

Scientific program

(PL - plenary talk, IT - invited talk, CT - contributed talk)

Monday, 9 October 2017

- 8:45 – 9:00** Opening of the conference
- 9:00 – 9:40** PL-1: **Mohandas Narla**
“Structural basis for red cell membrane function”
- 9:40 – 10:10** IT-1: **Annie Viallat**
“Dynamics of individual healthy, sickle and spherocytic RBCs: from very low mechanical stresses under shear flow to extreme ones in splenic-like slits”
- 10:10 – 10:30** CT-1: **Magalie Faivre**
“Flow of healthy and thermally rigidified erythrocytes in a microfluidic rheometer”
- 10:30 – 10:50** CT-2: **Emmanuele Helfer**
“Red blood cells in a bi-dimensional channel: flow structure and cell rigidity impact”
- 10:50 – 11:10** CT-3: **Simon Mendez**
“Why do red blood cells roll in shear flow?”
- 11:10 – 11:40** Coffee break
- 11:40 – 12:10** IT-6: **Anne-Virginie Salsac**
“Motion of a spherical capsule flowing in a branched tube with finite inertia”
- 12:10 – 12:30** CT-4: **Zunmin Zhang**
“Sorting red blood cells in deterministic lateral displacement devices”
- 12:30 – 12:50** CT-5: **Achim Guckenberg**
“The phase diagram of red blood cells flowing in a microchannel”
- 12:50 – 14:20** Lunch and poster session
- 14:20 – 14:50** IT-3: **Anirban Sen Gupta**
“Effect of particle shape and size on vascular margination and wall adhesion: design implications in drug delivery”
- 14:50 – 15:10** CT-6: **Lola Eniola-Adefeso**
“Impact of red blood cell rigidity on the vascular wall adhesion of neutrophils: implication in the pathology of sickle cell disease”
- 15:10 – 15:30** CT-7: **Björn Neu**
“Non-adsorbing macromolecules induce adhesion of diabetic red blood cells to the endothelium”

- 15:30 – 15:50** CT-8: **Guy Cloutier**
 “A protocol for in vivo measurements of erythrocyte aggregation using ultrasound spectroscopy”
- 15:50 – 16:20** Coffee break
- 16:20 – 16:50** IT-4: **Thomas Podgorski**
 “Order and disorder in red blood cell traffic”
- 16:50 – 17:10** CT-9: **Netanel Korin**
 “RBC dynamics in microfluidic capillary models of organ-specific microvasculatures”
- 17:10 – 17:30** CT-10: **Adlan Merlo**
 “An in vitro study of highly confined blood flows: from single bifurcations to 2D-networks”
- 17:30 – 17:50** CT-11: **Joana Fidalgo**
 “Biomimetic bifurcating networks for studying RBC partitioning in microvasculature”

Tuesday, 10 October 2017

- 9:00 – 9:40** PL-2: **Timothy Secomb**
 “Blood flow in the microcirculation”
- 9:40 – 10:10** IT-5: **YongKeun Park**
 “Holotomography techniques for 3-D label-free imaging of live cells and tissues”
- 10:10 – 10:30** CT-12: **Viviana Claveria**
 “Possible self-margination of sickle red blood cells suspensions in glass capillaries”
- 10:30 – 10:50** CT-13: **Emilie Franceschini**
 “Experimental ultrasound characterization of red blood cell aggregation: estimation of the aggregate size distribution”
- 10:50 – 11:10** CT-14: **Prosenjit Bagchi**
 “Direct simulation of cellular-scale blood flow in microvascular networks”
- 11:10 – 11:40** Coffee break
- 11:40 – 12:10** IT-2: **Takuji Ishikawa**
 “Deformation and the resultant motion of a red blood cell”
- 12:10 – 12:30** CT-15: **Jules Dichamp**
 “Modelisation of blood perfusion into a whole adipose tissue vascular network”

12:30 – 12:50	CT-16: Zaiyi Shen “Deformability-influenced delivery of red blood cells in microvascular networks”
12:50 – 14:20	Lunch and poster session
14:20 – 14:50	IT-7: Sergey Shevkoplyas “The dynamics of blood flow in artificial microvascular networks”
14:50 – 15:10	CT-17: Lars Kaestner “Red blood cell passage of small capillaries is associated with transient Ca(2+)-mediated adaptations”
15:10 – 15:30	CT-18: Mathilde Reyssat “Production of blood platelets in a microfluidic chip”
15:30 – 15:50	CT-19: Annemiek Cornelissen “Tissue growth pressure drives early blood flow in the chicken yolk sac”
15:50 – 16:20	Coffee break
16:20 – 16:50	IT-8: Jonathan Freund “Stability of flowing red blood cell trains”
16:50 – 17:10	CT-20: Alexander Alexeev “Mesoscale modeling of blood clot contraction”
17:10 – 17:30	CT-21: Georgy Guria “Platelet activation in intensive blood flows”
17:30 – 17:50	CT-22: Bastien Chopard “A physical description of platelet deposition”
17:50 – 18:10	CT-23: Britt van Rooij “Cell-based platelet aggregation modelling in Hemocell”
20:00	Conference dinner

Wednesday, 11 October 2017

9:00 – 9:40	PL-3: Manouk Abkarian “On the importance of red cells deformability in blood flow”
9:40 – 10:10	IT-9: Paolo Decuzzi “Rational design of nanoconstructs for the vascular administration of therapeutic and imaging agents”
10:10 – 10:30	CT-24: Philippe Connes “Red blood cell rheology and vascular dysfunction in sickle cell disease”

- 10:30 – 10:50** CT-25: **Yi-Fan Wu**
 “Physical investigation of hemo-rheological characteristics for cardiac surgery patients”
- 10:50 – 11:10** CT-32(P-21): **Amy Smith**
 “Structural and hemodynamic comparison of anatomical and synthetic cerebral capillary networks”
- 11:10 – 11:40** Coffee break
- 11:40 – 12:10** CT-26: **Petros Koumoutsakos**
 “Uncertainty quantification of the red blood cell model”
- 12:10 – 12:30** CT-27: **Benoit Pier**
 “Hydrodynamics of pulsatile flows”
- 12:30 – 12:50** CT-28: **Anil Dasanna**
 “Rolling adhesion of malaria-infected red blood cells”
- 12:50 – 14:20** Lunch
- 14:20 – 14:50** IT-11: **Thomas Fischer**
 “On the reference configuration of the red cell membrane”
- 14:50 – 15:10** CT-29: **Victor Steinberg**
 “Intermediate regime and a phase diagram of red blood cell dynamics in a linear flow”
- 15:10 – 15:30** CT-30: **Lionel Bureau**
 “Soft biolubrication: lift forces at a vascular wall mimic”
- 15:30 – 15:50** CT-31: **Stephan Quint**
 “3D tomography of red blood cells in micro-channels”
- 15:50 – 16:00** Wrap-up and closing