

# Schedule

## Monday, 03 of April

08h00-08h45	<b>Registration</b>		
08h45-09h00	<b>Welcome &amp; Openings</b>		
09h00-09h30	IS	<b>Oriane BONHOMME</b> ILM, Villeurbanne	Soft nanofluidics: from electroosmosis in a liquid foam to the molecular scale description of interfaces
09h30-09h50	CT	<b>Noam DEMRI</b> LPCC, Paris	Remote magnetic alignment of spheroids in 3D matrix for muscle-on-chip
09h50-10h10	CT	<b>Blaise DELMOTTE</b> LH, Paris	Magnetic microrollers as a platform for active transport
10h10-10h35	SP	<b>Matthieu RAISON</b> <b>Aurélie MORYTKO</b> <b>Guillaume LAFFITTE</b> <b>Esther GRAUDENS</b>	Microlight 3D Fluigent Klearia Idylle
10h35-11h00	<b>Coffe break</b>		
11h00-11h30	IS	<b>Jean GAMBY</b> C2N, Palaiseau	Electrochimie en dispositifs micro nanofluidiques : Méthodes et Analyses
11h30-11h50	CT	<b>Théo ASPERT</b> IGBMC, Strasbourg	Tracking aging and environmental adaptation of single-cells with microfluidics, timelapse microscopy and deep-learning
11h50-12h10	CT	<b>Saranath SESHADRI</b> LIPhy, Grenoble	Membrane-free approaches to harvest osmotic Energy
12h10-12h30	CT	<b>Julie LACHAUX</b> LERI, Gif-sur-Yvette	Microfluidic biosensor for the continuous enzymatic detection of organophosphorus compounds
12h30-14h30	<b>Lunch break + Poster session A</b>		
14h30-15h00	IS	<b>Romain QUIDANT</b> <i>ETH</i>	Interfacing light and microfluidics: fluid actuation and bio-analytes detection
15h00-15h20	CT	<b>Anastasiia DUBROVA</b> CRIC, Paris	Tumor-on-chip model to decipher the effect of nanoparticle-mediated photothermia on tumor microenvironment of pancreatic ductal adenocarcinoma (PDAC)
15h20-15h40	CT	<b>Lilian MAGERMANS</b> LPMC, Paris	Kinetic Energy Harvesting System based on Selective Ion Sweeping under Flow Shear on Capacitive Electrode
15h40-16h05	SP	<b>Ferdinand ATIVON</b> <b>Jessica RONTARD</b> <b>Nour CHEBBI</b> <b>Catherine BALTHASAR</b> <b>Charlène CORON</b>	AMF Netri Edentech Cluzeau Kloé
16h05-16h35	<b>Coffe break + Poster session A</b>		
16h35-17h05	IS	<b>Marie-Line COSNIER</b> CEA, Grenoble	PEPS: An Innovative Microfluidic Device for Bedside Whole Blood Processing Before Plasma Proteomics Analyses
17h05-17h25	CT	<b>Gabriel RAMOS</b> IMFT, Toulouse	Nonlocal dynamics of biofilm clogging in a porous microfluidic device
17h25-17h45	CT	<b>Solène MOREAU</b> TECTST, Paris	Soft thermoplastic elastomer compartmentalized chip for neurofluidic: applications to neural organotypic culture
17h45-18h05	AW	<b>Lucie DESCAMPS</b> LI, Eindhoven	MagPure chip: a microfluidic device for the purification of Circulating tumor cells and the integration in liquid biopsy workflow
18h05-18h25	CT	<b>Menghua ZHAO</b> ILM, Villeurbanne	Anomalous ionic transport in tunable angstrom-size water films on silica
20h00-23h30	<b>Gala dinner at O'CAPOT</b>		

