

PERSPECTIVES

THE NEWSLETTER OF CSBE Winter 2009 Hiver LES NOUVELLES DE SCGAB

A Few Words From President Stéphane P. Lemay

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THE ROLE, CHALLENGES AND OPPORTUNITIES FOR BIOENGINEERS WITHIN THE CONTEXT OF THE WORLD ECONOMIC CRISIS

Over the last six months, whether you read the news in the paper or you watch the news on your television, it is clear the world global economy is not performing well at all. Many investment portfolios lost more than 30% of their value over last year and some manufacturing sectors like the automobile makers will have to implement very drastic changes if they want to survive. I could mention many other examples of problematic situations associated with this global economic crisis but it would detract from the main point I would like to discuss. I can hear you thinking right now: "Why is Stéphane talking about global economy? How can he pretend to have any thoughtful opinion on the matter?" You are absolutely right! Beside my basic knowledge of economics gained at the university and through the years, like many of us, I fail to comprehend the various factors that interact with each other and that have led to this current situation. However, within the CSBE context, it raises a series of questions: what is the role of the bioengineers in stabilizing the current situation? What are the main challenges we are facing with over the next year? If we pay careful attention, are there any opportunities for us?

Our role within the public contributes at fulfilling basic needs for human kind and it will continue to be even more important over this difficult time ahead. When we say the secondary vision of CSBE is for all people to have a high-quality life, with good access to clean and safe food, water, air, energy and shelter, we are really saying our daily activities contribute at providing the basic needs of the population in which we live. Even during difficult periods when resources are more limited, these needs still have to be met.

Therefore, engineers will need to demonstrate a high level of creativity to further reduce the overall cost of food, water, clothing and shelter. As bioengineers, we can greatly contribute to this global effort.

Considering the world economical situation, is there a particular role we should play as bioengineers? Such a broad question can lead to multiple answers and I certainly do not have the expertise to prioritize what should be done first. Theoretically, the first role we can play is to contribute our share at investing more resources within the economical system in doing our job the best way we can. Each time a particular design or process is being refined or optimised, resources are being saved (operating or capital expenses, labour, energy, etc.). When these saved resources are being reinvested within the system, it has pretty much the same effect as injecting new resources or capital. Wasted resources do not stimulate the global economy.

(Continued on page 2)

Inside this issue: Dans ce numéro:

President's message <i>Un mot du président</i>	1-4
Paper submission note	4
Call for Volunteers: AIC & EIC representatives	5
Invitation to AGM & PEI	6
Manager's report	7
News Coast to Coast <i>Alberta News</i>	8-17 8
Saskatchewan News <i>Manitoba News</i>	9-10 11-12
Ontario News	13-15
Nouvelles du Québec	16
Atlantic News	17
Notices, meetings and Calls for Papers	18-23
Job opportunities	24
Notices & Coming Events	25-26
CSBE/SCGAB Council for 2008-2009	27

(Continued from page 1)

Our expertise provides us with the right background to assist world decision makers in taking technically sound decisions within a global context. For example, if the biofuel sector is being stimulated using mainly human food supply, or if the food product import/export are being enhanced to stimulate world trade without considering the environmental impacts or the benefits of producing and eating locally, the “ship” may have been steered in the wrong direction. In other words, if all the countries work together at putting the economical system back into shape, we need to ensure that the selected solutions induce more vigour within the economy and result in long term sustainability.

The next two years will certainly bring its share of challenges for politicians, managers and engineers as well. Especially in many of the agricultural sectors, where margins have been pretty thin, these sectors are already very lean. How will it be possible to further optimise it? Or how will we balance short term needs with long-term stability of different agricultural sectors? A technical solution may bring long-term benefits but if the required investments take the last breath of a sector away, no progress will have been achieved. If the resources become very limited in specific sectors, it will become very difficult to innovate and consequently, the particular area of activity will take longer to reach a healthier financial situation.

Now, most of the news information sources draw a rather dark picture of the next two years as far as the world economy is concerned. We know there will be challenges, but what about the opportunities? As bioengineers, what is in it for us? In some sectors, producers and companies will really benefit from our expertise to get through that period and in some cases, it may open new doors. It is also known that for every dollar invested by the government in research and development to raise the technical knowledge of a particular sector, important financial spin-offs will originate from that investment. Considering that people will still require food, to be dressed and to be provided with basic needs, if the reset button of the economy system is pressed, it can be launched again by investing in sectors closely related to the bioengineering discipline. The current context may even become a stepping-stone for various bioengineering sub-sectors to demonstrate our contribution to society.

In writing this text, I did not intend to bring any scope of genius on the overall economical crisis we are going through at this moment. Neither, I have suggested any particular solution that should be implemented right away. However, if it made you think about the contribution you could make to fix that problem, about some challenges you foresee in your area over the near future or how will you benefit from emerging opportunities, I will have reached my goal!

I hope you will enjoy a very nice spring season.

Un mot du Président

LE RÔLE, LES DÉFIS ET LES OPPORTUNITÉS POUR LES INGÉNIEURS EN BIOINGÉNIERIE DANS LE CONTEXTE DE LA CRISE FINANCIÈRE MONDIALE

Depuis les derniers six mois, que ce soit à la lecture des journaux ou par l'information présentée aux bulletins de nouvelles télévisées, il est clair que l'économie mondiale ne se porte pas très bien. Plusieurs portefeuilles d'investissement ont perdu plus de 30 % de leur valeur et certains secteurs manufacturiers, tels les fabricants automobiles, auront à intégrer des changements drastiques dans leurs opérations s'ils veulent survivre à la crise. Je pourrais vous donner plusieurs autres exemples de situations problématiques engendrées par la conjoncture actuelle, mais une telle discussion m'écarterait des éléments clés que j'aimerais aborder. J'imagine déjà votre réaction à la lecture de ces lignes : «Pourquoi est-ce que Stéphane nous parle d'économie mondiale? Comment peut-il prétendre avoir une opinion valable sur le sujet?» Eh bien, vous avez parfaitement raison! Mise à part les connaissances générales acquises à l'univer-

(Continued on page 3)

(Continued from page 2)

sité et au fil des années, comme plusieurs d'entre nous, j'en perds mon latin lorsque je tente de comprendre tous les facteurs qui ont conduit à la situation actuelle et leurs interactions. Par contre, en considérant le contexte de la SCGAB, cela m'amène à me poser une série de questions : quel rôle l'ingénieur en bioingénierie peut-il jouer pour rétablir la conjoncture actuelle? Quels sont les principaux défis auxquels nous ferons face au cours des prochaines années? En portant une attention particulière au contexte présent, existe-t-il des opportunités à saisir?

Notre rôle auprès de la population contribue à combler certains des besoins de base des humains et celui-ci continuera à être très important durant cette période plus difficile. Lorsque l'on écrit que la vision de la SCGAB consiste en partie à améliorer la qualité de vie des gens en leur fournissant l'accès à une alimentation saine, de l'eau propre, de l'air pur, un abri décent et à l'énergie requise, nous signifions que nos fonctions quotidiennes contribuent à assurer les besoins de base de la population. Même en temps de crise, au moment où les ressources sont plus limitées, ces besoins doivent être comblés. Par conséquent, les ingénieurs devront faire preuve d'une grande créativité pour réduire davantage le coût de l'alimentation, de l'eau, des vêtements et des abris. Comme ingénieur en bioingénierie, nous pouvons grandement contribuer à cet effort collectif.

