



## Doctoriales 2017

Monday, June 12th and Tuesday, June 13th 2017

Lausanne

**Hosted by the Laboratory for Hydraulic Machines (LMH), EPFL**

*Two days for PhD students and researchers from Grenoble and Lausanne to meet and exchange on the theme of hydraulic machines.*

### Program

#### **Monday, June 12<sup>th</sup>**

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|-------------------|--|
| 1.30 pm – 2.00 pm | Welcome at LMH (Avenue de Cour 33bis, 1007 Lausanne)       |
| 2.00 pm – 3.30 pm | Presentations<br>Session 1                                 |
| 3.30 pm – 4.00 pm | Break  |
| 4.00 pm – 5.30 pm | Presentations<br>Session 2                                 |
| 5.30 pm – 6.30 pm | Visit of the Laboratory                                    |
| 7 pm              | Dinner at Refuge Communal de Prilly (see directions below) |

Night at Hotel Aulac for visitors from Grenoble (<http://www.aulac.ch/>, Place de la Navigation 4, 1006 Lausanne)

#### **Tuesday, June 13<sup>th</sup>**

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| 09.30 am – 12 pm | Visit of the Veytaux power stations (Avenue de Chillon 18, 1820 Veytaux) |
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### Contacts

Audrey Maertens, [audrey.maertens@epfl.ch](mailto:audrey.maertens@epfl.ch), +41 21 693 25 77, LMH research associate

Isabelle Stoudmann, [isabelle.stoudmann@epfl.ch](mailto:isabelle.stoudmann@epfl.ch), +41 21 693 25 05, LMH administrative assistant

