



FALL 2007 NEWSLETTER

MEET A FEW PEOPLE LINKED WITH AICISE

Matt Ursenbach is a Research Engineer with the In Situ Combustion Research Group. Under the direction of Drs. Gord Moore and Raj Mehta he coordinates much of the day-to-day operations. Matt holds an M.Eng in petroleum engineering from the U of C and has been associated with the research group since 1984. He has co-authored numerous papers and technical reports on air injection-based oil recovery processes, safety, soil remediation, and *in situ* upgrading.



Dr. Steve Hubbard is an Assistant Professor in Geoscience and AICISE Lead Investigator. He holds a Bachelor and Master degrees from U of A and Ph.D from Stanford. His research interests include the application of sedimentology and stratigraphy to the exploration and development of hydrocarbon reservoirs. His current research focus includes: sedimentology and seismic stratigraphy of Oligocene-Miocene deep-water strata, and sedimentological applications to *in situ* heavy oil development in Alberta.



Punitkumar Kapadia is a Ph.D student in Chemical and Petroleum Engineering in the Schulich School of Engineering. He has completed his Bachelor degree in Chemical Engineering from Regional Engineering College (presently known as S. V. National Institute of Technology, Surat), Gujarat, India. He has done M.Tech. from Indian Institute of Technology Roorkee, India. He has worked as a commissioning engineer and assistant technical engineer at Nuclear Power Plants, India for four years. He also worked as a lecturer at S. V. National Institute of Technology, Surat, India for one year.



MEET TWO NEW AICISE STUDENTS



David Patruyo
Venezuela
Master student (Ron Spencer)
Geosciences



Baharan Moini
Irán
Master Student (A. Kantzas)
Chem & Petro Engineering

SOME NEW & OLD FACES AROUND AICISE



Jerry Jensen
Geostatistics



John Chen
CMG Chair



Mark Hancock
Senior Technologist



Michael Benedek
Tomography/Imaging



Hebert Molero
Research Associate



Pawel Ciecierski
Lab Technician

STUDENT SCHOLARSHIPS

Amir Zamani received the following scholarships: Dr. Wojciech Studzinski Memorial Scholarship in Chemical Engineering; Petroleum Society of CIM Graduate Scholarship; and Best Graduate Student Presentation Award in Canadian International Petroleum Conference 2007 (CIPC). Wow! Congratulations Amir.

1ST ANNUAL AICISE STUDENT CONFERENCE

The 1st Annual AICISE Student Conference was held on Wednesday, September 26 at the Teahouse at Canada Olympic Park.



Eighteen students presented papers showcasing their research projects. The 'Best Student Paper Award' was presented to John Thompson, a student of Dr. Pereira's, at the banquet, which was held at the top of the 90 meter ski Jump. The event was also attended by several of the Principal Investigators, Lead Investigators, industry representatives. By all accounts, it was a successful event.

UPCOMING EVENTS OF INTEREST TO AICISE

Heavy Oil Conference: AICISE will have a booth at the World Heavy Oil Conference in Edmonton in March 2008; and with ISEEE at the Global Petroleum Show in Calgary in June 2008. Volunteers will be needed to staff the booth.

Alberta Ingenuity Gala Event: Ingenuity is showcasing the five Centres of Ingenuity on January 30, 2008 at the Shaw Centre in Edmonton. AICISE will be one of the Centres featured. We will be taking 10 grad students and 5 to 10 Principal Investigators and the Centre Manager to participate in the all-day & evening event.

ANNUAL AICISE TAC MEETING

The annual meeting of AICISE's Technical Advisory Committee is scheduled for December 11 & 12, 2007. Each of the AICISE Principal Investigators and Lead Investigators will be presenting a summary report about the progress made in the past year. This is AICISE's opportunity to shine and demonstrate our stuff.

FESTIVE SEASON & END OF TERM AICISE PARTY

Students, staff and special guests are being invited to attend the AICISE Festive Season & End of Term Party. It is by invitation only and will be held in the Alberta Room of the U of C Dining Centre from noon on December 12. Members of the AICISE TAC will also be present to mingle with students and guests. Please don't forget to RSVP to Susan Dooley at sdooley@ucalgary.ca.

AICISE STUDENT MILESTONES

The Prince of Persia, Behdad Moini, has successfully defended his Master thesis and as of October 1 started working for a small oil & gas company. Congratulations Behdad! Behdad will be convocating in November. The gapping hole left in the graduate student ranks by Behdad's departure has been ably filled by the Princess of Persia, Baharan Moini, Behdad's sister.



