



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

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

**24-26 June, 2019**

**Streatham Campus, Amory Building, University of Exeter, UK**

### **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)  
Matthieu de Leffe, Nextflow Software, France  
Xiangyu Hu, Technische Universität München, Germany (only on June 24<sup>th</sup>)  
David Le Touzé, École Centrale de Nantes, France  
Jean-Christophe Marongiu, Andritz Hydro, Switzerland (only on June 26<sup>th</sup>)  
Salvatore Marrone, CNR-INM, Italy  
Nathan Quinlan, NUI Galway, Ireland (only on June 26<sup>th</sup>)  
Antonio Souto-Iglesias, Universidad Politecnica de Madrid, Spain  
Damien Violeau, EDF R&D, France (only on June 26<sup>th</sup>)

### **Also present:**

Giuseppe Bilotta, INGV, Italy (only on June 26<sup>th</sup>)  
Tom de Vuyst, Brunel University, UK (substituting Rade Vignjevic)  
Orlando García Feal, Universidade de Vigo, Spain (substituting Alex Crespo)  
Pablo Loren-Aguilar, University of Exeter, UK  
Pengnan Sun, ECN, France & Harbin Engineering University, China  
Angelo Tafuni, New Jersey Institute of Technology, USA  
Fei Xu, Northwestern Polytechnical University, Xi'an, China (only on June 26<sup>th</sup>)

### **Apologies:**

Alex Crespo, Universidade de Vigo, Spain (webmaster)  
Rade Vignjevic, Brunel University, UK

## **Exeter 2019 Workshop**

Pablo Loren-Aguilar reports on the ongoing 2019 workshop.

The Training Day was successful and the talks by Guillaume Oger and Angelo Tafuni were appreciated, but the number of present students was rather low: a total of 18, including a few locals from Exeter, out of 30 contacts previously received.



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The total registrations at the workshop are 112, mostly because the number of registrations from the astrophysics community is lower than expected. Some missing participations are also due to the problems faced by Iranian citizens to obtain the UK visa: for instance, Rouhollah Fatehi and Abbas Khayer could not participate to the Workshop because their Visa were denied by UK authorities. In any case, all the selected speakers are present, and no talk will be cancelled.

Some issues occurred with the management of the deadline of the Early Bird Registration, because of the large fluctuations of the exchange rate between British pound and Euro and because the dinner fee was proposed separately from the conference fee.

The programmed social activities will include the BBQ on Tuesday, the Winery Tour or the City Centre Tour on Wednesday afternoon and the Banquet in the University Campus on Wednesday night.

The student prizes will include two prizes in cash (£ 400 and £ 600) and a laptop for the Libersky Prize winner.

## **New York 2020 Workshop**

Angelo Tafuni updates the SC about the 2020 workshop organization at the New Jersey Institute of Technology.

The official workshop dates are June 15-18, 2020.

The Workshop Venue will be the Campus Center Atrium, which is a room with large tables (8 places each) with several satellite rooms for the SC meetings. The venue for the Training Day will be the GITC computer lab, which hosts 36 workstations with GPUs. Most venue fees will be waived.

Regarding the social activities, the welcome reception will be either a buffet dinner or a BBQ on the soccer field. The Banquet will take place during a Dinner Cruise around Manhattan: the cruise on the Duchess Yacht will last 3 and a half hours. The Cruise contract needs to be signed by mid-August 2019 and the cost per person will range from 150\$ (for 130 guests) to 220\$ (for 90 guests).

The consequent suggested registration rates are 550\$ (Early registration), 650\$ (Regular registration) and 800\$ (Late registration) for regular attendees. These will be reduced to 400\$ (Early), 475\$ (Regular) and 575\$ (Late) for students. All the rates include the banquet. The Training Day rate will be 80\$.

The break-even of the budget will be obtained for 90 participants (although VAT on some expenses must be checked). In detail, the budget includes 9000\$ for lunches and breaks, 3700\$ for the welcome cocktail, 4000\$ for the banquet transportation, 4000\$ for 2 keynote speakers (including travel and accommodation) and 2200\$ student prizes (1200\$+600\$+400\$). Welcome bags will not be included.

