

# Program FPS2010

Tuesday 5 October 2010

9h00 – 9h45		Registration			
9h45-10h15		Opening Ceremony / <i>St Clair 3</i>			
10h15-11h00		Pierre Aimar ( <i>LGC, Toulouse, France</i> ) Membrane filtration of colloidal suspensions – an overview			Plenary Lecture 1 / <i>St Clair 3</i>
11h00-11h40		Coffee Break and Poster Exhibition			
11h40-12h25		David H.Y. Pui ( <i>University of Minnesota, USA</i> ) Nanoparticles filtration			Plenary Lecture 2 / <i>St Clair 3</i>
12h25-14h00		Lunch Break			
L1. Predicting and monitoring of separations. Compression-permeability characteristics			L2. Process intensification and combined technologies		
<i>St Clair 3 / Chairs: D. Lerche, S. Rebouillat</i>			<i>St Clair 2 / Chair: H. Anlauf</i>		
14h00-14h30	L1K	D. Lerche ( <i>LUM GmbH, Germany</i> ) Sedimentation and Consolidation behaviour of Suspensions in Centrifugal Fields ( <i>keynote lecture</i> )	14h00-14h20	L2P1	H. Nirschl ( <i>Karlsruhe Institute of Technology, Germany</i> ) New Developments in Selective Magnetic Separation Technologies
14h30-14h50	L1P1	M. Loginov, E. Vorobiev, N. Lebovka, O. Larue ( <i>Université de Technologie de Compiègne, France</i> ) Determination of compressibility-permeability parameters of mineral sediments using analytical photocentrifuge	14h20-14h40	L2P2	C. H. Chen, Y. J. Juang, J. R. Pan, C. P. Huang ( <i>National Chiao Tung University, Taiwan</i> ) A hybrid photo-electrochemical filter system for dye wastewater treatment
14h50-15h10	L1P2	N. Katagiri, T. Sato, E. Iritani ( <i>Nagoya University, Japan</i> ) Consolidation properties of tofu and okara as soft colloids	14h40-15h00	L2P3	C. Delsart, C. Cholet, R.Ghidossi, C. Poupot, N. Grimi, E. Vorobiev, V. Milisic, M. Miettton Peuchot ( <i>Université de Bordeaux, Université de Compiègne, France</i> ) Effect of Pulsed Electric Field on grape polyphenols extraction
15h10-15h30	Coffee Break and Poster Exhibition				
L3. Predicting and monitoring of separations. Simulation of filtration performance and membrane fouling			L4. Predicting and monitoring of separations. Simulation of gravitational and centrifugal separation		
<i>St Clair 3 / Chairs: E. Iritani, M. Meireles</i>			<i>St Clair 2 / Chair: W. Leung</i>		
15h30-15h50	L3P1	H. Nirschl ( <i>Karlsruhe Institute of Technology, Germany</i> ) Numerical Simulation of the Filtration of Colloidal Suspensions	15h30-15h50	L4P1	J.-S. Kroll-Rabotin, F. Bourgeois, É. Climent ( <i>Université de Toulouse, CNRS, France</i> ) Experimental validation of an analytical UF Falcon concentrator model for ultrafine particle beneficiation
15h50-16h10	L3P2	E. Iritani, N. Katagiri, S. Kanetake ( <i>Nagoya University, Japan</i> ) Evaluation of filtration characteristics based on single constant pressure filtration test	15h50-16h10	L4P2	A. Davailles, E. Climent, F. Bourgeois ( <i>Université de Toulouse, France</i> ) CFD simulation of hydrocyclone performance under normal operating conditions
16h10-16h30	L3P3	D. Moussa Ragueh, M. Meireles, M. Clouin, S. Neveu ( <i>Université Paul Sabatier, Rhodia, France</i> ) On the influence of silica particles properties on the filtration and washing process performances	16h10-16h30	L4P3	L. Jönsson ( <i>University of Lund, Sweden</i> ) Experimental and numerical model results of flow phenomena in a dissolved air flotation tank