En considérant la situation économique mondiale actuelle, quel rôle pouvons-nous jouer comme ingénieur dans notre discipline? Une question aussi large peut conduire à une multitude de réponses et je n'ai surtout pas la prétention de posséder l'ensemble des connaissances requises pour prioriser les actions à mettre de l'avant. Sur papier du moins, la première tâche que nous pouvons effectuer consiste à réinjecter, à notre façon, plus de ressources dans le système économique en effectuant notre travail le mieux possible. En effet, chaque fois qu'une conception est raffinée ou qu'un procédé est optimisé, des ressources sont économisées (dépenses en capital ou en opération, en main d'œuvre, en énergie, etc.). Lorsque ces ressources sont réintroduites dans l'ensemble du système, cela crée pratiquement le même effet que d'injecter de nouvelles ressources ou de nouveaux capitaux. Une chose est sûre, les ressources gaspillées ou mal utilisées ne contribuent certainement pas à stimuler l'économie.

Notre expertise fait aussi en sorte que nous avons les bonnes connaissances pour assister les décideurs de ce monde à prendre des décisions orientées sur de l'information technique valable et ce, avec une vision globale des problématiques. Par exemple, si l'on désire stimuler le secteur des biocarburants simplement en utilisant des intrants actuellement nécessaires à l'alimentation humaine ou si l'on augmente les échanges internationaux des denrées alimentaires pour stimuler l'économie sans se soucier des impacts environnementaux ou des avantages et inconvénients de produire et de consommer localement, nous faisons fausse route sur le plan du développement mondial. En d'autres mots, plusieurs pays travaillent à remettre le système économique mondial sur les rails et nous devons nous assurer que les solutions retenues seront réellement durables à long terme.

Les prochaines années seront certainement remplies de défis pour les politiciens, les responsables d'organisation ainsi que pour les ingénieurs. Cela est spécialement vrai pour les secteurs agricoles où les marges financières sont déjà très faibles et où plusieurs des étapes de production ont déjà été épurées. Comment serait-il possible de réduire davantage le coût des opérations? Comment pourrions-nous maintenir certains secteurs en marche à court terme tout en assurant leur stabilité à long terme? Dans certains cas, une solution technologique pourrait permettre à un secteur d'être viable à long terme. Cependant, si les investissements requis par cette solution drainent l'ensemble des ressources disponibles à court terme, ce secteur ne sera pas avancé. La disponibilité des ressources de certains domaines deviendra un défi considérable. Si les ressources viennent à manquer, il sera très difficile d'innover et ce secteur nécessitera beaucoup plus de temps à reprendre une meilleure santé financière.

À l'heure actuelle, pratiquement toutes les sources d'information disponibles au grand public façonnent une image plutôt sombre des deux prochaines années en ce qui concerne l'économie mondiale. Nous savons qu'il y aura des défis importants à relever, mais qu'en est-il des opportunités? Comme ingénieur en bioingénierie, qu'est-ce qui s'offre à nous? Dans certains secteurs, des producteurs et des compagnies auront recours à nos services pour traverser cette

(Continued on page 4)

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période difficile et la situation actuelle pourra contribuer à ouvrir de nouvelles portes. Nous savons que chaque dollar investit par le gouvernement pour développer le niveau de connaissances techniques d'un secteur génère normalement des retombées économiques importantes et supérieures à l'investissement initial. Puisque la population devra continuer de s'alimenter, de se vêtir et de combler ses besoins fondamentaux et que nous avons à réinitialiser le système économique en entier, nous aurions sûrement avantage à le relancer en s'appuyant sur des secteurs en lien étroit avec les besoins des gens. Et cela est intimement lié avec la bioingénierie. Qui sait, peut être que le contexte actuel permettra à certains secteurs de notre discipline d'accéder à de nouvelles opportunités et de démontrer l'importance du domaine pour la société.

En rédigeant ce court texte, je n'avais certainement pas la prétention de vous présenter des idées totalement révolutionnaires apportant des solutions d'avant-garde à la crise économique actuelle. Je n'avais pas non plus les connaissances pour faire une recommandation sur les actions à mettre de l'avant dès aujourd'hui pour nous permettre de sortir de cette torpeur. Par contre, si cette réflexion vous amène à vous interroger sur le rôle que vous pouvez jouer personnellement dans le contexte actuel, à faire le point sur les défis qui surviendront au cours des prochaines années et à prendre conscience des nouveaux marchés ou opportunités d'affaire qui pourraient naître du contexte actuel, j'aurai, dans ce cas, atteint mon but!

Je vous souhaite de bien profiter de ce renouveau printanier.

Stéphane.

Note : le masculin est utilisé dans le texte précédent simplement pour en alléger la forme.

Online Journal Submission Information

The Online Journal Submission has been activated on the web site www.bioeng.ca. Please follow the link "submit a paper" on the paper submission page that will take you to the login screen. Please register yourself as an author, reader, and reviewer providing all contact information and keywords describing your expertise. You only need to register once. Thereafter, you can access the same account to submit a paper, read published papers, or review papers.

L'option de soumission d'articles en ligne est maintenant disponible. Veuillez suivre le lien "Soumettre un article" à la page de soumission, qui lancera le portique d'inscription. Veuillez vous y inscrire à titre d'auteur, lecteur ou évaluateur et remplissez les sections relatives aux renseignements décrivant votre champ d'expertise. Vous devrez vous inscrire qu'une seule fois. Par la suite, vous pourrez accéder au même compte d'utilisateur pour soumettre vos articles, lire d'autres articles ou effectuer votre évaluation d'un projet d'article.



Online registration at www.bioeng.ca coming soon.

Call for Volunteers: AIC and EIC Liaison Officers

Volunteer CSBE/SCGAB members are solicited to act as Liaison Officers between the CSBE/SCGAB and each of the Agricultural Institute of Canada (AIC) and the Engineering Institute of Canada (EIC).

The CSBE/SCGAB is a member society in both the AIC and the EIC. The Council has determined that a Liaison Officer should be appointed to strengthen the relationship of the CSBE/SCGAB with these organizations. The institutes are valuable forums for interaction with government and other professional organizations involved in agriculture or engineering at the provincial, national, and international levels. CSBE/SCGAB involvement in these institutes is an important means by which the bioengineering profession can influence agricultural and engineering policy on the national stage. More information about these institutes can be found on their websites: www.aic.ca and www.eic-ici.ca.

This role of Liaison Officer involves monitoring the activities of the institute by participating actively in its meetings and activities whenever possible, representing the interests of CSBE/SCGAB to the institute when appropriate, and keeping the CSBE/SCGAB Executive Council apprised of matters concerning the institute. The Liaison Officer will advise the CSBE/SCGAB executive as required, and submit an annual written report to the CSBE/SCGAB Executive Council. A Liaison Officer will serve a two-year term which may be renewed for additional terms upon mutual agreement of the Council and the Officer.

If you are willing to serve the CSBE/SCGAB in one of these capacities, please contact Grant Clark (grant.clark@mcgill.ca) or Secretary Jim Townsend (bioeng@shaw.ca).

Volontaires demandés: Agents de liaison pour l'IAC et l'ICI

Comme membre du CSBE/SCGAB, nous vous sollicitons en temps que volontaire, à servir comme officier de liaison entre la CSBE/SCGAB et l'**Institut agricole du Canada** (IAC) et l'**Institut canadien des ingénieurs** (ICI).

La CSBE/SCGAB est une société membre à la fois de l'IAC et de l'ICI. Le Conseil juge que la CSBE/SCGAB se doit de nommer un agent de liaison afin de renforcer les liens entre la CSBE/SCGAB et ces organismes. Ces instituts sont d'importants forums permettant de dialoguer avec des organisations gouvernementales et professionnelles, oeuvrant dans les domaines de l'agriculture et du génie à l'échelle provinciale, nationale et internationale. Pour la CSBE/SCGAB, la participation aux activités de ces instituts représentera un important outil permettant le domaine des bio-ingénieries d'influencer les politiques agricoles et d'ingénierie sur la scène nationale. On peut trouver plus d'information sur ces instituts à leurs sites Web: www.aic.ca et www.eic-ici.ca.

