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SUR LA QUALITÉ  
DE L'EAU*



*CANADIAN  
ASSOCIATION ON  
WATER QUALITY*

**25<sup>e</sup> Congrès régional de l'Est du Canada / 25<sup>th</sup> Eastern Regional Conference**

30 octobre 2009 / October 30, 2009

Tenu à / Held at

Université d'Ottawa / University of Ottawa  
Ottawa, ON

## **PROGRAMME SCIENTIFIQUE / SCIENTIFIC PROGRAM**

**INSTITUTE FOR ENVIRONMENTAL ENGINEERING  
INSTITUT DE GÉNIE DE L'ENVIRONNEMENT**



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AND





	<b>Session A SITE Room 0130</b>	<b>Session B SITE Room 0131</b>	<b>Session C SITE Room 2060</b>	<b>Session D CBY D113A</b>
10:00	Evaluation Non-Imprinted Polymer Nanoparticles for Removal of Endocrine Disrupting Compounds from Surface Water and Wastewater <i>A Murray*, B Örmeci and EPC Lai</i>	L'enlèvement de l'azote ammoniacal dans les étangs aérés facultatifs dans le contexte de la Stratégie pancanadienne <i>R Leduc et B Gagnon</i>	Adsorption of Arsenic from a Nova Scotia Groundwater onto Water Treatment Residual Solids <i>MK Gibbons*, JA MacDonald and GA Gagnon</i>	Transport of Surface-Modified Nanoiron Particles in Porous Media <i>S Ghoshal</i>
10:30	Pause / Break	Pause / Break	Pause / Break	Pause / Break
	<b>Innovative traitements / Innovative Treatments</b>	<b>Eaux usées / Wastewater Treatment</b>	<b>Ressources en eau / Water Resources</b>	<b>Brace Centre: Gestion des ressources des eaux / Water Management</b>
Président / Chair	R Tyagi	R Leduc	C Rennie	VTV Nguyen
10:50	Integration of Photochemical and Biological Processes for Wastewater Treatment: An Overview of Trends, Advances and Future <i>M Mehrvar, W Cao, M Johnson, GB Tabrizi, and A Asadi</i>	Start-up and Operation of a Mobile Pilot-Scale Anaerobic Digester <i>D Lacasse, J-C Frigon and S Guiot</i>	Experimental Investigation of Biological Clogging In Different Soils with Different Pore Structures <i>M Mostafa and PJ Van Geel</i>	On Downscaling of Rainfall Processes for Climate-Related Impact Assessment Studies <i>VTV Nguyen</i>
11:20	Interaction <i>Sinorhizobium meliloti-Trichoderma viride</i> produits dans les eaux usées d'amidon sur la luzerne <i>N Mhamdi*, T Rouissi, J Rojan, RD Tyagi, D Prévost et SK Brar</i>	A Recycled Media Passively Aerated On-Site Sewage Treatment System <i>J Baker, J St Marseille and B Anderson</i>	Reducing Pollutant Discharge into Urban Rivers by Controlling the Retention Time in a Stormwater Pond <i>JF Carpenter*, G Pelletier et P Lessard</i>	Hydrodynamic Simulations of Flash Flood Using a Minimal Intervention Strategy <i>T Wang, LW Tan and VH Chu</i>
11:50	<b>Affiches / Posters</b>	<b>Affiches / Posters</b>	<b>Affiches / Posters</b>	<b>Affiches / Posters</b>
12:15	Lunch SITE Cafeteria	Lunch SITE Cafeteria	Lunch SITE Cafeteria	Lunch SITE Cafeteria