The deadlines must consider that early times are required for US visa applications. The abstract submission deadline will be therefore on January 31; the selected abstracts will be announced on February 14; the early registration will be before March 21 and the final paper submission will be required before April 21.



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For the keynote speakers, Antonio Souto suggests that at least one keynote speaker be American (possibly to be chosen in agreement with Alexandre Tartakowsky). Ben Rogers suggests Michael Owen (LLNL) or John Williams (MIT), or even a speaker involved in non-SPH particle methods.

The code to be used during the Training Day should be DualSPHysics, given that SPH-Flow will be the code adopted for the Training Day in Harbin.

### **Harbin 2020 Asian Workshop**

Pengnan Sun, on behalf of Aman Zhang, updates the SC on the Harbin 2020 Asian Workshop.

The workshop will be hosted by Harbin Engineering University on 13-16 January 2020 and all the activities will take place inside the congress venue in the city center. The regular format of the workshop and of the Training Day will be adopted.

The keynote speakers will be Abbas Khayyer, Fei Xu and Xiong Zhang.

Following the Beijing workshop, also in Harbin three student prizes will be awarded: Best, Outstanding and Excellent.

The abstract submission deadline is set on September 10 and the regular registration deadline will be on November 30. The registration will be free for people coming from outside China.

The Training Day talks will be on SPH theory (by Pengnan Sun and an additional speaker from the SC), while the afternoon training sessions will adopt the SPH-Flow code by NextFlow.

The planned SC members participating to the Workshop are David Le Touzé, Ben Rogers, Salvatore Marrone, and Mathieu De Leffe (possibly substituted by someone else from NextFlow). Stefano Sibilla and Antonio Souto are still considering their participation.

Ben Rogers asks to try to keep as high as possible the level of the contributions, possibly limiting to 50 the number of speakers (or even less, with slightly longer oral presentations).

### **Catania 2021 Workshop**

Giuseppe Bilotta confirms to the SC that the INGV will take care of the 2021 workshop organization in Catania. The venue still needs to be defined, but Catania offers in the city centre several historical locations, some of which are part of Catania University.

## **Specific Issues**



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### **1. Expressions of Interest for SC Membership**

The issue is discussed on the June 24 meeting. Angelo Tafuni leaves the room during the discussion.

Two Expressions of Interest for the SC membership were submitted by Angelo Tafuni and Giuseppe Bilotta. Both applications and CVs show persons highly involved in SPH research, younger in the case of Angelo Tafuni, more experienced in the case of Giuseppe Bilotta. Unfortunately, Giuseppe Bilotta is not eligible for the SC because the maximum number of SC members from a single nation is three, and there are already 3 Italian SC members. He will be encouraged to resubmit his Expression of Interest once eligible. David Le Touzé suggests having in the future a two-stage process, with an eligibility check by the SC before the formal submission of the Expression of Interest.

The SC is unanimously in favour of Angelo Tafuni's SC membership. The new SC member will be announced during the Banquet.

### **2. By-laws update**

The last draft of the Spheric By-laws was sent by Ben Rogers to all the Spheric members before the meeting. Some minor corrections were suggested by Peter Eberhard (Stuttgart) and Ruben Cabezon (Basel). The By-laws will be proposed to the SPHERIC assembly and will be ratified by the SC in its Autumn meeting.

### **3. Chair Job description**

In 2020 Ben Rogers will end to serve as SC Chairman and a new Chair will be appointed.

Ben Rogers prepared a Chair job description (which is basically the same as the one contained in the By-laws) to advertise the position.

### **4. Twitter account contributors**

Antonio Souto-Iglesias updates on the Twitter account, which is slowly growing and has reached 427 followers). He suggests managing the account jointly with Ben Rogers, Renato Vacondio, Nathan Quinlan and Daniel Duque.

Other accounts on Facebook and/or LinkedIn may be created as well: Angelo Tafuni is available to help to extend Twitter messages to these to social networks.