Ce rôle d'agent de liaison nécessitera un suivi des activités de l'institut découlant d'une participation active dans ses réunions et activités, lorsque possible. De plus, l'agent devra garder le Conseil exécutif de la CSBE/SCGAB au courant des plus récentes questions concernant les instituts. Au besoin, l'officier de liaison en avisera l'exécutif de la CSBE/SCGAB, et présentera un rapport annuel au conseil exécutif de la CSBE/SCGAB. L'agent de liaison servira un mandat de deux ans, pouvant s'étendre par entente mutuelle avec le conseil.

Si vous êtes prêt à servir la CSBE/SCGAB à ce titre, veuillez rejoindre Grant Clark (grant.clark@mcgill.ca) or le secrétaire Jim Townsend (bioeng@shaw.ca).

MAKE YOUR PLANS NOW TO ATTEND THE AGM IN PEI.

Planning for the 2009 AGM and Technical Conference is in the final stages. The next important phase of the process is for you to register for the conference. All the information you need to make your plans and register for the AGM and associated functions is contained on the CSBE/SCGAB web site. Click on Upcoming Meetings and follow the links to Registration.

You may register for the conference by using the secure on line CSBE/SCGAB conference registration and payment system or by filling in the dynamic PDF registration form and faxing (secure) or mailing the completed printed form to the conference office. Payment may be made by noting your credit card information on the form or sending your form and cheque in the mail. The address is listed on the bottom of the form.

Please note that the early bird registration date is May 12. Registering by this date will reduce your conference costs considerably and it will help the local arrangements committee with its planning. If you are travelling by air, and need shuttle bus transportation to the conference, please note your flight information so ground transportation will be available upon your arrival. If applicable, also include the name of your guest and any children so name tags can be pre-printed for your registration package.

The conference schedule is available on the web site. A quick review shows that the first event is the Meet and Greet reception on Sunday evening. Monday morning and afternoon features concurrent technical sessions. The AGM is held during an extended noon break. Monday evening will feature an informal social event "Over the Coals and Under the Moon". This social event features a fully themed setting, lobster and mussel dinner and local entertainment.

Concurrent technical sessions will continue on Tuesday morning. In the afternoon there is a choice of two separate technical tours as well as a separate visit to Greenwich National Park, which will be of interest to companions and children. The park features an interpretive center, swimming at the sandy beaches and board walk trails through natural areas. Click on the Workshop and Tours link for more information on these tours. The tours will arrive back at the resort in time to get ready for the Awards Banquet.

Wednesday morning will feature concurrent technical sessions and the conference will conclude with the noontime Student Awards Luncheon and Presentations. Transportation will be provided to the airport.

In addition to the organized conference activities, Rodd Brudenell River Resort offers a wide variety of on-site activities, including two championship golf courses, outdoor and indoor swimming pools, Canoe/Kayak/Bike rentals, tennis courts, recreation program, horseback riding, a childrens play area, etc. For more information on the Rodd Brudenell River Resort, please go to the Rodd Hotel web site at www.roddhotelsandresorts.com and click on Prince Edward Island / Brudenell. To make room reservations call the Rodd central reservations office at 1-800-565-7633 or fax (902) 629-2325



Conference attendees are encouraged to extend their stay in PEI by arriving early or staying a few days following the conference. Contact the hotel regarding golfing packages or other resort activities. The CSBE web site has links to PEI and other Atlantic Provinces tourism web sites. There are lots of interesting and fun events in the region, so plan to make the conference the start of a wonderful summer holiday in the East.

I hope to see you at the AGM. I know you will have a great experience.

Graeme Linkletter, P. Eng. Chair, Local Arrangements Committee

A few words from your CSBE/SCGAB Society Secretary/Manager



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The 2009 Annual General Meeting and Technical Conference organizers are breaking new ground for the Society! They have arranged for online registration at www.bioeng.ca for the first time. The service will be up and running very soon.



Annual General Meeting and Technical Conference
Brudenell River Resort, Prince Edward Island
July 12 - 15, 2009



And look what is waiting for you at the meeting site. You can see the photo below and others on line at:

www.roddhotelsandresorts.com/ourhotels/pei/brudenell/index.asp



Main Entrance to Hotel Lobby

I'll see you there! (more photos on next page)

COAST TO COAST/D'UN OCÉAN À L'AUTRE

Alberta Regional News

Len Ring

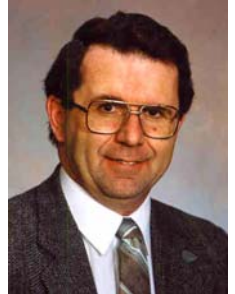
tel: 403-381-5176; fax: 403-382-4406

eml: len.ring@gov.ab.ca

At the Alberta Irrigation Projects Association's conference held in Lethbridge in February **Ron Renwick** and **Len Ring** were each presented with an AIPA Gold Award with their over 30+ years of service each to Alberta's irrigation industry.

Robert Kok, past-president, has indicated that they are in dire need of a director for the CSBE Foundation. If anyone is interested in this position, please contact Robert directly at Robert.Kok@McGill.ca.

This will be my last newsletter as the Alberta Regional Director for ASBE. The new Regional Director will be appointed, or elected, in the near future. If anyone else would like to be considered for the position, this is your last chance to indicate your interest. Contact LRing@telus.net if you are interested.



Saskatchewan Regional News

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News from ABE Dept.

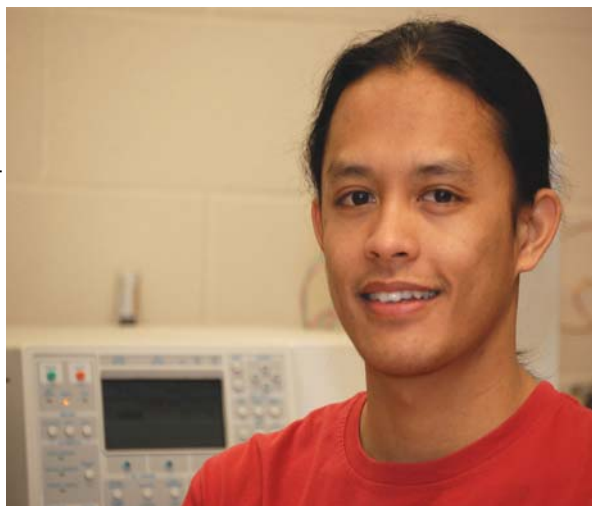
The 50th Annual Awards Ceremony of the College of Engineering was held at the TCU Place, Saskatoon, on January 28, 2009. Eleven of our ABE undergraduate students were awarded scholarships.

Congratulations to Brendan Christensen for getting the APEGS Prize and the Saskatchewan Mining Association Environmental Scholarship, Devon Schollar for the Kenneth Bimman Scholarship, Jasyn Henry, Eric Lamontagne, Laura McNary and Devon Schollar for the Uof S Bursary, Lana Obach for the Mossis Industries Evan Hardy Memorial Scholarship, Zacharie Martin for the Harvey Undergraduate Scholarship, Joel Gervais for the John Deere Ltd. Scholarship, Kira Goff for the Niedermaier Scholarship, and Brent Laroque for the SaskEnergy Awards for Aboriginal Students. Lyndon Graff (M.Sc. student) was awarded Oliver Symes Memorial Scholarship and Kramer Ltd. Awards.

The following **graduate** students were awarded the Graduate Scholarships: Phani Adapa, Joy Agnew, William Campbell, Olayide Fabunmi, Jimmy Fung, Zhu Gao, Lyndon Graff, Myra Martel, Sabyasachi Mishra, Eleonor Navia, Rahim Oraj, Anup Rana, Ryan Roberge, Majid Soleimani and Eric Veikle.

