

**INTERNATIONAL ASSOCIATION OF HYDRO-ENVIRONMENT
ENGINEERING AND RESEARCH (IAHR)
ANNUAL REPORT**

A. Division name: Division II: Hydro-Environment

Committee name: Committee on Ice Research and Engineering
Reporting period: April 2010 . April 2011

B. Mission statement / Long range objective

To promote research towards a better understanding of ice properties and processes, and related environmental and ecological issues on rivers, lakes, and the ocean. To develop knowledge for water resources problems in cold regions, including natural and anthropogenic ice-related challenges.

C. Committee Membership

1. Number of committee membership:
Primary affiliation: 185

2. Leadership Team:

Dr. Pat Langhorne
Department of Physics
University of Otago
P.O. Box 56
Dunedin 9054
New Zealand
+64 3479 7787
E-mail: pjl@physics.otago.ac.nz

Andrew (Andy) M. Tuthill, MSCE
U S Army Cold Regions Research and Engineering Laboratory
72 Lyme Rd.
Hanover, NH 03755
USA
+603-646-4225
E-mail: Andrew.M.Tuthill@usace.army.mil

Committee names, nationality and email addresses

Bakanovichus	Natalya	Russia	member	Bakanovichus@yandex.ru
Bekker	Alexander	Russia	member	bekker@mail.primorye.ru
Choi	Kyungsik	Korea	member	kchoi@hhu.ac.kr
Evers	Kalle	Germany	past chair	Evers@hsva.de
Heinonen	Jakko	Finland	member	jaakko.heinonen@vtt.fi
Hoyland	Knut	Norway	member	knut.hoyland@ntnu.no
Jasek	Martin	Canada	member	Martin.Jasek@bchydro.com
Kioka	Shinji	Japan	member	Kioka <kioka@ceri.go.jp>
Langhorne	Pat	New Zealand	chair	pjl@physics.otago.ac.nz
Lau	Michael	Canada	member	Michael.Lau@nrc-cnrc.gc.ca
Leppäranta	Matti	Finland	member	Matti.Lepparanta@Helsinki.Fi
Li	Zhijun	China	member	Li Zhijun <lizhijun@dlut.edu.cn>
Loiset	Sveinung	Norway	co-opted	sveinung.loiset@ntnu.no
Shen	Hayley	USA	member	hhshen@clarkson.edu
Shen	Hung Tao	USA	co-opted	htshen@clarkson.edu
Squire	Vernon	New Zealand	member	Vernon.Squire@otago.ac.nz
Tuthill	Andrew	USA	secretary	Andrew.M.Tuthill@usace.army.mil

3. Name and composition of Working Groups

Ice Committee working groups have been in abeyance for some years. They were discussed at the most recent committee meeting and will continue to be included on the agenda of future meetings.

D. Affiliation with other professional associations

The IAHR Ice Committee has informal links with the Port and Ocean Engineering under Arctic Conditions (POAC) and the speciality conferences of each group are held on alternate years and have many common participants. The committee also has an informal relationship with the Canadian River Ice Processes and the Environment (CRIPE) group.

E. Report on activities in reporting period

1. Committee meetings

An Ice Committee Meeting was held at the 20th IAHR Symposium on Ice in Restaurant Myllysaari, Lahti, Finland on Sunday 13 June, 3:00 to 5:00 pm and 7:00 to 9:00 pm, and on Thurs, 17 June, 2:50-3:20 pm (Student Paper Award Committee). The minutes of this meeting are available at

http://www.iahr.net/site/about/organisation/technical/files/Committee_on_Ice_Research_and_Engineering/IceCommitteeMinutes26Aug10.pdf

2. Specialty conferences

The 20th IAHR International Symposium on Ice was held at the Sibeliustalo Hall Conference Centre on the shore of Lake Vesijärvi in Lahti, Finland, June 14 . 17th, 2010. The conference was chaired by Prof. Matti Leppäranta of the University of Helsinki. The symposium was attended by 158 participants from 16 countries. There were 34 participants from the host country, more than five participants from Canada, China, Japan, New Zealand, Norway, Russia, and USA, and less than that from Estonia, Germany, Kazakhstan, Lithuania, Netherlands, Poland, South Korea, and U.K. Oral and poster presentations were given, the oral presentations being divided into three parallel sessions 1) Ice engineering, 2) Sea ice and lake ice science, and 3) River ice, with nearly equal numbers of papers in each session. Nicolas Serré from Norwegian University of Science and Technology won the award for the best student paper "Loads from ice ridge keels -experimental vs. numerical vs. analytical". A full report on the conference, prepared by Matti Leppäranta has already been sent to IAHR. Symposium proceedings are available at <http://www.riverice.ualberta.ca/IAHR%20Proc/>

- Activities related to World Congress and Division Congress

Martin Jasek attended the Leadership Seminar at the 33rd IAHR Congress in Vancouver in Aug 2009 on behalf of the Ice Committee.

3. (Continuing) education activities workshops, training seminars, courses, etc.

None

4. Working Group meetings and output

None

5. Publications: proceedings; papers for IAHR Journals; state-of-the-art papers; monographs; books

The Proceedings of 20th IAHR International Symposium on Ice was published on CD-ROM. (ISBN 978-952-10-5979-7). This volume is available at <http://www.riverice.ualberta.ca/IAHR%20Proc/>

6. Contacts with other organizations

Thanks to the efforts of Andy Tuthill and the generosity of Canadian River Ice Processes and the Environment (CRIPE), all Ice Symposium proceedings (1970-2010) are available on <http://www.riverice.ualberta.ca/IAHR%20Proc/>

We plan to make the proceedings accessible via the main IAHR website but this has been delayed due to IAHR reorganization. The Ice Committee is very grateful to the CRIPE website for hosting these for us in the meantime.

7.- Other activities.

The Ice Research and Engineering Award 2010 was awarded to Professor Torkild Carstens, retired from the Norwegian University of Science and Technology (NTNU), Trondheim. A more detailed description of Professor Torkild Carstens achievements is available in Prof. Matti Leppäranta's report on the 20th Ice Symposium.

F. Short range plans (1 to 2 years)

- specialty conferences

The 21st IAHR International Symposium on Ice will be held in Dalian, China, in June 11. 15, 2012 (<http://slcoe.dlut.edu.cn/ice/iahr2012.html>), and an invitation to Dalian has been extended by conference chair, Professor Li Zhijun.

- Working group activities

- Publications

We plan to publish the Proceedings of the 21st IAHR International Symposium on Ice.

- Contacts with other organizations

Linkages with the Winter Limnology Series (WLS) under SIL (International Limnological Society, Contact Prof. Brian Moss)

An approach was made to the Ice Committee by the Winter Limnology Series under the International Limnological Society and this was discussed at the IAHR ice committee meeting. The committee decided to invite an ILS member to organize a winter limnology session at the 2012 China meeting.

- Other activities.

The committee will continue to consider suitable recipients of the Ice Research and Engineering Award.

Remarks