**Wednesday 20th November, 2019**

7:00 pm Wine & Cheese cocktail (for speakers only, location disclosed later)

**Thursday 21th November, 2019**

8:15 am Welcome coffee

8:40 am Official opening

**Lea DI CIOCCIO** (CEA/LETI- Genoble/France)

8:50 am Scientific opening

**Jérôme CASAS** -University of Tours – Institut Universitaire de France- chair at CEA/LETI, France

**Thomas ALAVA** – CEA/LETI Grenoble, France

**Susana BONNETIER** – CEA/LETI Grenoble, France

**First session: extracting and moving fluids**

09:00 am – 09:30 am

**Pascal DAMMAN** (University of Mons / Belgium)

*How physics of fluid demonstrates the prominent role of tongue’s morphology*

09:30 am – 10:00 am

**Jake SOCHA** (Virginia Tech / USA)

*Biomechanical mechanisms of fluidic pumping in insects*

10:00 am – 10:30 am

**Yasser ABOELKASSEM** (University of California-San Diego / USA)

*Insect-inspired flow transport model and electrokinetics pumping in microfluidics*

10:30 am – 10:45 am Quick coffee break

10:45 am – 11:15 am

**Poster short presentations** (a couple of slides per poster)

**Second session: colorful ideas**

11:15 am – 11:45 am

**Bodo WILTS** (University of Fribourg / Switzerland)

*Functional optical materials in insects*

11:45 am – 12:15 am

**Salim BOUTAMI**  (CEA/LETI, Grenoble/France)

*From bio-inspired to optimized non-intuitive nanophotonics*

12:15 am – 14:00 pm Lunch on the spot and posters

**Third session: more flows**

14:00 pm – 14:30 pm

**Johan VAN LEUWEN** (University of Wageningen / Holland)

*Biomechanics of the ovipositor of a parasitic wasp – an inspiration for steerable needles*

14:30 pm – 15:00 pm

**Thomas ENGELS** (TU Berlin / Germany)

*Computational aerodynamics of insects in turbulent flows*

15:00-15:30 Coffee break

**Fourth session: a peek into the future**

15:30 pm – 16:00 pm

**Xavier GIDROL** (CEA, Grenoble / France)

 *Organs & organoids on chip: a brief history of the future of biochips*

16:00 pm – 16:30 pm

**Marc DESMULLIEZ** (Heriot-Watt University, Edinburgh / United Kingdom)

*Computer-aided nature-inspired design, where are we?*

**Friday 22nd November, 2019**

8:30 am Welcome coffee

**Fifth session: tiny brains on chips**

9:00 am – 09:30 am

**Elisa VIANELLO** (CEA/LETI, Genoble/ France)

*Resistive memories for neuromorphic hardware*

09 :30 am – 10:00 am

**Elisabetta CHICCA** (Universität Bielefeld / Germany)

*The Time Difference Encoder (TDE)*

10:00 am – 10:30 am Coffee break

**Sixth session: remote recording and control**

10:30 am – 11:00 am

**Hirotaka SATO** (Nanyang Technological University/ Singapore)

*Remote control of cyborg insects*

11:00 am – 11:45 am

**Special Guest: Anthony LEONARDO** (Janelia Research Campus, Howard Hughes Medical Institute, Virginia / USA)

*Remote neuroethology: recordings of neural signals in aerial pursuits between insects and their prey*

11:45 – 14:00 Lunch on the spot

**A general public conference will be given at MIDIS MINATEC by Marc Desmulliez** “*Innovation Inspirée de la Nature: exemples et opportunités”* at 12:30.