UofS Graduate Student Wins 2009 Banff Pork Seminar Student Competition

Lyman Moreno, graduate student in the Division of Environmental Engineering, College of Engineering, University of Saskatchewan won first place in the Graduate Student Research Competition at the 2009 Banff Pork Seminar (BPS) held in January. Initiated in 1972, BPS is an annual event attended by pork producers, researchers, agribusiness representatives, and extension specialists from North America, Europe and Asia. Six finalists selected from 22 abstracts submitted for poster presentation at the Conference were invited to make an oral presentation before a panel of judges composed of industry and research representatives. Lyman presented his research work on controlling emission of hydrogen sulphide from swine barns, which is supervised by Dr. Bernardo Predicala, Research Scientist at Prairie Swine Centre and Adjunct Professor at Department of Agricultural and Bioresource Engineering, and Dr. Mehdi Nemati, professor at the Department of Chemical Engineering. This research is supported by Saskatchewan Agriculture Development Fund and Agriculture and Food Council of Alberta.



Funded Research Projects – Agricultural Bioproducts Innovation Network (ABIP)

Pre-processing and Densification of Biomass and Biorefinery Interface under Theme 1 - Feedstock Enhancement and Biorefinery Interface of the Agricultural Biorefinery Innovation Network for Green Energy, Fuels & Chemicals Network. Agricultural Bioproducts Innovation Program (L.Tabil with S. Panigrahi as co-investigator), \$215,000 over

(Continued on page 10)

(Continued from page 9)

three years

Transportation, Collection and Post-harvest Processing of Plant Biomass of the The Cellulosic Biofuel Network. Agricultural Bioproducts Innovation Program. (L. Tabil with V. Meda as co-investigator), \$536,000 over 3 years

Evaluation of Drying Technologies and Bran-solubles By-product Development of the Feed Opportunities from the Biofuels Industry Network. Agricultural Bioproducts Innovation Program. (L. Tabil with V. Meda and S. Panigrahi as co-investigators) \$155,000 over 3 years

Congratulations to Dr. Janice Paslawski, P.Eng of POS Pilot Plant Corp, Saskatoon for becoming an Adjunct Professor in the Dept. of Ag. & Bioreource Engineering. She will be Collaborating with Drs. Meda and Fonstad on bio-energy and bioproducts from Microalgae.

Dr. V. Meda has been invited to attend at a **EU** Conference (ISEKI_MUNDUS II) on Internationalisation of Food Studies and Research, at London Metropolitan University, UK, between April 5-8, 2009.



Dr. V. Orsat of McGill University visits the Bioprocess Engineering Research Laboratory in February 2009. Visiting GSEP fellow from IIT (Delhi), Mr. R. Pradhan, demonstrates the functioning of the newly designed flax seed oil expeller. (left)

Dr. Lope Tabil presenting a souvenir to the visiting UG student from Food Process Engineering Dept., TNAU, India, Ms. Avanthika. (right)



Manitoba Regional News

Danny Mann

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Drs. **Digvir Jayas** and **Noel White** received the \$250,000 Brockhouse Canada Prize for Interdisciplinary Research in Science and Engineering. The award is granted by the Natural Sciences and Engineering Research Council of Canada.

On December 8, 2008, **Kris Dick** received an Outreach Award from the University of Manitoba in recognition of his efforts to promote the Alternative Village to both industry and the public. During 2008, Kris offered a two-week long "truss school" as a service to the truss industry in western Canada. Kris was also instrumental in hosting the third "Northern Climates Alternative Building Design Day" at the Alternative Village.

Ron Britton received the Leadership Award from the Association of Professional Engineers and Geoscientists of Manitoba (APEGM) in October 2008. The award is presented "in recognition of his outstanding leadership and use of scientific knowledge for the benefit of engineering and geosciences professions in Manitoba and all his contributions to the education of new generations of students and future engineers."

The Faculty of Engineering at the University of Manitoba received special funding to hire 6 new professors to increase the teaching capacity in the various engineering programs to enable internationally-educated engineers to participate in the IEEQ program (this is a program to allow engineers who were educated elsewhere to have their credentials evaluated so that they can become registered professional engineers in Manitoba). Dr. **Kris Dick** has been hired as the IEEQ Professor assigned to the Biosystems Engineering program. Kris officially began his new role in the Department as of January 1, 2009.

Ron Britton spent the first two months of 2009 serving as the Acting Dean in the Faculty of Engineering, University of Manitoba.

Perry Klassen, a fourth-year Biosystems engineering student, received \$1000 as the 2009 recipient of the CSBE/SCGAB Foundation Undergraduate Scholarship. The Scholarship was awarded to the Biosystems Engineering student who is a student member of the Society and who had the highest GPA in the preceding fall semester.

Case New Holland (CNH) has donated a tractor cab to the Department of Biosystems Engineering. The modern cab is to replace the 40-year-old cab that is currently being used for the tractor-driving simulator located in the Agricultural Ergonomics Laboratory, the research laboratory of **Dr. Danny Mann**.

Dr. **Anubha Kaushik** (Professor, Dept. of Environmental Science & Engineering, Guru Jambheshwar University of Science & Technology) will be visiting with Dr. **David Levin** later in March to discuss various technical aspects of biological hydrogen production and to visit our biofuels lab.

Three undergraduate students completed their Biosystems Engineering degrees following the fall semester. **Stephen Godon, Guang Lu, and Hin Yat Tang** are the newest alumni of the Department of Biosystems Engineering. **Congratulations!**

Research Profile

Dr. **Ying Chen** in the Department of Biosystems Engineering, university of Manitoba, is currently conducting a research project on modeling of bio-fibre materials and fibre decorticating processes. As hemp is a new fibre crop to

(Continued on page 12)

(Continued from page 11)

many countries in the world, there has been limited research in the area of hemp mechanisation, in particular hemp decortication. Decortication is a process of mechanically obtaining fibre from fibre crop. Naturally occurring fibres, such as hemp fibre, are renewable resources, and they are proving their use in creating light weight composite materials. Demand for natural fibre from composite and other fibre industries is increasing. Most of these industries generally require high-quality fibres. However, existing decortication equipment has very limited capability for producing high-quality hemp fibre. One of the major obstacles in improving the decortication process is the general lack of knowledge on hemp mechanical properties and mechanical behaviour during processing, which is needed for the development of effective and energy-efficient hemp decortication equipment.

The main goal of this research is to obtain the knowledge on hemp characteristics related to hemp decortication, including mechanical properties of hemp material from different stages of decortication, and mechanical behaviour of hemp material during the decortication process. The research approaches include comprehensive experimental studies using industrial-scale testing facilities and innovative modeling using the Discrete Element Method (DEM) with a commercial discrete element code, Particle Flow Code in Three Dimension (PFC^{3D}). Modeling of hemp decortication process will be realised within a virtual reality (VR) system. Results from this research project will contribute to a better understanding of hemp mechanical properties and decortication processes, leading to the development of high-performance decortication equipment, in terms of high fibre quality, minimum fibre losses, and low energy cost, to meet the increasing industrial demand for natural fibres.

The project is supported by a NSERC Strategic grant. The expertise of the research team includes hemp decortication [Dr. **Ying Chen**, Department of Biosystems Engineering, University of Manitoba (UM)], DEM, PFC and machinery [Dr. **Claude Laguë**, Dean, Faculty of Engineering, University of Ottawa (UO); Dr. **Huber Landry**, Prairie Agricultural Machinery Institute (PAMI)], fibre material properties and stochastic modeling [Dr. **Wen Zhong**, Department of Textile Sciences, UM], product design and virtual prototyping, [Dr. **Qingjin Peng**, Department of Mechanical Engineering, UM].