Herbert Loria, the Prince of the Mayan Riviera in Mexico, successfully passed his Candidacy Exam in early October and is now working on drafting his dissertation. Congratulations Herbert! You have passed another major milestone alone the road toward becoming a Ph.D. Cheers.



CONGRATULATIONS....TEAM!

Congratulations to the AICISE/Catalyst group ball team for reaching the finals of the 2007 GSA summer baseball league. The competition in the final game was fierce resulting in the team taking second place. Way to go team!

RECENT AICISE THESES AND PUBLICATIONS:

THESES

- Sequera, B. 2007. Numerical Simulation of LTO Reactions. Unpublished Masters Thesis, University of Calgary.
- Szeoke, J.A. 2007. The Onset of Asphaltene Precipitation. Unpublished Masters Thesis, University of Calgary.
- Vasquez, A. 2007. Ultra Dispersed Catalysts for Hydroprocessing. Unpublished Masters Thesis, University of Calgary.

PUBLICATIONS

- Bennett, B., Fustic, M., Farrimond, P., Huang, H. and Larter, S.R. 2006. 25-Northopanes: Formation during biodegradation of petroleum in the subsurface. *Organic Geochemistry*, Vol. 37 (7), pp. 787-797.
- Bennett, B., Larter, S., Carbognani, L. and Pereira-Almao, P. (undated). Identification and characterization of reaction proxies for monitoring the progress of thermal processing of heavy oils and tar sands (In preparation).
- Carbognani, L., Pereira-Almao, P., Gonzalez, M. and Trujillo, G. 2007. Heavy oil vacuum residue and vacuum gas oil upgrading studied by high temperature simulated distillation. *Molecular Structure of Heavy Oils and Coal Liquefaction Products*, April 2007, pp. 12-13. (IFP-Lyon, France).
- Carbognani, L., Gonzalez, M.F. and Pereira-Almao, P. 2007. Characterization of Athabasca vacuum residue and its visbroken products: Stability and fast hydrocarbon group-type distributions. *Energy & Fuel*, Vol. 21, pp. 1631-1639.
- Carbognani, L., Lubkowitz, J., Gonzalez, M.F. and Pereira-Almao, P. 2007. High temperature simulated distillation characterization of a vacuum residue and its visbroken products. Evidence for Secondary "In-column" Cracking of nC₇ Asphaltene. ASAP Article, web release. August 18, 2007.
- Gonzalez, M.F., Sosa-Stull, C., Lopez-Linares, F. and Pereira-Almao, P. 2007. Comparing asphaltene adsorption with model heavy molecules over macroporous solid surfaces. *Energy & Fuels*, Vol. 21, p.p. 234-241.
- Lopez-Linares, F., Sosa, C., Gonzalez, M.F. and Pereira-Almao, P. 2005. The adsorption of asphaltenes compared to the model heavy molecules over macroporous solid. *American Chemical Society, Div. Fuel. Chem.* Vol. 50 (2), p. 786.
- Lopez-Linares, F., Carbognani, L., Gonzalez, M.F., Sosa-Stull, C., Figueras, M. and Pereira-Almao. 2006. Quinolin-65 and Violanthrone-79 as Model Molecules for the Kinetics of the Adsorption of C₇ Athabasca Asphaltene on Macroporous Solid Surfaces. *Energy & Fuels* Vol. 20, p.p. 2748-2750.
- López-Linares, F., Carbognani, L. and Pereira-Almao. 2007. Study of the adsorption of heavy hydrocarbons over solid sorbents. *Molecular Structure of Heavy Oils and Coal Liquefaction Products*, pp. 12-13. April 2007. (IFP-Lyon, France).
- Loria, H., Pereira-Álamo, P. and Satyro, M. (undated). Prediction of density and viscosity of bitumen using the Peng-Robinson equation of state. *Journal of Petroleum Science and Engineering*, Submitted July 2007.
- Thompson, John, Vasquez, A., Hill, M.J. and Pereira-Almao, P. (undated). The synthesis of up-scalable molybdenum based ultra dispersed catalyst: effect of the temperature on particle size. *Catalysis Letter*. Submitted August 2007.

CONTACT INFO:

For further information about the AICISE Centre's mandate, role and research activities, please go to the web site (www.aicise.ca) or contact any one of the following:

- Dr. Pedro Pereira-Almao, Co-Director (403) 220 -4799; ppereira@ucalgary.ca
- Dr. Stephen Larter, Co-Director (403) 220 - 7484; slarter@ucalgary.ca
- Mr. David Reynolds, AICISE Centre Manager (403) 220-4043; dave.reynolds@ucalgary.ca