<b>Session A</b>		<b>Session B</b>		<b>Session C</b>			
<b>SITE Room 0130</b>		<b>SITE Room 0131</b>		<b>SITE Room 2060</b>			
<b>Déchets agricoles / Agricultural Wastes</b>		<b>Modélisation / Modeling</b>		<b>Ressources en eau / Water Resources</b>			
Président / Chair		D Lapen		Y Comeau		P Van Geel	
13:30	Diètes produites à partir des eaux usées agro-industrielles pour l'élevage de <i>Cydia pomonella</i> – bilan nutritionnelle <u>JR Gnepe*</u> , <u>SK Brar</u> , <u>RD Tyagi</u> , <u>JR Valero</u> et <u>RY Surampalli</u>	2-D Numerical Multimedia Environmental Analysis System and Its Validation <u>M Elektorowicz</u> , <u>J Yuan*</u> and <u>Z Chen</u>	Potential for Aluminum to Influence Detection of <i>Escherichia coli</i> <u>J Perez</u> , <u>D Bérube</u> , <u>S Sattar</u> , <u>A Unc</u> and <u>S Springthorpe</u>				
14:00	Determination of Phosphorus Source Coefficients for Animal Manures <u>TQ Zhang</u> , <u>QC Hu</u> , <u>YT Wang</u> , <u>CS Tan</u> , <u>I O'Halloran</u> , <u>K Reid</u> , <u>B Ball-Coelho</u> and <u>BL Ma</u>	Détermination des paramètres biocinétiques du modèle de respiration endogène pour un système de boues activées alimenté en acétate <u>A Ramdani*</u> , <u>PI Dold</u> , <u>A Gadbois</u> et <u>Y Comeau</u>	Downscaling of Daily Temperature Extremes for Climate-Related Impact Assessment Studies <u>M Khalili</u> , <u>VT Van Nguyen</u> and <u>P Gachon</u>				
14:30	Fermentation à l'état solide de déchets agroindustriels pour produire des enzymes ligninolytiques par <i>Phanerocheate chrysosporium</i> <u>F Gassara*</u> , <u>SK Brar</u> et <u>RD Tyagi</u>	Modélisation d'un système de traitement individuel d'épuration <u>J Bernier*</u> , <u>P Lessard</u> et <u>M Girard</u>	Response of Soil-Bentonite Liners to Leachate of Biofuel <u>M Bani Baker*</u> , <u>M Elektorowicz</u> and <u>A Hanna</u>				
15:00	Pause / Break		Pause / Break		Pause / Break		
<b>Déchets agricoles / Agricultural Management</b>		<b>Traitement et utilisation des biosolides / Sludge Treatment and Utilization</b>		<b>Chimiques persistants / Persistent Chemicals</b>			
Président / Chair		D Lapen		B Örmeci		J Nicell	
15:20	Simulations by AnnAGNPS of Controlled Tile Drainage on Water Quality in the South Nation River Watershed <u>Z Que*</u> , <u>G Wilkes</u> , <u>RL Droste</u> , <u>O Seidou</u> , <u>M Sunohara</u> , <u>E Topp</u> , <u>G Parker</u> and <u>DR Lapen</u>	Freeze-Thaw Treatment of RBC Sludge: A Sustainable Option for Sludge Dewatering in Cold Regions <u>J Diak</u> , <u>C Proux</u> and <u>B Örmeci</u>	Importance of Hospitals as Point Sources of Pharmaceutical Releases to the Environment <u>U Khan*</u> and <u>JA Nicell</u>				

	<b>Session A</b>	<b>Session B</b>	<b>Session C</b>
	<b>SITE Room 0130</b>	<b>SITE Room 0131</b>	<b>SITE Room 2060</b>
15:50	Impact of Spring Melt on Phosphorus and Sediment Losses in Agricultural Watersheds of Eastern Canada  <i>JJ Su*, E van Bochove, G Thériault, B Novotna, J Khaldoune, JT Denault, J Zhou, MC Nolin, M Bernier, G Benoy, ZS Xing and L Chow</i>	Valorisation des rejets de l'industrie d'extraction d'amidon pour la production de bio-inoculants: Développement de formulations de <i>Sinorhizobium meliloti</i> <i>T Rouïssi*, R John, N Mhamdi, SK Brar, D Prévost et RD Tyagi</i>	Fate of Steroid Estrone (E1) in Natural Aquatic Environment  <i>RR Chowdhury*, P Charpentier and MB Ray</i>
16:20	The Effect of Liquid and Solid Manures under Controlled Drainage with Sub-Irrigation Recycling Systems on Water and Nutrient Movement and Crop Performance  <i>CS Tan, TQ Zhang, CF Drury, TW Welacky and WD Reynolds</i>	Traitement de résidus d'abattoirs par digestion anaérobie bi-phasique  <i>R Rodriguez-Méndez, Y LeBihan et P Lessard</i>	Immobilized Laccase for the Elimination of Endocrine Disrupting Chemicals: Characterization of the Biocatalysts Formed and Their Utilization in Continuous Bioprocesses  <i>H Cabana, A Arseneault* and JP Jones</i>
16:50	Mot de la fin / Final Words SITE Room 2060		
17:00	Cocktail CBY Room A04		