## Tuesday, 04 of April

09h00-09h20	AW	<b>Baptiste ALRIC</b> LAAS, Toulouse	Confinement de bactérie à l'aide de puce nanofluidique
09h20-09h40	CT	<b>Philippe MARMOTTANT</b> LIPhy, Grenoble	Obstacle race of air invading biomimetic leaves
09h40-10h00	CT	<b>Léa CHAZOT-FRANGUIADAKIS</b> LPENSL, Lyon	Flow driven jamming of viral particles in nanopores
10h00-10h30	IS	<b>Delphine DELACOUR</b> IJM, Paris	Organoid engineering for new biomimetic tools to study the intestinal tissue
10h30-11h00	<i>Coffe break + Poster session B</i>		
11h00-11h30	IS	<b>Antonin EDDI</b> PMMH, Paris	Artificial ice packs: a model laboratory approach
11h30-11h50	CT	<b>Antoine BÉRUT</b> ILM, Villeurbanne	Designing microfluidic hourglasses to study flows of dense colloidal suspensions under gravity
12h00-12h20	CT	<b>Robin DEBUYSSCHÈRE</b> ULB, Bruxelles	Investigation of the shear-induced nucleation mechanisms in a micro-crystallizer
12h20-12h40	CT	<b>Pauline BREGIGEON</b> Ampère, Ecully	Microfluidic device for spheroid culture and anticancer drug testing with electrochemotherapy
12h40-14h30	<i>Lunch break + Poster session B</i>		
14h30-14h50	CT	<b>Valentin CHALUT</b> INL, Villeurbanne	Cell growth on moving curvatures, towards gut-on-a-chip
14h50-15h10	CT	<b>Brice CALVIGNAC</b> MNT, Angers	Development of the Galenic Lab-on-a-chip and Therapy-on-a-chip concepts for drug formulation / delivery
15h10-15h30	CT	<b>Corentin TREGOUET</b> ESPCI, Paris	Ion exchange membrane resistance from cm to micro scale: is the power per unit area a good indicator?
15h30-15h50	CT	<b>Fabien OLIVIER</b> NIMBE, Gif-sur-Yvette	Etude par microfluidique des procédés de recyclage de composants de circuits imprimés
15h50-16h00	<i>Closing remarks</i>		

	CT	Contributive Talk		AW	Award Winner
	SP	Sponsor Presentation		IS	Invited Speaker

All abstracts including full author list and references are available here. They can also be reached by clicking on the talk title on the online version of the program, they can be browsed by speakers at the following address <https://gdr-mnf-2023.sciencesconf.org/browse/author> or by flashing this QR-code:



# List of posters

## Session A (Monday, 03 of April):

A1	Adaptive networks: erosion of microfluidic channels	J. Bouvard, LadHyX, Palaiseau
A2	Controlled evaporation of droplets on hierarchical superhydrophobic devices coupled with plasmonic nanoantenna for environmental applications	S. Ramos, LAAS, Toulouse
A3	Development of a microfluidic chip for the characterization of nano and micro suspensions characterization by digital in line holography	T. Kurdadze, CEA, Bagnols-sur-Ceze
A4	Beads, bubbles and drops in microchannels: stability of centred position and equilibrium velocity	J. Cappello, TIPs, Bruxelles
A5	Wetting 2D materials at the microscale	F. Vialla, ILM, Lyon
A6	Capture of CO <sub>2</sub> using aqueous foam: a 2D case study in microchannels	C. Aprili, LiPhy, Grenoble
A7	A skin-on-a-chip microfluidic platform to investigate neurovascular interplays in rosacea	M. Bellenguez, LOF, Pessac
A8	Actuation of droplets using opto-electrowetting, models and application for single cell analysis	S. Mekkaoui, CEA, Grenoble
A9	Mechanical oocyte measurement as a predictive biomarker for assisted reproductive technologies	L. Barbier, CIRB, Paris
A10	Functionalization of air microbubbles in a microfluidic chip for a novel biosensor	M. Prudhomme, FEMTO-ST, Besançon
A11	Fast cancer cell deformation under flow and morphological recovery	E. Gasser, LIED, Paris
A12	Relaxation of a colloid clog formed under hydrodynamic flow	O. Liot, IMF, Toulouse
A13	Hydrogel-based microsystem to study coupling between diffusion and cellular volume in living tissues	G. Jardiné, ILM, Lyon
A14	Lab-on-a-chip for the isolation of circulating Adipose Stem Cells: Preprocessing blood using the hydrodynamic filtration module	M. H. Baz, LAAS, Toulouse
A15	Optimizing liquid-solid slip in nanofluidic systems	L. Joly, ILM, Lyon
A16	Role of surfactant chemistry on the dynamic of confined droplets.	L. Jannin, IPR, Rennes
A17	Lab-on-disc for in situ monitoring of surface water quality by algae biosensors and physicochemical sensors	J.F. Chateaux, INL, Lyon