View site at www.rodhotelsandresorts.com

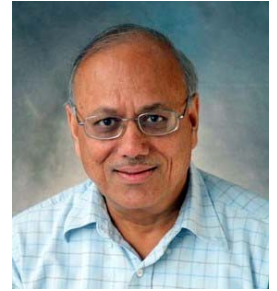
**Online registration at www.bioeng.ca
coming soon.**

Ontario Regional News

Gauri S. Mittal

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eml: gmittal@uoguelph.ca



I. Student Activities

1. Engineers showed Sustainable Innovations (from Campus Bulletin)

Engineering students showed its engineering programs and expertise by hosting the 30th annual Ontario Engineering Competition Feb. 6 to 8. Teams from 15 Ontario universities competed in 6 categories under the theme of sustainable innovation. Almost 14 from Guelph's School participated and won few awards. Design project teams received a problem to solve, build a prototype and presented their solutions. Other categories included consulting, communications, debates and innovative design. For the first time this year, a high school design day also took place. High school students designed a sustainable product and observed the university competition and design projects.

2. U of G hosted Engineering Event for high school girls (from University News Release)

The University of Guelph is one of 15 Ontario universities hosted on Oct. 18 "Go ENG Girl," a one-day event for girls in grades 7 to 10 and their parents that showcased career opportunities in engineering. They heard inspirational success stories from females studying and working in the engineering field. It was initiated by the Ontario Network of Women in Engineering. The program aims to enhance young women's interest in engineering and encourage enrolment in engineering programs at the post-secondary level. Currently women represent less than 20% of first-year engineering students in Ontario. In addition to listening to guest speakers, the girls tackled hands-on projects aimed at helping them develop their skills in engineering design. For parents, an information session explained how they can support their daughters on the road to a career in engineering. There were also displays showcasing the innovative engineering-related research and clubs at U of G.

II. Faculty Activities

1. Water conservation and efficiency award in the residential category by the City of Guelph to Engineering professor Dr. Khosrow Farahbakhsh

A rainwater harvesting system was installed at the Farahbakhsh residence in Guelph in October 2006, to serve as both a test site for a research and development project at the School of Engineering, and a demonstration site for the broader community. Dr. Farahbakhsh realized that rainwater harvesting is only effective if other water conservation measures have already been implemented in the home. Therefore, Dr. Farahbakhsh and his family undertook a comprehensive water conservation program including replacing all water consuming devices with those with highest water conservation ratings including the washing machine, dishwasher, two water closets, all showerheads and all faucets. As well, they changed their front lawn into a low-water use garden with many native plants.

The performance of the rainwater harvesting system over a one-year period resulted in an 89% reduction in storm water run-off from the roof surface and a 32% reduction in demand for mains water, due to the use of rainwater alone. The total reduction in household mains demand due to the installation of both low-flow toilets and a RWH system lowered the consumption of municipal water of approximately 70 L per capita per day (compared with Guelph's average of 230-250 L per capita per day).

(Continued on page 14)

(Continued from page 13)

Based on the experiences gained through this and other demonstration sites, a design manual and sizing tool are being created to aid in the design of future systems. The submission for award can be found at: http://guelph.ca/uploads/ET_Group/waterworks/WCE%20Awards/Farahbakhsh_WCE%20Award%20submission.pdf

2. Water resources research activities of Dr. Ramesh Rudra

Ramesh has been developing approaches for watershed-based source water protection under changing climatic conditions, which are easy to use, environmentally sustainable, economically feasible and socially acceptable. The other focus of the on-going research is to evaluate the effect of regional hydrology including land use activities and manure management on the loading of sediment, nutrients (phosphorus and nitrogen) and pathogens. This requires evaluation of various hydrologic models, identification of their strengths and weaknesses and improvement for application in Ontario conditions. Examples of some active projects are:

(a) Investigation of seasonal hydrology and variable source areas within regions of Ontario:

This addresses various aspects of Ontario seasonal hydrology and its impact on water quantity. The focus is on the investigation of seasonal hydrology by quantifying the seasonal variability of surface runoff, base flow, and tile flow for various regions of the province. It also focuses on the quantification of seasonal variations in soil hydraulic properties and their relationship with hydrologic soil groups; variations of hydrologic soil group within a textural class; and a methodology to model surface runoff contributing areas (variable Source Area).

(b) Development of water quality data base:

The objectives of this project are to develop a comprehensive water quality data set for one of the watersheds in Ontario which could be used to evaluate hydrologic models to estimate pollutants (sediment and nutrients) loads and to evaluate temporal (season and event) pattern of pollutant loadings (flow and concentration) and their relationship with land use activities.

(c) Development of a procedure for monitoring and mapping surface runoff contributing areas:

The objectives of this study are a comprehensive review of literature on the contributing areas and the factors influencing runoff generation. Development of sensors for identification of generated surface runoff to map surface runoff contributing areas. The development and laboratory and field evaluation of these sensors have been completed and now these sensors are used to collect data from a sample watershed for mapping the runoff contributing areas.

(d) Effect of climate change on soil erosion, soil productivity, and drainable water quantity and quality in the Ontario Great Lakes basin:

This focuses on the investigation of changes in temporal and spatial pattern of precipitation (including changes in monthly, seasonal, and annual extremes of short duration rainfall events and Intensity-Duration-Frequency (IDF) curve) and temperature in Ontario Great Lakes basin and to investigate the impact of climate change, by developing climate scenarios, using historical data, climate generators and general circulation models, on water quantity and water quality at field and watershed scale by using modeling approaches.

III. Research Activities

1. New Research Centre to focus on Bioenergy, Sustainability (from University News Release)

(Continued on page 15)

(Continued from page 14)

Bioenergy research and the bioeconomy will be the focus of the University of Guelph's new Centre for Agricultural Renewable Energy and Sustainability (CARES) at the Ridgetown Campus initiated in October 2008. It will bring together highly skilled people and support applied research and knowledge transfer in renewable energy, which is relevant to the public, private and non-profit sectors. The centre will have an agricultural focus, with the objectives of strengthening the agriculture sector, improving sustainability and development, increasing alternative energy and energy conservation, and leveraging education, training and research. It will include a research and demonstration facility to test new technologies to benefit rural Ontario and create new value-added markets for agricultural products. The first project is a farm-scale biodiesel demonstration plant that is currently under construction with more than \$900,000 federal funds.

2. New U of G “Bioproducts Discovery and Development Centre” will revolutionize agriculture (from University News Release)

The University of Guelph opened, in October, the Bioproducts Discovery and Development Centre where researchers will revolutionize the use of agricultural products, turning soy, wheat, corn and other crops into everything from car parts to furniture. This discovery centre is a nexus where physical and engineering scientists and plant biologists will work together on viable solutions to some of today's most pressing problems. The Centre will produce greener bioproducts to substitute non-renewable materials in many manufacturing sectors, consumer goods and services. This includes turning crops into renewable resins, polymers and tough fibres for the production of biobased materials, which will reduce dependency on petroleum materials. These biomaterials can be used for everything from car parts and furniture to building materials to new kinds of rubber.

The Centre director Prof. Amar Mohanty, an international leader in the field of biomaterials holds the \$3-million Premier's Research Chair in Biomaterials and Transportation. The bioproducts centre contains machinery and equipment that can turn plant material into components in the manufacturing process. For example, residues and waste biomass from soy, corn and wheat become plastics used to make bumpers, seats, dashboards and other automotive parts. Prototypes of many of the products have already been produced. U of G researchers are also creating new industrial crops that can be turned into composite materials.