### **5. Wikipedia entry on SPH**

Antonio Souto-Iglesias updates on the Wikipedia page, which is substantially unchanged since the last reshaping (apart from minor edits).

Renato Vacondio suggests having a Wikipedia page editing session during the New York workshop, in parallel with the Training Day.



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### **6. Certificate suggestion**

Antonio Souto-Iglesias has prepared a template of a Certificate to be delivered to all the speakers, to certify that the papers were selected by a Scientific Committee, with a certain rate of acceptance, and that the proceedings are published with an ISBN number.

The certificate will be signed by the Chair of the LOC, who is also the Editor of the proceedings.

### **7. Grand Challenges**

Antonio Souto-Iglesias remains as the leader of GC#2 on Boundary conditions. Salvatore Marrone, Corrado Altomare and David Le Touzé will be the leaders of GC#4 on Coupling.

Renato Vacondio proposes either to restore the GC forum or to close it: his idea is to add to the forum some comments about the papers presented at the Exeter workshop, and to see if this fosters the discussion on the Forum. If no discussion arises, his suggestion is to close the forum.

The last Newsletter had 5 contributions on the GCs (by Steven Lind and Xiangyu Hu on GC#1 on Convergence, consistency & stability, and by the leaders of each GC for the other four). Renato Vacondio complained that some contributions were sent to him after the deadline, causing a general delay in the publishing of the Newsletter. Renato Vacondio suggests extending the contributions to the Newsletter issue on GC into Journal papers which may be submitted to CPM.

### **8. Membership of Scientific Committee**

Fabian Spreng (who completed his PhD in Stuttgart and had at present a post-doc position at MIT) has applied to be part of the Scientific Committee. The SC decides to reconsider his application in the future, after he will have regularly attended the next Spheric workshops.

### **9. Special Issues of Journals**

Nathan Quinlan reports on the forthcoming Special Issue on IJCFD, which will aim at Industrial applications of SPH. A list of people from the industrial field will be contacted to contribute to the Special Issue. In addition to this, Antonio Souto is planning a proposal for a Special Issue on CPM on the coupling between SPH and other methods.



## Smoothed Particle Hydrodynamics rEsearch and engineeRing International Community

### Regular issues

#### 1. New SPHERIC members

Ben Rogers reports that some new applications have been received but, considering the number of dead email addresses, the overall number of active Spheric members has remained substantially the same.

#### 2. June issue of the newsletter

Renato Vacondio relates about the status of the summer newsletter, which will contain: the contribution by Pablo Loren-Aguilar on the Exeter workshop; some advertisement of the future workshops (indicatively of half a page each one, from Angelo Tafuni and Pengnan Sun); three contributions from the prize winning students; one contribution from European projects on Aircraft ditching (David Le Touzé and Andrea Colagrossi) and on Wave Energy Converters (Alex Crespo).

The December issue of the Newsletter may be devoted to HPC applied to SPH.

#### 3. New benchmarks

Two new SPHERIC Benchmark Test Cases have been proposed, one by Peter Stansby and one by Valentin Heller. They will be discussed more deeply in the Autumn meeting.

#### 4. Website

Ben Rogers reports that he was contacted by people proposing to Spheric to buy web domain names similar to the original one, but with a Chinese .cn extension. He replied that Spheric is not interested.

The website has been certified for security reasons.

#### 5. SPHERIC Bibliography

Corrado Altomare is managing the Mendeley reference list (about 2500 references) for Word or Latex.

Daniel Duque is helping Antonio Souto to create another reference list with Zotero, after the one with CiteULike was closed.



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### **6. Future Workshops**

Damien Violeau relates about the interest by Pierre Sabrowski to host a Spheric workshop in Berlin; Tom de Vuyst will instead check with Rade Vignjevic if it will be possible to host a workshop in Brunel University.

For the Asian workshop, Fei Xu is available to organize a workshop in Xian; the opportunity to hold a workshop also in Japan (Kyoto) should be examined together with Abbas Khayyer.

### **7. Autumn SC meeting place**

The next autumn SC will be hosted in November by Antonio Souto-Iglesias at the Escuela Técnica Superior de Ingenieros Navales in Madrid.