16h30-16h50	L3P4	G.-C. Agbangla, P. Bacchin, E. Climent ( <i>Université de Toulouse, CNRS, France</i> ) Pore fouling by microparticles: experimental and numerical investigations	16h30-16h50	L4P4	H.T. Hoa, B. Leger, M. Valat, P. Ginisty, W. Jomaa ( <i>IFTS, Université Bordeaux 1, France</i> ) Role of Capillary effects in centrifugal drainage
<b>P1. Poster Session I / Filtration performance and membrane fouling</b>			<b>P2. Poster Session II / Process intensification and media</b>		
<i>St Clair 3 / Chair: F. Bourgeois</i>			<i>St Clair 2 / Chair: P. Ginisty</i>		
16h50-17h10	P1P1	M.-E. Krapf, G. Frappier, B. Lartiges, J. Ghanbaja ( <i>LEM-Pôle de l'eau, Limos, Nancy-Université, France</i> ) Fouling of membranes during ultrafiltration of coagulated humic substances : morphology and cake characteristics	16h50-17h10	P2P1	D. Kimmer, I. Vincent, D. Petras, M. Zatloukal, W. Sambaer, H. Salmela, M. Lehtimak ( <i>SPUR, Tomas Bata University, Czech Republic, VTT Technical Research Centre of Finland, Finland</i> ) Application of nanofibres in filtration processes
	P1P2	J. Kim, H. Seo, T. Yoon, B. Van der Bruggen ( <i>INHA University, Republic of Korea - Laboratory for Applied Physical Chemistry and Environmental Technology, Belgium</i> ) Mitigations of humic acid fouling of polyethersulfone microfiltration membrane enhanced by TiO <sub>2</sub> nanoparticles		P2P2	A. Mahmoud, J. Olivier, J. Vaxelaire ( <i>ENSGTI, France</i> ) Electro-dewatering of wastewater sludges: influence of the operating conditions using the response surface methodology
	P1P3	N. Katagiri, Y. Ogi, E. Iritani ( <i>Nagoya University, Japan</i> ) Decolorization of anthraquinone dye by enzyme-immobilized membrane		P2P3	M. Citeau, O. Larue, E. Vorobiev ( <i>Université de Technologie de Compiègne, France</i> ) Effect of polyelectrolyte on the electro-osmotic dewatering of sewage sludge
	P1P4	E. Iritani, N. Katagiri, Y. Sugiyama and K. Yagishita ( <i>Nagoya University, Sanshin Mfg. Co. Ltd, Japan</i> ) Membrane fouling in filtration of dilute suspensions under constant pressure conditions		P2P4	D. Liu, R. Savoie, E. Vorobiev, J-L Lanoiselé ( <i>Université de Compiègne, Ecole supérieure de chimie organique et minérale, France</i> ) Dead-end microfiltration behavior of disrupted yeast cell suspensions with stirring
17h15-18h15	<b>AG SF<sup>2</sup>P / St Clair 3</b>				

Wednesday 6 October 2010

8h30-9h00		Registration			
L5. Equipment design and simulations			G1. Fundamentals and simulation		
St Clair 3 / Chairs: J.-C. Roux, R. Ben Aim			St Clair 2 / Chair: D. Thomas		
9h00-9h30	L5 K	A. Andre (Choquenot, France) The Filter-presses 100% automatic: a reality in 2010 (keynote lecture)	9h00-9h30	G1K	J. Vendel (IRSN, France). The Main Principles of the Air Filtration (keynote lecture)
9h30-9h50	L5P1	H. Anlauf, X. R. Fernández (Karlsruhe Institute of technology, Germany) Separation of Ultrafine Particles from Very Low Concentrated Suspensions by Expandable Filter Candles	9h30-9h50	G1P1	A. Wiegmann, L. Cheng, S. Rief (Fraunhofer ITWM, Germany) Filtration simulation on the nano scale – the influence of slip flow
