to a new position. Other candidates for this position may be identified in Fei Xu (Northwestern Polytechnic University, Xi'an, China), Magdalena Neuhauser (Andritz Hydro), Adrey Marteens (EPFL) and Bing Ren (Dalian University, China).

Ben Rogers will contact all the candidates to ask if they are willing to be involved in this activity.