## Scientific program

### Session 1. Monday, June 12<sup>th</sup> 2017, 2.00 pm – 3.30 pm

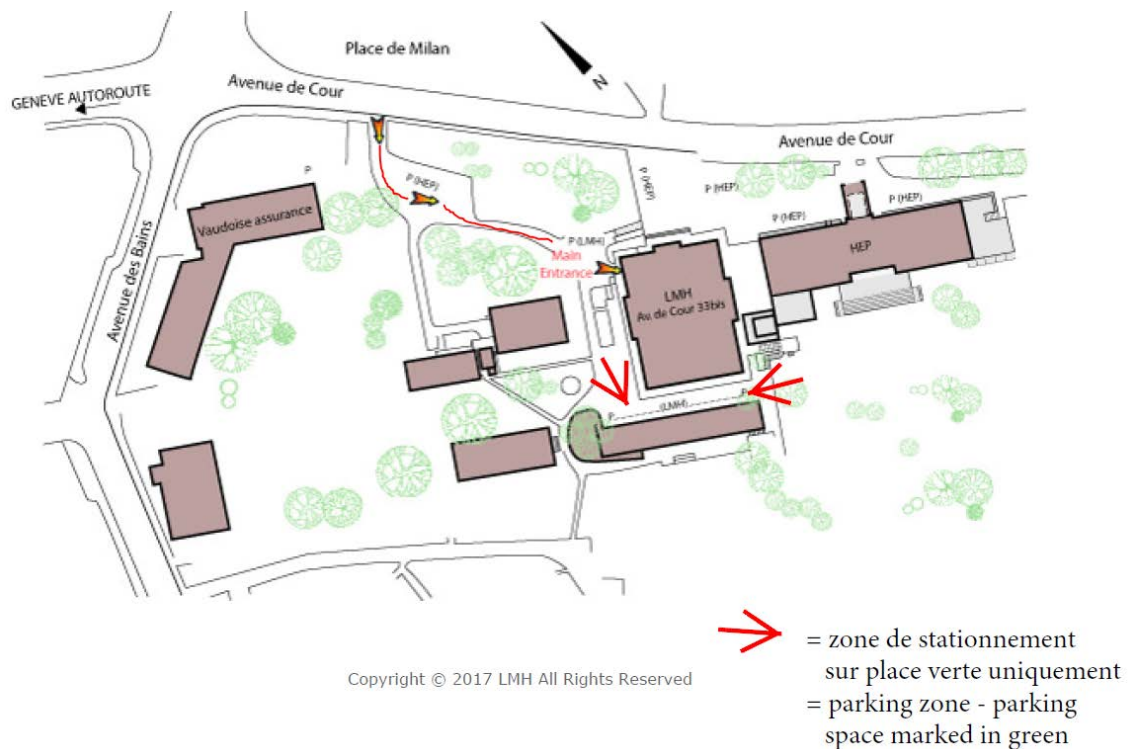
2.00 pm	Amgad Tarek MOHAMED <a href="mailto:amgad.mohamed@gipsa-lab.grenoble-inp.fr">amgad.mohamed@gipsa-lab.grenoble-inp.fr</a> <i>Control of hydraulic turbines for the integration of renewables</i>
2.08 pm	Janailson RODRIGUES-LIMA <a href="mailto:janailson.rodriques@supergrid-institute.com">janailson.rodriques@supergrid-institute.com</a> <i>Control of variable speed pumped storage plants for the provision of fast ancillary services</i>
2.16 pm	Favrel Arthur <a href="mailto:arthur.favrel@epfl.ch">arthur.favrel@epfl.ch</a> <i>Prediction of part load resonance conditions in hydropower plants units</i>
2.24 pm	Gomes Pereira junior Joao <a href="mailto:joao.gomes@epfl.ch">joao.gomes@epfl.ch</a> <i>Prediction of Francis Turbine Dynamics on the Very Early Project Design Stage</i>
2.32 pm	Sofien BOUJILA <a href="mailto:sofien.bouajila@legi.grenoble-inp.fr">sofien.bouajila@legi.grenoble-inp.fr</a> <i>Francis turbine Inter-blade vortices in partial load conditions</i>
2.40 pm	François DOUSSOT <a href="mailto:francois.doussot-ext@power.alstom.com">francois.doussot-ext@power.alstom.com</a> <i>Large Eddy Simulation of deep part load conditions in Francis turbines: analysis and control of channel vortices</i>
2.48 pm	Yamamoto Keita <a href="mailto:keita.yamamoto@epfl.ch">keita.yamamoto@epfl.ch</a> <i>Flow characteristics and influence associated with inter-blade cavitation vortices at deep part load operations of a Francis turbine</i>
2.56 pm	Markku YLONEN <a href="mailto:markku.ylonen@univ-grenoble-alpes.fr">markku.ylonen@univ-grenoble-alpes.fr</a> <i>Cavitation impact estimation by acoustic emission in laboratory testing</i>
3.04 pm	Vagnoni Elena <a href="mailto:elena.vagnoni@epfl.ch">elena.vagnoni@epfl.ch</a> <i>Experimental investigation of the two-phase flow phenomena in a pump-turbine operating in synchronous condenser mode</i>
3.12 pm	Corado NINGRE <a href="mailto:corado.ningre@3sr-grenoble.fr">corado.ningre@3sr-grenoble.fr</a> <i>Development of a new method for monitoring the multiaxial fatigue damage</i>
3.20 pm	Flavia TURI <a href="mailto:flavia.turi@univ-grenoble-alpes.fr">flavia.turi@univ-grenoble-alpes.fr</a> <i>Prediction of the influence of cavitation phenomena on the performance of a double-regulated turbine</i>