9h50-10h10	L5P2	M. Meireles, M. Prat, A. Ramadane, G. Estachy (INP, Toulouse, Alfa Laval Moatti SAS, France) Analytical modelling of steady-state filtration process in an automatic filter with continuous “back-flushing” operation	9h50-10h10	G1P2	S. Chazelet, D. Bemer, F. Gripari (INRS, LRGP CNRS, France) Effect of the test aerosol charge on the penetration through electret fibrous filters
10h10-10h30	L5P3	J.-C. Roux, M. Rueff (Grenoble Institute of Technology, France) Characterization of the fibre-water separation process through a suction box of a pilot paper machine	10h10-10h30	G1P3	W. W.F. Leung, C.H. Hung, P.T. Yuen (Hong Kong Polytechnic University, Hong Kong) Skin Effect in Nanofiber Filtration of Submicron Aerosols
10h30-10h50	Coffee Break and Poster Exhibition				
L6. Product related filtration and separation. Water			G2. Gasification or combustion aerosols		
St Clair 3 / Chair: C. Peuchot			St Clair 2 / Chair: J. Vendel		
10h50-11h10	L6P1	M. Pontié, S. Plantier, A. Massé, J.B. Castaing, P. Jaouen (GEPEA, CNRS, France) New seawater pre-treatment by ultrafiltration (UF) operation intensification	10h50-11h10	G2P1	L. Le Coq, A. Duga, A. Joubert (Ecole des Mines de Nantes, GEPEA, CNRS, France) Particle and tar removal from syngas – application to small scale gasifier
11h10-11h30	L6P2	F. Silva, R. Bergamasco, M.T. Pessoa de Amorim, C. Tavares (University of Maringá, Brazil, University of Minho, Portugal) Modification of commercial acetate membranes with titanium dioxide to apply in drinking water treatment	11h10-11h30	G2P2	D. Steiner, W. Höflinger, M. Lisberger (Scheuch GmbH, Vienna University of Technology, Austria) Using HF-power supplies for ESP's at biomass power plants compared to other industrial applications
11h30-11h50	L6P3	F. Springer, C. Guigui, S. Laborie (Université de Toulouse, INRA, CNRS, France) Membrane filtration process for nanoparticle removal from waters before and after release in environment	11h30-11h50	G2P3	A. Villot, Y. Gonthier, E. Gonze, A. Bernis (Université de Savoie, CNRS, France) Filtration with an Electrostatic Precipitator of Gases Stemming from Biomass Gasification to Produce Biofuel
11h50-12h10	L6P4	P. Ginisty, C. Peuchot (IFTS, France) A review of laboratory devices to follow sludge flocculation kinetics	11h50-12h10	G2P4	S. Artous, L. Bouilloux, M. Kessoum, V. Mocho (IRSN, France) Study of pressure drop during clogging of mini-pleated and plane air filters by nanometric particles, simulating combustion aerosol
12h10-14h00	Lunch Break				
L7. Product related filtration and separation. Water and Wastes			G3. Liquid and solid aerosols (filtration and characterization)		
St Clair 3 / Chairs: H. Nirschl, F. Bourgeois			St Clair 2 / Chairs: Y. Gonthier, J.-F. Bloch		
14h00-14h30	L7 K	S. Rebouillat (DuPont Int.) After several oil crises... what have we “taken home” and	14h00-14h20	G3P1	T. Laminger, W. Höflinger (Vienna University of Technology, Austria) Standardized filter tests of metal working fluid mist separators

		implemented in the energy demanding solid/liquid separation processes? ( <i>keynote lecture</i> )			