A18	Probing spheroids rheology with a microfluidic aspiration pipette	P. Joseph, LAAS, Toulouse
A19	CO2 evaporation in microchannels: numerical simulations and microfabrication of cooling chips	M. Vacher, LEGI, Gières
A20	Towards microfluidic separation processes using Switchable Hydrophilicity Solvents	M. Zollo, LdF, Pessac
A21	Transport of fibers in structured media: toward a sorting device	C. Bielinski, LadHyX, Paris
A22	Lubrication and flow of microgels in square constrictions	C. Moore, LADHYX, Paris
A23	Acoustically activated shell-based microswimmers	A. Feasson, LiPhy, Grenoble
A24	Development of a microfluidic device for the analysis of nuclear samples	M. Boudias, UPS, Gif-sur-Yvette
A25	Coupled transport mechanisms to harvest energy from thermal waste	A. Allemand, ILM, Lyon
A26	Facile bacterial encapsulation for digital antimicrobial susceptibility testing of colistin	J. Riti, CEA, Saclay
A27	Tortuosity-governed droplet transport in a microfluidic porous network	E. Speirs, IPR, Rennes
A28	Microfluidic devices for studying swimming plant pathogens interactions with their host root.	C. Cohen, IPN, Nice
A29	Flow instabilities in microvascular network	G. Coupier, LiPhy, Grenoble

**Session B (Tuesday, 04 of April):**

B1	Biomimetic leaf-on-a-chip to study embolism	F.X. Gauci, UCA, Nice
B2	Development of geoelectrical monitoring on microfluidic chips for reactive transport and multi-phase flow characterization in the shallow subsurface	F. Rembert, BRGM, Orléans
B3	Dynamic monitoring of cytokine-secreting immune cells at the single-cell level using droplet-based microfluidics	L. Descamps, LI, Eindhoven
B4	A microfluidics-assisted photopolymerization method for high-resolution multimaterial 3D printing	V. Fournie, LAAS, Toulouse
B5	Bio-sourced polymer for the elaboration of lab-on-a-chip	M. Zimmer, INL, Lyon
B6	Characterisation of artificial polymers translocating through nanopores	C. De Blois, LP, Lyon
B7	First steps towards a glomerular filtration barrier-on-chip	M. Miran, LRS, Paris
B8	On-chip immuno-extraction of extracellular vesicles to reveal hidden sub-populations	L. Alexandre, LPCC, Paris
B9	Encapsulation by AESO bio-based polymers through microfluidic tools	E. Lu, PASTEUR, Paris
B10	Evaluation of cancer cells mechanical phenotype associated with the resistance to treatment in myeloid leukemia	C. Martin Cardozo, INL, Lyon
B11	Reversible and selective trapping of micro-algae in microfluidic chips	M. Coux, PASTEUR, Paris
B12	Controlling fast and versatile thermo-osmotic flows with a pinch of salt	C. Herrero, LCC, Montpellier
B13	Helical Fungi under Physical Constraints	C. Villard, PCC, Paris
B14	Investigation of microbial communities in glacial meltwater utilizing deterministic lateral displacement (DLD) array	T. W. Wong, LiPhy, Grenoble
B15	Lab on Chip for the isolation of circulating adipose stem cells: Module for leucocyte separation by Cell Rolling	L. Charpin, LAAS, Toulouse
B16	Equilibrium and transport of micro-to-nanoconfined electrolytes	C. Cramail, LIP, Grenoble
B17	Lymphatic clearance studied in a lymphatic vessel-on-a-chip platform	J. Edwards, LAAS, Toulouse
B18	Study of oscillating flow inside a matrix regenerator: impact of internal scale on the operating frequency	B. Bataille, CEA, Grenoble
B19	Relaxation des profils d'hématocrite après une bifurcation en T	K. Useo, IMFT, Toulouse
B20	Topological optimization of heating resistors for controlling temperature in a microfluidic cavity	T. Mabit, IPR, Rennes
B21	Influence of surfactants in bubble transport under an electric field	C. Bae, ILM, Lyon

B22	A method for single-cell multiomic barcoding, enabled by physical bioseparation in high-throughput droplet microfluidics	S. Dumas, PCC, Paris
B23	Precise and fast control of the dissolved oxygen level for tumor on chip	C. Bouquerel, MMBC, Paris
B24	Microfluidics to study the permeability of a yeast clog	T. Desclaux, IMFT, Toulouse
B25	Boosting the blue energy to the next level	N. Wu, ESPCI, Paris
B26	Design and optimization of a magneto-plasmonic sandwich biosensor for integration within microfluidic device	W. Ait Mammam, LRS, Paris
B27	Droplet microfluidic platform for drug screening on tumoroids	C. Parent, Institut Curie, Paris
B28	Thermal conductivity measurement of liquids using single resistive sensor within a Silicon-Pyrex microfluidic device	R. Moreno Jimenez, IFP, Rueil-Malmaison