IV. Other News

1. Protecting Lake Simcoe and its watersheds in Ontario (by Dr. Pradeep Goel, Ontario Ministry of the Environment)

Last year the province of Ontario has taken a significant step by passing the *Lake Simcoe Protection Act* on December 10, 2008. This Act is to protect Lake Simcoe, the largest lake in southern Ontario, outside of the Great Lakes. Recently, Draft Lake Simcoe Protection Plan has been released by the province to protect the lake and surrounding areas. This Lake Simcoe Protection Plan would be the most comprehensive watershed-based legislated plan in Canada. The draft plan was developed after input from the people who live and work around Lake Simcoe and is based on the advice from the Lake Simcoe science and stakeholder advisory committees. Plan includes voluntary and mandatory measures to restore and protect the ecological health of Lake Simcoe and its watershed. One of the main objectives of the plan is to improve water quality by reducing the amount of phosphorus entering the lake. Other objectives are to protect and rehabilitate fish habitat, wetlands, woodlands and the vegetation in the watershed. Plan will also address issues related to climate change and invasive species. The Ontario government has also committed \$20 million over four years to support research, monitoring and on-farm stewardship activities in the Lake Simcoe area. The Draft Lake Simcoe Protection Plan has been posted on Ontario Environmental for a 62 day public review and comment period starting from January 13 to March 16, 2009.

Quebec Regional News / Nouvelles régionales du Québec

Stéphane Godbout

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Confirmation d'événement

Récemment, il a été confirmé que l'« International Symposium on Cement Based Materials for a Sustainable Agriculture » se tiendra à Québec du 18 au 21 septembre 2011. Ce symposium spécialisé se tient tous les trois ans. Les derniers se sont tenus à Gent (Belgique) en 2002, à Madrid (Espagne) en 2005 et à Iguazu Falls City (Brésil) en 2008. Un comité local d'organisation sera formé dans les prochains mois pour débiter l'organisation. Vous pouvez communiquer avec Stéphane Godbout (stephane.godbout@irda.qc.ca; 418-646-1075) pour plus d'information.

New event

Recently, it has been confirmed that the « International Symposium on Cement Based Materials for a Sustainable Agriculture » will be held in Quebec City from September 18th to September 21st. This symposium is organised every three years. The three last CSA symposiums were held in Belgium (2002), Madrid (2005) and at Iguazu Falls City in 2008. A local organizing committee will be put in place in the next few months. You can contact **Stéphane Godbout** (stephane.godbout@irda.qc.ca; 418-646-1075) for more detail and information.

INVITATION - RAPPEL

Une Journée d'information scientifique et technique en génie agroalimentaire aura lieu à Saint-Hyacinthe le 25 mars 2009. La Journée elle-même se déroulera au Centre de recherche et de développement sur les aliments (CRDA) le 25 mars 2009, avec présentation orale des communications. C'est donc un rendez-vous pour tous ceux qui sont impliqués dans la profession. Vous pouvez communiquer avec **Philippe Savoie** (philippe.savoie@fsaa.ulaval.ca; 418-657-7985, poste 5166) pour vos demandes de renseignement.



<http://bioeng.ca/st-hyacinthe2009>

INVITATION - REMINDER

An Agricultural and Biosystems Engineering Technical Conference will be held on March 25th, 2009 in Saint-Hyacinthe. The conference itself will be held at the Food Research and Development Centre on March 25, 2009 with oral presentation of all the contributions. This event will bring together a large number of professionals involved in food and biosystems engineering. You can contact **Philippe Savoie** (philippe.savoie@fsaa.ulaval.ca; 418-657-7985, poste 5166) for more details.

Atlantic Regional News

Peter Havard

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eml: phavard@nsac.ca



INVITATION TO ATTEND THE 2009 NABEC MEETING HALIFAX, NOVA SCOTIA

The 2009 Northeast Agricultural and Biological Engineering Conference (NABEC) will be held in Halifax, NS from **July 26 – 29, 2009**, the capital region of Nova Scotia. Canada's first permanent British town was established here in 1749, on the scenic shores of the world's second largest natural harbour. Today, Halifax is Atlantic Canada's largest city, with historic sites, museums, art galleries, churches and shopping areas located within the downtown center and by the waterfront. NABEC 2009 will be held within walking distance of the downtown.



The NABEC meetings have a tradition of a wide variety of topics in the field of Agricultural and Biological Engineering. Presentations about successful or innovative teaching and extension programs are also welcomed. Graduate students are invited to enter into the NABEC Graduate Student Competition by submitting an abstract proposal for either an oral paper or for a poster.

For more information: <http://www.abe.psu.edu/nabec/>

2008 FARM COMPUTER & TECHNOLOGY GUIDE Internet Directory by Western Producer

Canada's largest farm newspaper, **the Western Producer**, will once again be publishing **THE FARM COMPUTER & TECHNOLOGY GUIDE/Internet Directory** in the fall of 2008.

For more information of this publication contact:

Dennis Eklund

The Western Producer – Specialty Advertising

eml: dennis.eklund@producer.com

tel: 1-888-820-8555

NOTICES OF INTEREST

Ecological engineering is the creation of ecosystems *with purpose!*



Practicing professionals, researchers, and students from all disciplines are invited to submit abstracts related to the modeling, design, creation, and management of ecosystems, for presentation at the Annual General Meeting and Technical Conference of the **/La Société Canadienne de Génie Agroalimentaire et de Bioingénierie**.

Examples of areas of application range through microbial bioreactor design, stream daylighting, treatment wetland construction, low-impact urban development, and sustainable agricultural systems, to the analysis and management of global biogeochemical cycles and the creation of space habitats. The conference, held at the Brudenell River Resort, Prince Edward Island, 12-15 July 2009, will include invited speakers, open technical sessions, and posters about ecological engineering, as well as a variety of other topics. These conference features will be of interest to environmental and ecological scientists and engineers, landscape architects, policy makers and planners, government agency personnel, environmental consultants, environmental interest groups, and students.

For more information, visit www.bioeng.ca or directly contact the technical program director, Stefan Cenkowski (cenkows[at]cc.umanitoba.ca).



L'ingénierie en écologie c'est la création d'écosystèmes dans un but précis!

Professionnels actifs, chercheurs et étudiants de toutes disciplines sont invités à fournir des résumés sur la modélisation, le design, la création et la gestion d'écosystèmes pour être présentés lors du Congrès Général Annuel et de la Conférence Technique de **La Société Canadienne de Génie Agroalimentaire et de Bioingénierie/Canadian Society for Bioengineering**.

Les exemples de domaines d'application vont du design d'un bioréacteur microbiactériologique à l'analyse et la gestion des cycles biogéochimiques mondiaux et la création d'habitats en passant par la création des zones humides artificielles, les développements urbains à faibles impacts, ou encore un système d'agriculture durable. La conférence, qui sera tenue à Brudenell River Resort, Prince Edward Island du 12 au 15 juillet, sera composée de présentations orales, de sessions techniques en libre accès. Des affiches seront exposées sur l'ingénierie en écologie ainsi que sur de nombreux autres sujets. Cette conférence a vocation de servir aux scientifiques et ingénieurs en environnement et écologie, ainsi qu'aux architectes-paysagistes, aux conseillers politiques, au personnel des agences gouvernementales, aux consultants en environnement, aux groupes d'intérêts environnementaux et aux étudiants.

Pour plus d'information, visitez le site internet www.bioeng.ca ou contactez directement le directeur du programme technique, Stefan Cenkowski (cenkows[at]cc.umanitoba.ca).



24th European Photovoltaic Solar Energy Conference and Exhibition

The 24th European Photovoltaic Solar Energy Conference and Exhibition (EU PVSEC) is the leading platform for the world's PV Solar specialists. It will be held from 21st to 25th September 2009 at the CCH Congress Center and International Fair Hamburg, Germany.

With this email we like to take the opportunity to remind you of the submission of abstracts for the 24th EU PVSEC. All authors wishing to contribute and to present innovative development, progress and results to the PV community from around the globe are highly welcome to submit their **abstract by 30th January 2009**.

For detailed information about conference subjects and submission of abstracts please see the '**Call for Papers**' which can be downloaded from: <http://www.photovoltaic-conference.com/286.0.html>

Authors interested in presenting an abstract are welcome to submit it by using the comfortable Online Submission Form on our Conference website: <http://www.photovoltaic-conference.com>

All accepted papers that will be presented and submitted during the Conference will be made available in the Proceedings of the Conference (on CD ROM). **New:** In agreement with the corresponding authors all presented papers will also be officially published on web for citation purposes.