<b>14h30-14h50</b>	<b>L7P1</b>	<b>P. Bubakova, M. Pivokonsky</b> ( <i>Institute of Hydrodynamics, Czech Republic</i> ) Influence of velocity gradient on properties and filterability of suspension formed during water treatment	<b>14h20-14h40</b>	<b>G3P2</b>	<b>A. Ginestet, D. Pugnet</b> ( <i>CETIAT, France</i> ) Experimental study of the particle emission of an industrial pulse-jet fabric filter when dust cake is removed by reversed compressed air
<b>14h50-15h10</b>	<b>L7P2</b>	<b>S.Strasser, J.Baumgartinger, R.Größwang</b> ( <i>Lenzing Technik GmbH, Austria</i> ) New methods of boiler- and process water microfiltration as an economical alternative to replace traditional sand filters.	<b>14h40-15h00</b>	<b>G3P3</b>	<b>B. Sutter, D. Bémer, J.-C. Appert-Collin, D. Thomas, N. Midoux</b> ( <i>INRS, LRGP CNRS, France</i> ) Evaporation of deposited micrometric heavy alkane droplets on fibers: evidences of the gap between experimentations and Fick's law
<b>15h10-15h30</b>	<b>L7P3</b>	<b>S. Vieuille, S. Minebois</b> ( <i>SEFAR- FYLTIS, France</i> ) SEFAR® CLICKSEAL™, the innovate solution for your filter press	<b>15h00-15h20</b>	<b>G3P4</b>	<b>A. Charvet, S. Rolland du Roscoat, M. Peralba, J.F. Bloch, Y. Gonthier</b> ( <i>CNRS, Université de Grenoble, Université de Savoie, ESRF, France</i> ) Determination of the liquid aerosol distribution in a porous filter by synchrotron X-ray holotomography
<b>15h30-15h50</b>	<b>L7P4</b>	<b>M. El-Mansour, F.E. Antón, J. P. Baumert, B. Vivas, B. González, J.R. Álvarez, S.Luque</b> ( <i>University of Oviedo, Spain, ArcelorMittal Research &amp; Development, Spain, Iowa State University, USA</i> ). Recovery of ammonium thiocyanate from coking wastewaters in steel manufacturing	<b>15h20-15h40</b>	<b>G3P5</b>	<b>A. Joubert, J.C. Laborde, L. Bouilloux, S. Callé-Chazelet, D. Thomas</b> ( <i>IRSN, LRGP CNRS, France</i> ) Empirical model for the prediction of the pressure drop across HEPA filters clogged by solid particles in presence of humidity
<b>15h50-16h10</b>	<b>Coffee Break and Poster Exhibition</b>				

L8. Product related filtration and separation. Water and Wastes			M1. Media		
<i>St Clair 3 / Chair: R. Ben Aim</i>			<i>St Clair 2 / Chair: P. Vroman</i>		
16h10-16h30	L8P1	G. Waidelich, A. Martinez, E. Routier ( <i>Ingenieurbüro Waidelich, Germany, LAFFORT, France, INOXPA, Spain</i> ) New approach of Flotation System without Pressurized Gas Injection.	16h10-16h30	M1P1	P. Counet, C. Maurer ( <i>SEFAR-FYLTIS, France, SEFAR AG, Switzerland</i> ) New spunlaced sintered filter media - description and filter results
16h30-16h50	L8P2	M. Tourbin, Y. Liu, S. Lachaize, P. Guiraud ( <i>Université de Toulouse, France</i> ) Preliminary experiments of flotation for the development of a process treatment for the removal of nanoparticles from liquid wastes	16h30-16h50	M1P2	P. Lescoche, E. Papin ( <i>TAMI Industries, France</i> ) New method to design new ceramic membranes with optimised performances