**Session 2. Monday, June 12<sup>th</sup> 2017, 4.00 pm – 5.30 pm**

4.00 pm	Andrey PUSHKAREV <a href="mailto:andrey.pushkarev@univ-grenoble-alpes.fr">andrey.pushkarev@univ-grenoble-alpes.fr</a> <i>A new numerical strategy for Large-Eddy Simulations of turbulent flows in the presence of moving bodies</i>
4.08 pm	Papagiannopoulos Alexis <a href="mailto:alexis.papagiannopoulos@epfl.ch">alexis.papagiannopoulos@epfl.ch</a> <i>Fast and robust dynamic local remeshing</i>
4.16 pm	Yves PAQUETTE <a href="mailto:yves.paquette@legi.grenoble-inp.fr">yves.paquette@legi.grenoble-inp.fr</a> <i>Fluid-Structure Interaction in Cavitation Erosion</i>
4.24 pm	Siamak Alimirzazadeh, Sebastián Leguizamón, Audrey Maertens, Ebrahim Jahanbakhsh <a href="mailto:audrey.maertens@epfl.ch">audrey.maertens@epfl.ch</a> <i>GPU-SPHEROS: Faster and better simulations of Sediment Erosion using the Finite Volume Particle Method</i>
4.32 pm	Prasanta SARKAR <a href="mailto:prasanta.sarkar@univ-grenoble-alpes.fr">prasanta.sarkar@univ-grenoble-alpes.fr</a> <i>Simulation of cavitation erosion by a coupled CFD-FEM approach</i>
4.40 pm	Isha Shukla <a href="mailto:isha.shukla@epfl.ch">isha.shukla@epfl.ch</a> <i>The velocity and shape of buoyant squeezed droplets</i>
4.48 pm	Christophe LECLERC <a href="mailto:christophe.leclercq@univ-grenoble-alpes.fr">christophe.leclercq@univ-grenoble-alpes.fr</a> <i>Title: Numerical simulation of cavitation intensity for 3D homogeneous unsteady viscous flows - Application on centrifugal pumps</i>
4.56 pm	Lorenzo Siconolfi <a href="mailto:lorenzo.siconolfi@epfl.ch">lorenzo.siconolfi@epfl.ch</a> <i>Boundary Layer stabilization using freestream vortices</i>
5.04 pm	Jean-Bastien CARRAT <a href="mailto:jean-bastien.carrat@legi.grenoble-inp.fr">jean-bastien.carrat@legi.grenoble-inp.fr</a> <i>Numerical and experimental analysis of the global behavior and aggressivity of a cavitating flow</i>
5.12 pm	Amini Ali <a href="mailto:ali.amini@epfl.ch">ali.amini@epfl.ch</a> <i>Effect of gas content on tip vortex cavitation</i>
5.20 pm	Vamsi Krishna CHAKRA-RAVILLA <a href="mailto:vamsi-krishna-chakra.ravilla@univ-grenoble-alpes.fr">vamsi-krishna-chakra.ravilla@univ-grenoble-alpes.fr</a> <i>Dynamics of vortex rope in coaxial swirling jets</i>

## Maps & directions

### LMH



### Refuge Communal de Prilly

**By car:** Park at the public parking located across the street from the Auberge de la Fleur-de-Lys (Chemin des Passiaux 39, 1008 Prilly) and walk north for 10 min along the route de Neuchâtel.

**By public transport:** Take the **LEB** from **Lausanne-Flon**. Get off at “**Cery-Fleur-de-Lys**” and walk north for 10 min along the route de Neuchâtel. Train every 15 minutes.

Schedule: [http://www.t-l.ch/images/pdf/horaire/courant/LEB\\_a.pdf](http://www.t-l.ch/images/pdf/horaire/courant/LEB_a.pdf)

### Veytaux power stations



**By car:** 45 minutes from Lausanne. Take **A9 toward Simplon/Gd-St-Bernard** and **exit 16 Villeneuve**. Parking is available on the street.

**By public transport from Lausanne-Gare:**

- 8:36 am **Villeneuve train**. Get off at “**Veytaux-Chillon**” and walk for 10 min.
- or
- 8:50 **Brig train**. Get off at “**Montreux Gare**”, walk for 3 min to “**Montreux Débarcadère**”, take **201 Villeneuve bus** and get off at **Grandchamp**.