Our Conference team is glad to assist you with any supplementary inquiries: pv.manuscripts@wip-munich.de. Your contact person is Ms. Anna Wemer. Together with her colleagues she will answer all questions you might have.

We look forward to meeting you on the occasion of the 24th EU PVSEC in Hamburg 2009, the most inspiring forum for the global PV Solar sector.

The above was sent on behalf of the Technical Programme Chair by the:

EU PVSEC Organiser
WIP - Renewable Energies
Sylvensteinstr. 2
81369 Munich
Germany
Tel. +49-89-720 12 735
Fax +49-89-720 12 791
E-Mail: pv.conference@wip-munich.de
<http://www.photovoltaic-conference.com>

24th European Photovoltaic Solar Energy Conference and Exhibition
CCH - Conference Center Hamburg - Germany

Conference 21 - 25 September 2009
Exhibition 21 - 24 September 2009
<http://www.photovoltaic-conference.com>

Journal of Horticulture and Forestry (JHF)

The *Journal of Horticulture and Forestry (JHF)* is a multidisciplinary peer-reviewed journal published that will be monthly by Academic Journals (<http://www.academicjournals.org/JHF>). JHF is dedicated to increasing the depth of the subject across disciplines with the ultimate aim of expanding knowledge of the subject.

Editors and reviewers: JHF is seeking qualified researchers to join its editorial team as editors, subeditors or reviewers. Kindly send your resume to JHF@acadjourn.org

Call for Papers: JHF will cover all areas of the subject. The journal welcomes the submission of manuscripts that meet the general criteria of significance and scientific excellence, and will publish:

- Original articles in basic and applied research
- Case studies
- Critical reviews, surveys, opinions, commentaries and essays

We invite you to submit your manuscript(s) to JHF@acadjourn.org for publication in the Maiden Issue (April 2009). Our objective is to inform authors of the decision on their manuscript(s) within four weeks of submission. Following acceptance, a paper will normally be published in the next issue. Instruction for authors and other details are available on our website; <http://www.academicjournals.org/JHF/Instruction.htm>

JHF is an Open Access Journal: One key request of researchers across the world is unrestricted access to research publications. Open access gives a worldwide audience larger than that of any subscription-based journal and thus increases the visibility and impact of published works. It also enhances indexing, retrieval power and eliminates the need for permissions to reproduce and distribute content. JHF is fully committed to the Open Access Initiative and will provide free access to all articles as soon as they are published.

Emeje Cynthia
Editorial Assistant
Journal of Horticulture and Forestry (JHF)
Academic Journals
E-mail: jhf@acadjourn.org
<http://www.academicjournals.org/JHF>

Help Wanted to Identify MEMBERS EMERITUS

Last year Council redefined the membership category of Member Emeritus to read as follows:

Member Emeritus - A member aged 65 or more who has retired from professional life but who wishes to maintain professional contact with the CSBE/SCGAB. A member or ex-member in this member category may be invited to become a 'Member Emeritus' of CSBE/SCGAB. Annual fees will be as listed in Paragraph 4. Members Emeritus will receive the CSBE/SCGAB Newsletter in electronic format.

If you fit or someone that you know fits this definition please contact the CSBE/SCGAB office to get your or their designation changed to Member Emeritus. In some cases, but not all, it will mean a reduction in dues. Perhaps you know of an older retired member who might not be aware of this change. Please send their name and email address to the Society office. Contact the Society Manager at bioeng@shaw.ca. Thank you for your cooperation.



Technology and Management to Increase the Efficiency in Sustainable Agricultural Systems

The preliminary registration is open for this CIGR V Symposium to be held from 1st to 4th September 2009, at the Convention Centre of Rosario, Argentina. (deadline March, 31, 2009).

On the preliminary registration page you will find also abstract instructions (template and sample).

If you need an invitation check the appropriate option in the user registration form, and, based on your data we will provide you a personal, official invitation letter to the symposium.

Your preliminary registration and/or abstract submission does not involve any payment. It just helps us to establish the Symposium program. For those who already registered for the conference we wish to thank you for your preliminary registration.

We look forward to meeting you in Rosario.

Prof. Pietro Piccarolo, CIGR V President, University of Turin, Italy

Dr. Ricardo Bartosik, INTA, Argentina

Prof. Remigio Berruto, University of Turin, Italy

If you have questions send an e-mail to: info@cigr2009argentina.org

EBSCO Publishing

Would your association benefit from a comprehensive resource which can assist in increasing sponsorships, recruiting volunteers, and providing guidance with grant writing? Is your group looking for new fundraising ideas? Let EBSCO Publishing's *Nonprofit Organization Resource Center* assist you.

This database provides access to the full-text articles of magazines and journals as well as additional sources specifically designed to support the ongoing functional and information needs of the nonprofit sector. Its extensive scope and content provide users with a wealth of extremely useful information essential to all types of nonprofit sector organizations. The database features hundreds of thousands of records, and offers complete coverage of more than 100 full-text titles, many of which are available in native (searchable) PDF format.

The *Nonprofit Organization Resource Center* offers unmatched full text coverage of information relevant to many areas integral to the successful function of nonprofits including, but not limited to:

Grant writing

Fundraising

Volunteering

Charitable and philanthropic issues

Social entrepreneurship

And much more

For more information or to request a free trial, contact information@ebSCOhost.com.

POND PULSE NEWS

This is only a partial list of information you will find in the May issue of POND PULSE. Click on pondpulse.com/2009/01_09.pdf to go directly to the Newsletter.

Message from the President Huntington: If you are not planning for spring start ups now you may miss the boat. Why? Click here to read more <http://pondpulse.com/2009/01_09.pdf>

28th Annual AKCA Seminar: Representatives from Great Lakes Bio Systems will be exhibiting at Booth #334. Click here to read more <http://pondpulse.com/2009/01_09.pdf>

New IPPCA Membership Opportunities for 2009. Supporting member: (Level 1)\$25.00 per year dues. Anyone interested in supporting Click here to read more <http://pondpulse.com/2009/01_09.pdf>

Pondit at For Humanity 2009: What is Pondit at For Humanity? IPPCA Top Gun contractors &. Click here to read more <http://pondpulse.com/2009/01_09.pdf>

Biggest Event of Japanese Koi in Hawaii, Honolulu, HI January 18, 2009, On February 21st and 22nd. Click here to read more <http://pondpulse.com/2009/01_09.pdf>

INFO TANZA 2009: By popular demand. Click here to read more http://pondpulse.com/2009/01_09.pdf>

Carp In North America: Perhaps you have heard that carp, which is an exotic. Click here to read more <http://pondpulse.com/2009/01_09.pdf>

Synergy and technical development International conferences in Agricultural Engineering

Due to the number of requests received, the new deadline for abstract submission has been extended up to **30. April 2009**.

If you are interested in abstract submission and would like to present your work at the conference, you've got some more time to send your proposals.

Main topics

Synergy and Technical development in Agricultural Engineering:

Rational Use of Energy in Agriculture and Economical Use of the Renewable Sources in Connection with Environmental Protection

Please note the following dates: Abstract submission: April 30, 2009

For more details please visit our official website, where the online registration can be done.

<http://www.synergy2009.szie.hu>

In case of further help please contact the Conference Secretariat at the e-mail address: synergy2009@gek.szie.hu



17th European Biomass Conference & Exhibition
From Research to Industry and Markets
CCH-Congress Center, Hamburg, Germany
Conference 29 June - 03 July 2009 • Exhibition 29 June - 02 July 2009

For questions concerning the conference, please contact Ms. Anna Andretta at: papers@etaflorence.it
We look forward to your participation in Hamburg 2009.

