

CREWES NEWS

The Consortium for Research in Elastic Wave Exploration Seismology

CREWES Welcomes New Students

CREWES is delighted to welcome five new M.Sc. students to the research group. We wish them the best of luck with their studies.



Katherine Brittle (left) gained her B.Sc. from the University of Waterloo. Her supervisor is Larry Lines.

Victor Iliescu (right) gained his B.Sc. at the University of Bucharest, Romania. He is studying deconvolution with wavelet transforms with Gary Margrave.



Marco Perez (below left) is a B.Sc. Physics major from McGill University. His interim advisor is John Bancroft.



Shuang Sun (centre right) joins us from China, where she attended the Northeast Normal University, gaining a B.Sc. in Environmental Science. Shuang's supervisor is also John Bancroft.



Yan Yan (right) graduated in 1990 with a B.Sc. in Geophysics from Petroleum University of China. Before joining CREWES, Yan's work mainly involved seismic data processing. Her principle interests include multi-component exploration. Her supervisor is Jim Brown.



Improvements to Radial Trace Modules

Dave Henley has continued development work on his radial trace modules in ProMAX (see the March and April/May issues of CREWES NEWS). Dave has improved the two original modules, and produced two additional modules. The four modules available are:

radfilt: a linear noise attenuation module, which can now be used in the standard fan-filter mode or in a new dip-filter mode; **raddisp**: the forward radial transform only, which can be used to create radial trace panels in either the fan or dip mode for display and diagnosis; **radtran**: a new radial transform module, which can perform either the forward or inverse radial transform in either fan or dip mode; **make_ens**: a macro for converting a stacked section to an ensemble suitable for dip-filtering with radfilt.

All modules are provided with complete help files, have reasonable parameter defaults, and been tested reasonably thoroughly. Radtran provides all the functionality of raddisp, but in addition provides the inverse radial transform, with the opportunity to re-specify the source-receiver offsets for the X-T domain gather. The user can choose to build an X-T panel with more or fewer traces than the original X-T panel used to create the radial trace panel, and any offset range within the original offset range can be specified. Furthermore, three options are currently available for offset increments: linear (standard); quadratic (forms an X^2 -T) panel; or X^2 - T^2 (both offsets and travel times are interpolated to quadratic axes). The latter mapping makes all hyperbolic events linear and should prove useful in wavefield separation, multiple attenuation, and other applications.

These modules will be described in more detail in the 1999 research report, and will be included on our software release CD. Advance copies are available from Dave Henley at henley@geo.ucalgary.ca.

Coming to Kananaskis? Reservations Deadline! - See Page 2

1999 CREWES Sponsors Meeting

As we announced last month, the 1999 Sponsors Meeting will be held at The Lodge at Kananaskis, Alberta, Canada, December 1-3. On Wednesday evening, we will be hosting the icebreaker. Presentations will begin at 08:00 on Thursday morning and end Friday afternoon. To qualify for the group rate of \$133.00 per room, plus service charge and tax, please identify yourself as being with the University of Calgary, CREWES Project. The block of rooms for CREWES sponsors will be held only until October 15, and the group rate cannot be guaranteed after that. Those wishing to stay at the Lodge on Friday night (December 3) are strongly recommended to reserve a room before October 15.

An agenda is in preparation and will be published shortly.

Characterising Aquifers and Reservoirs

Calgary-based Sponsors may be interested in a series of lectures presented by Dr Melvyn E. Best of BEMEX Consulting International, as part of the Geology 699.05 course, "Topics in Reservoir and Aquifer Characterization".

During the four, three-hour evening classes Dr. Best will discuss using geophysical methods to determine (characterise) the physical properties of reservoirs and aquifers and to monitor the movement of reservoir/aquifer fluids over time.

This course will be held 17:00 to 20:00, Monday 15 November through Thursday 18 November, 1999, at the Earth Sciences building, room 609, University of Calgary.

For further information contact Larry Bentley on 220-4512 or bentley@geo.ucalgary.ca.

Students at CREWES - Peter Manning

Unlike previous students profiled here, many of whom are just embarking on careers as geophysicists, Peter Manning is a veteran of the industry, having spent over 30 years working for Mobil Canada.

Peter graduated in Mathematics from the University of British Columbia. Prior to joining CREWES in March 1997, Peter worked at Mobil, mostly within Canada and usually with a technical group. His experience includes designing and running synthetic seismogram programs and ray tracing programs of various types. The most recent work at Mobil was designing optimum parameters for 2D and 3D surveys, and layout of 3D surveys in problem areas.

Peter is currently working with supervisor, Gary Margrave, on finite difference modelling of surface (Rayleigh) waves, to investigate their response to shallow conditions within the earth and matching the models to seismic data. This has led to research on the effects of spatial and time sampling on stability and the variation of velocity with frequency for these waves.



Making Contact...

The CREWES Project

Dept. of Geology & Geophysics
University of Calgary
2500 University Dr. N.W.
Calgary, Alberta T2N 1N4
CANADA

Fax: (403)284-0074

Email: crewes@geo.ucalgary.ca

WWW (World Wide Web):

www.crewes.ucalgary.ca

Directors:

Dr. Robert Stewart: 220-3265

Dr. Larry Lines: 220-2796

Dr. Don Lawton: 220-5718

Dr. Gary Margrave: 220-4606

Associated Faculty Members:

Dr. John Bancroft: 220-5026

Dr. Larry Bentley: 220-4512

Dr. Jim Brown: 220-7484

Administrative Manager:

Louise Forgues: 220-8279

Research Staff:

Henry Bland: 220-8461

Dr. Pat Daley: 220-8340

Eric Gallant: 220-3259

Dave Henley: 220-6137

Brian Hoffe: 220-6429

Mark Kirtland: 220-2483

Xinxiang Li: 220-2482

Han-Xing Lu: 220-4292

Colin Potter: 220-8012

Chuangong Xu: 220-7092

Graduate Students:

Katherine Brittle: 220-3026

Ayon Dey: 220-3026

Robert Ferguson: 220-3271

Cindy Gosse: 220-7201

Saul Guevara: 220-5134

Victor Iliescu: 220-3026

Jeff Larsen: 220-3439

Xinxiang Li: 220-2482

Peter Manning: 220-3439

Michael Mazur: 220-6801

Yanpeng Mi: 220-3258

Marco Perez: 220-3026

Carlos Rodriguez: 220-6801

Chanpen Silawongsawat: 220-3083

Shuang Sun: 220-3026

Todor Todorov: 220-6801

Yong Xu: 220-5134

Yan Yan: 220-3026

Jianlin Zhang: 220-3258

CREWES News Editor:

Mark Kirtland: 220-2483