16h50-17h10	L8P3	M.E. Krapf, B.S. Lartiges, C. Merlin, G. Francius, J. Ghanbaja, J.F. Duval ( <i>Pôle de l'eau, Nancy-Université, France</i> ) Flocculation of bacterial sludge conditioning with polyethyleneim polymers : Impact of lipopolysaccharide	16h50-17h10	M1P3	C. Vallet ( <i>Ahlstrom Filtration LLC, USA</i> ) High Surface Area Electroadsorptive Filter Media to Reduce Endotoxins and Polysaccharides Causing Membrane Fouling
17h10-17h30	L8P4	I. Duchemin, O. Lorain, J.M. Espenan ( <i>POLYMEM, France</i> ) A New Membrane Module Design to Reduce Capital Investment and Operative Costs in Drinking Water Production : Hydraulics and Rejection Performances	17h10-17h30	M1P4	R. Kirsch, O. Iliev, Z. Lakdawala, H. Andrae, M. Kabel, M. Dederling ( <i>Fraunhofer ITWM, IBS Filtran, Germany</i> ) CFD and efficiency tests simulations supporting filter element designs
P3. Poster Session III / Water and wastes			P4. Poster Session IV/ Gas and media		
<i>St Clair 3 / Chair: J.-C. Roux</i>			<i>St Clair 2 / Chair: L. Bouilloux</i>		
17h30-18h05	P3P1	C Delsart, A. Massot, F. Meunier, M. Mietton Peuchot ( <i>Université de Bordeaux, France, Amarante process, France</i> ) Reconditioning of Water from Water-Treatment Plants on Wine Estates by membrane filtration processes	17h30-17h50	P4P1	D. Thomas, J. Payen, S.Chazelet, P-C. Gervais, N. Monnier, J-C Appert-Collin, A. Perwuelz, P. Vroman, M. Lewandowski ( <i>LRGP, ENSAIT, GEMTEX, France</i> ) Pressure Drop of Fibrous Media with Bimodal Fiber Size Distribution
	P3P2	K. L. Tung and N. J. Lin ( <i>Chung Yuan University, Taiwan</i> ). Study of organic fouling mechanism on microfiltration membrane for water treatment applications using confocal laser scanning microscope technique		P4P2	P-C. Gervais, N. Bardin-Monnier, D. Thomas ( <i>LRGP Nancy, France</i> ). Aerosol deposit characterization via nuclear imaging.
	P3P3	P. Bubakova, M. Pivokonsky ( <i>Institute of Hydrodynamics, Czech Republic</i> ) FLGM – a tool for upgrade of separation process during water treatment		P4P3	P. Tronville, V. Bertola, E. Cafaro, R.D. Rivers ( <i>Department of Energetics, Politecnico di Torino, Italy, University of Edinburgh, UK, EQS Inc., USA</i> ) The Influence of Bipolar Ion Neutralization on Test Aerosol
	P3P4	B. Kysela, Z. Chára ( <i>Institute of Hydrodynamics, Czech Republic</i> ) CFD Study of a Storm-water Vortex Separator with Free Surface		P4P4	N. Bardin-Monnier, S. Altmeyer, V. Schreiber, A. Marecat ( <i>Nancy University, PROGEPI, Air Liquide, France</i> ). Comparison of two methods of cyclones simulation: semi-empirical model and CFD. Example of a specific cyclone design
	P3P5	M.W. Naceur, H. Boutoumi, N. Aitmessaoudene, R. Henniche, N. Drouiche ( <i>LApEH, UTDS, Algeria</i> ) Preliminary study of the regeneration of photovoltaic cells cutting oil by ultrafiltration reinforced by a chemical pretreatment			
	P3P6	Y.F. Chang, A.C. Hoffmann, C.G. Ilea, Ø.L. Aasen ( <i>University of Bergen, Norway</i> ). Particle flow in a hydrocyclone investigated by radioactive particle tracking			
20h00	Gala Dinner				



9h00-9h45		<b>Plenary Lecture 3 / St Clair 3</b>				
		Philippe Vroman ( <i>ENSAIT Roubaix, France</i> ) Advances in Fibers and Processes for Innovative Filter Media and Related Filtration Structures				
<b>L9. Product related separation. Bioproducts</b>						