Sincerely yours,
Jean-François Dallemand
European Commission - DG Joint Research Centre
Coordination of the Technical Programme

**International Conference on
Nutrient Recovery from Wastewater Streams
May 10-13, 2009 - Vancouver, British Columbia, Canada**

Programme and information attached

With 23 sessions, plenary presentation, expert panel discussion and poster sessions, this conference will bring together the resource stream industries, regulators, researchers, process engineers and managers, to develop joint projects for phosphorus and nitrogen recovery and reuse.

On May 14th, site visits will be organised to recently commissioned full-scale Ostara/UBC municipal wastewater struvite plants (Edmonton, Alberta or Portland, Oregon,) and Fraser Valley stream and reservoir fertilization sites. Conference partners include the University of British Columbia, Stantec, Ostara, CIWEM, Global Phosphate Forum, Bonneville Power, Metro Vancouver, Dayton & Knight and NORAM.

Deadline for early registration : February 28, 2009.

After this date, the rates will increase so be sure to take advantage of the savings and register before the early registration deadline!

Visit the conference website www.nutrientrecovery2009.com for these details and more!

Bioenergy Engineering '09

October 11-14, 2009

Hyatt Regency, Bellevue, Washington
www.bioenergyengineering2009.com

The American Society of Agricultural and Biological Engineers (ASABE), in partnership with peer engineering and professional organizations, announces the first comprehensive multi-disciplinary International Bioenergy Engineering Conference providing professional education for all aspects of engineering in the biofuels and bioenergy systems from genetics through production, distribution and use. The unique agenda will offer many options to provide a forum for the exchange of ideas, dissemination of knowledge, and the pursuit of initiatives to answer the changing societal, economic and political concerns. Please visit www.bioenergyengineering2009.com for additional details.

JOB OPPORTUNITIES

Postdoctoral Position in Bioenergy and Biofuels

We are looking for an individual with research experience in bioenergy and biofuels immediately. The position is initially for one year and has a possibility of extension. The remuneration will depend on the qualifications.

Desired Qualifications: The candidate should have a PhD in relevant engineering/science discipline with emphasis on techno-economic assessment, simulation and modeling of biomass energy systems. Candidate should also have a background in biomass production, harvesting, processing, and conversion to energy. Experience in energy and environment systems analysis will be added advantage.

The successful candidate will have the opportunity to join an active group of researchers in the areas of bioenergy and biofuels. The candidate is expected to carry out research on assigned project(s). The candidate will also have the opportunity to develop and initiate new research activities in the relevant areas.

Interested candidates should send their curriculum vitae and the names of three references to:

Dr. Amit Kumar
Assistant Professor
Department of Mechanical Engineering
University of Alberta
Edmonton, Alberta
Canada T6G2G8
E-mail: Amit.Kumar@ualberta.ca
Tel: +1-780-492-7797
Fax: +1-780-492-2200

Online Journal Submission Information

The Online Journal Submission has been activated on the web site www.bioeng.ca. Please follow the link "submit a paper" on the paper submission page that will take you to the login screen. Please register yourself as an author, reader, and reviewer providing all contact information and keywords describing your expertise. You only need to register once. Thereafter, you can access the same account to submit a paper, read published papers, or review papers.

L'option de soumission d'articles en ligne est maintenant disponible. Veuillez suivre le lien "Soumettre un article" à la page de soumission, qui lancera le portique d'inscription. Veuillez vous y inscrire à titre d'auteur, lecteur ou évaluateur et remplissez les sections relatives aux renseignements décrivant votre champ d'expertise. Vous devrez vous inscrire qu'une seule fois. Par la suite, vous pourrez accéder au même compte d'utilisateur pour soumettre vos articles, lire d'autres articles ou effectuer votre évaluation d'un projet d'article.

NOTICES TO MEMBERS

From time to time various agencies request that the CSBE/SCGAB office supply the list of members for the distribution of certain products. Your Secretary, James Townsend, is reluctant to do so since we all have too much spam as it is. My approach will be to list the agencies, and their products, in each Perspectives Newsletter so that members can make personal contact with the agencies if they so wish.

Educational Programs Innovations Center (EPIC)

This web site, available at www.epic-edu.com, offers information on seminars/short courses, on-site training, international educated engineers, water and wastewater courses, management online courses, French courses, mailing lists, and a search engine for other topics. Check it out!

Looking for a job or offering a job?

Most of us are aware of the **employment opportunities** that are featured on the web site www.bioeng.ca under the Jobs Banner (lower right on home page). Through EIC we have access to additional services. Check it out at www.EngineeringCareers.ca.

Are you interested in Agriculture? Urban Agriculture News that is!

The latest issue of Urban Agriculture News is available at: <http://www.urbanagriculture-news.com/current.php>

In addition, there is a live feed of urban agriculture news at: <http://www.urbanagriculture-news.com/>

Your access to the news service, the newsletter and archives is 100% free. You may access the archive for free at: <http://www.urbanagriculture-news.com/archive.php>

It is hoped that you continue to find the Urban Agriculture News useful in your work, and that you will refer us to your colleagues engaged in the urban agriculture. The website is: <http://www.urbanagriculture-news.com>. New issues of Urban Agriculture News are available monthly.



Online registration at www.bioeng.ca coming soon.

Coming Events

... **2009**

... **International Conference on Nutrient Recovery from Waste water Streams**, 2009 05 10-13, Vancouver, BC Canada. More information at www.civil.ubc.ca/pcwm/

... **2nd CLIMATE CHANGE TECHNOLOGY CONFERENCE/2^e Conférence sur les technologies du changement climatique** May 12-15 mai, 2009 Hamilton, Ontario, Canada. More information at www.cctc2009.ca

... **2nd Chaotic Modeling and Simulation International Conference (CHAOS2009)**, 2009 06 01-05, Chania, Crete, Greece. More information at www.chaos2009.net

... **ASABE Annual International Meeting**, 2009 06 21-24, Grand Sierra Resort, Reno, Nevada. More information at www.asabe.org.

... **World Congress of Computers in Agriculture**, 2009 06 22-24, Reno, Nevada, USA. More info at www.asabe.org/meetings/wcca2009/index.htm.

... **CSBE/SCGAB AGM & Technical Conference**, 2009 07 12-15, Charlottetown, Prince Edward Island. View information on site at: www.roddhotelsandresorts.com for Brudenell River Resort.

... **Second Farming Systems Design Symposium**, 2009 08 23-27, Monterey CA. More information from jerry.hatfield@ars.usda.gov.

... **Bioenergy Engineering '09**, 2009 10 11-14, Hyatt Regency, Bellevue, WA, USA. More information at www.bioenergyengineering2009.com

... **2010**

... **The XVII CIGR World Congress 2010**, 2010 06 13-18, Quebec City, QC Canada. More information at www.bioeng.ca/Events/CIGR/index.htm.

... **2014**

... **The XVIII CIGR World Congress 2014**, 2014 09 ??, The Beijing International Convention Center, Beijing China. More information in CIGR Newsletter No. 82, page 6 (see below for web site).

CIGR Newsletter (BULLETIN DE LA CIGR)

CIGR publishes a quarterly Newsletter in English and French. It is also available in Arabic, Chinese and Russian translations. The Russian translations of CIGR NL have been available from CIGR NL 75.

A quarterly publication that is available to all members, the CIGR Newsletter contains information on member associations, members, sections, working groups, **future events such as congresses, seminars, symposia, workshops, etc.** Furthermore it highlights new publications, lists publications that are available from CIGR and publicizes vacant positions. View the latest newsletters at: www.cigr.org/CIGRNewsletters.htm

AIC Newsletter

Go to www.aic.ca to access AIC news and information.

EIC Information and News

Go to www.eic-ici.ca for information, news and job board

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