## **Les affiches / Posters**

Detection of Human Enteric Viruses in Fractured Bedrock Aquifers

M Aly, S Vidovic, S Springthorpe, S Sattar, S Trimper and K Novakowski

Comprehensive Wastewater Treatment Plant and Sludge Pretreatment Model

ÉL Bordeleau and RL Droste

Captage des métaux lourds d'un lixiviat de lieu d'enfouissement de matières résiduelles après sa biofiltration sur support organique

K Boucher, P Lessard, G Buelna et R Dubé

L'influence de l'aération et du milieu filtrant sur la production de CH<sub>4</sub> et de N<sub>2</sub>O dans un biofiltre à milieu organique traitant du lisier de porc

C Bourgault, C Dufour-L'arrivée, P Lessard, Y Le Bihan, N Turgeon et G Buelna

Phytoreclamation of Trace Metal Contaminated Dredged Sediments Using Organic Amendments

LMC Casséus and A Karam

Etude d'impact de la recharge artificielle de la nappe de la Côte Orientale du Cap Bon (Tunisie) par les eaux usées traitées

A Chemingui, FJ Horriche, C Paniconi, A Charef

Sludge Retention Time and Pretreatment Conditions Effects on Mesophilic and Thermophilic Sludge Digestion

N Coelho, W Parker, K Kennedy and R Droste

Mercury Speciation and Transport in the Wagigoon-English River System

J Gaskin and CD Rennie

Activated Sludge Modelling in Practice – An International Survey

H Hauduc, S Gillot, L Rieger, T Ohtsuki, A Shaw, I Takács and S Winkler

Real-Time Monitoring of Water Supplies

N Linklater and B Ormezi

Anaerobic Treatment of Spent Aircraft De-Icing Fluid

J Marin and KJ Kennedy

Experimental Study on the Control of By-products by the Innovative Complex Pre-oxidation (CPO) Technique

J Miao, J Li, S Yan, RD Tyagi and RY Surampalli

Influencing Factors on the Paranitrobenzoic Acid Wastewater Treatment by Ozone and Chlorine Dioxide Processes Using Granular Activated Carbon as the Catalyst

J Miao, CS Ding, S Yan, RD Tyagi and RY Surampalli

Impact of Mining Activities on Surface and Ground Water Quality Parameters

DP Mohapatra, SK Brar and RD Tyagi

Effect of Ultrasound Pre-Treatment on Raw Was Dewaterability

YM Moya, J Marin, KJ Kennedy and M Warith

Impact of Climate Freeze-Thaw Variability on Soil Water Flow and Nitrogen Transport

NK Newlands, AJ Phillips, BH Ellert and RS Erickson

River Catchment Microbial Dynamics under Storm Event Conditions and Human Health Protection: from a Curative to a Preventive Strategy

DE Nnane, JE Ebdon and HD Taylor

Improved PVDF Ultrafiltration Membranes for Water Treatment

N Prezeshk and RM Narbaitz

Chemical Characteristics of Stormwater Ponds in the Ottawa Region

Rolon Mérette M, FR Pick, PC Frost and MA Xenopoulos

The Removal of Humic Substances in the Effluent Organic Material (Efom) by Applying Electrical Field

I Sharif, M Elektorowicz, J Oleszkiewicz

Etude des réacteurs à boue granulaire aérobie: effet du mode d'aération et de l'alternance anoxie/aérobie sur les performances

M Spérandio, J-F Wan et Y Bessiere

Comparison of Regular Free Drainage and Controlled Drainage/Sub-Irrigation Water Recycling Systems on Nitrate, Phosphorus Losses and Crop Production

CS Tan, TQ Zhang, CF Drury, WD Reynolds, T Oloya and JD Gaynor

Improved Environmental Multimedia modeling and Its Sensitivity Analysis

J Yuan, M Elektorowicz and Z Chen

Kinetic Formulations for Growth and Substrate Uptake in Biological Wastewater Treatment

Q Zhang and RL Droste

Sub-surface Flow: A Significant Pathway for Soil Phosphorus Loss?

TQ Zhang, CA Madramootoo and CS Tan

Thermophilic and Mesophilic Sequencing Batch Reactors for TMP Pressate Treatment

MR Zheng, D Bertoldo, HJ Lin, KT Leung and BQ Liao

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