



3rd VPH study group on VPH Toolkit

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Host Institutions

The third [VPH NoE study group](#) (SG3) will be held in Barcelona in May 2012. The event, organised by the University of Sheffield, Super Computing Solutions, Istituto Ortopedico Rizzoli, and Universitat Pompeu Fabra, will take place at UPF premises the week after the IEEE International Symposium on Biomedical Imaging (ISBI 2012).

Objective

Following the success of previous study groups organised by the VPH NoE Consortium, the format of SG3 will be quite similar to that of SG1 and SG2¹. The organisers invited three groups of world-recognised experts, typically leading large VPH Projects, to submit a proposal for a grand challenge in the area of musculoskeletal, cardiovascular, and oncology research. The organisers requested that these grand challenges would identify each a challenging modelling workflow, a minimum list of “essential” tools known to be necessary, and a list of European research groups that are known to be active in research topics that could benefit from the complete realisation of such workflow.

Norbert Graf, USAAR Saarland, coordinator of the P-medicine project, and Georgios Stamatakos, ICCS Athens, coordinator of the Oncosimulator Project proposed “Multiscale cancer models and oncosimulators for clinical use”;

Fulvia Taddei, Istituto Ortopedico Rizzoli, co-coordinator of the VPHOP project, and Damien Lacroix, IBEC Barcelona, coordinator of the MYSPINE project proposed “Multiscale models of the skeleton for clinical use”;

Blanca Rodriguez, University of Oxford, Pras Pathmanathan, University of Oxford, Pablo Lamata, Kings College London/University of Oxford and Mariano Vazquez, Barcelona Supercomputing Centre proposed “Multiscale multiphysics modelling and simulation of the cardiovascular system”.

¹ To view a video made on the last VPH study group held in Barcelona 2010 please visit <http://www.youtube.com/watch?v=y2-0khXJATU>



Format

For each challenge a workgroup will be formed, composed by the experts who proposed the challenge, expert developers of software tools identified relevant for that challenge, and by young researchers (PhD students and post-docs) who are conducting research in directions that would take clear advantage by the full realisation of the workflow defined by the challenge.

The first day the three keynote speakers will present each challenge during a plenary session, so as to promote cross-fertilisation between the three research areas. An additional plenary lecture for each challenge will be given in the following days. From the afternoon of the first day to the end of the fourth day the three workgroups will collaborate to the development of the three workflows, and to their applications to the specific research problems of each participant. The fifth day the three workgroups will meet again in plenary session, to wrap-up the results of the study group, again with cross-fertilisation intent.

For tool developers the event will be an opportunity to “evangelise” young researchers on the use of their tools, but also a perfect opportunity to understand what are the difficulties that VPH researchers find in using software of the VPH toolkit, so as to improve the tools and make them more effective. Last, but not least, it will give to tool developers the opportunity to hack interoperability solutions to compose multiple tools into relevant workflows.

For young researchers it will be the perfect opportunity to be brought at the state of the art from a methodological point of view, with the possibility to try multiple software tools pertinent to their research project, under the direct guidance of the tools developers. It will also give the opportunity to find synergies and common solutions to problems emerging from distinct research problems.

How to participate

In order to make the study groups effective, the event is open to a maximum of 60 participants between tool developers or young researchers, 20 for each study group. If you are interested please complete the [Application Form](#) and submit it according to the instructions **no later than January 15th, 2012**. We reserve the right to discard any application received after this date.

The organisers and the challenge leaders will rank the applications, primarily on the basis of the relevance of the tool / research project of the applicant. The first 60 applicants will be invited to attend **no later than February 15th, 2012**.

Participants are expected to confirm their participation **no later than March 30th, 2012**. To the applicants ranked in the first 60 places, who are affiliated to a not-for-profit organisation, the VPH NoE will cover the costs of the registration fee, and will provide free accommodation.