<i>St Clair 3 / Chair: M. Meireles</i>						
9h45-10h15	L9 PK	W.W. F. Leung ( <i>Hong Kong Polytechnic University, Hong Kong</i> ) Centrifugal Separation in Biotechnology ( <i>keynote lecture</i> )				
10h15-10h35	L9P1	M. Van Audenhaege, G. Gésan-Guizoui ( <i>INRA, UMR1253, France</i> ) Structural and functional modifications of $\alpha$ -lactalbumin induced by dead-end ultrafiltration				
10h35-10h55	<b>Coffee Break and Poster Exhibition</b>					
<b>L10. Product related separation. Bioproducts</b>			<b>M2. Measurement and characterization technique</b>			
<i>St Clair 3 / Chair: E. Vorobiev</i>			<i>St Clair 2 / Chairs: C. Peuchot, J.-F. Bloch</i>			
10h55-11h15	L10P1	N. Rombaut, R. Savoie, E. Van Hecke, J. Castello, B. Thomasset, J.-L. Lanoisellé ( <i>Université de Technologie de Compiègne, Ecole Supérieure de Chimie Organique et Minérale, France</i> ) Screw pressing of grape seed: influence of process parameters on oil polyphenol content		10h55-11h15	M2P1	S. Grosse, E. Blanpain ( <i>Topas GmbH, Germany, ACIL Sarl, France</i> ) Application of non-mercury porometric measurements for structural characterisation during product development of filter media
11h15-11h35	L10P2	D. Colas, P.Y. Pontalier, L. Rigal ( <i>Université de Toulouse, INRA LCA, France</i> ) Alfalfa protein fractionation by combination of twin-screw extrusion and liquid extraction		11h15-11h35	M2P2	F. Pignon, M. Abyan, C. David, A. Magnin, M. Sztucki ( <i>UJF - Grenoble I, ESRF, France</i> ) <i>In-situ</i> characterization of concentration polarization layers during cross-flow membrane separation process of anisotropic colloidal dispersions by small-angle X-ray scattering
11h35-11h55	L10P3	R. Zeitoun, P.-Y. Pontalier, L. Rigal ( <i>Université de Toulouse, France</i> ) Ultrafiltration of hemicelluloses from wheat straw and wheat bran		11h35-11h55	M2P3	M. Peralba, A. Charvet, S. Rolland du Roscoat, P. Dumont, J.F. Bloch, P. Mangin ( <i>CNRS UMR 5518, UMR 5521, ESRF, France, Université du Québec, Canada</i> ) Determination of collected particle repartition in filter using synchrotron X-ray microtomography coupled with a multiresolution method

			<b>11h55-12h15</b>	<b>M2P4</b>	<b>C. Peuchot (IFTS, France)</b> An overview of International and European standards related to suspensions and filters characterisation
<b>P5. Poster Session V / Bioproducts</b>					
<i>St Clair 3 / Chair: E. Vorobiev</i>					
<b>11h55-12h10</b>	<b>P5P1</b>	<b>J-C Vidal, M. Vidal Vila, G. Waidelich (INRA Gruissan, France, Ingenieurbüro Waidelich, Germany)</b> New approach by membrane contactor to manage dissolved gases in wine.			
	<b>P5P2</b>	<b>K. L. Tung, Y. Chang, C. Y. Chen , N. J. Lin, (Chung Yuan University, Taiwan)</b> Modification of poly(vinylidene fluoride) microfiltration membrane with surface-copolymerized poly(ethylene glycol) methacrylate and its applications on protein purification			
	<b>P5P3</b>	<b>K. L. Tung, C. H. Kang, K. S. Chang, M. M. Shao (Chung Yuan University, Taiwan)</b> Preparation of Macroporous Ceramic Membranes by Atmospheric Plasma Spraying and its Application on Protein Separation			
<b>12h15-12h30</b>	<b>Best Poster Awards / Closing session</b>				