



**МОСКОВСКИЙ  
ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ  
им. М.В. ЛОМОНОСОВА  
(МГУ)**

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**Norwegian Institute for Air Research**  
Cathrine Lund Myhre  
Department of Atmospheric and Climate Research  
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Moscow, November, 15, 2010

**Partnership in the project THAW: "Trends and Hazards in Arctic Warming: Climate change and greenhouse gas emissions from Arctic permafrost regions"**

Dear Dr Lund Myhre,

Thank you for the invitation to participate as a partner in the proposed project **THAW** coordinated by the Norwegian Institute for Air Research. I gladly accept this invitation and I am looking forward to our collaboration.

The Department of Geocryology at the Moscow State University is well-known internationally as a center for studying permafrost and has comprehensive expertise on thermodynamic and climatic conditions for the formation and evolution of permafrost onshore and offshore, geological processes and phenomena in the permafrost regions, including gas hydrate formation and decomposition in Arctic permafrost.

For more than a decade, I have been carrying out research on the formation and decomposition processes of gas hydrate in freezing, frozen and thawing sediments with my gas hydrate group; this includes analysing field data on forms and conditions for the existence of gas in Arctic permafrost. For WP2 of THAW, I can contribute to Task 2.7 and the modelling of methane emission scenarios from thawing permafrost and decomposing hydrates. In particular, expertise is available on modelling the possibility of relict gas hydrate formation in frozen marine sediments, analysing the phase composition of marine sediment cores and developing physical-chemistry and geological models of gas hydrate formation and decomposition in frozen and thawing marine sediments based on experimental modelling.

I confirm that I will participate as a partner in the THAW project without being a contractor.

Best regards,  
Ass. Prof. Evgeny Chuvilin,  
Department Geocryology, Faculty of Geology,  
1 Leninskiye Gory, Moscow State University, 119991, Moscow, Russia

Annex: selected references

1. Chuvilin E.M., Yakushev V. S., Perlova E. V., 2000. Gas and possible gas hydrate in the permafrost of Bovanenkovo gas field, Yamal peninsula, West Siberia. *Polarforschung* 68: 215-219,1998 (erschienen 2000).
2. Yakushev V. S., Chuvilin E.M., 2000. Natural gas and gas hydrate accumulations within permafrost in Russia. *Cold Regions and Technology* 31. 189-197.
3. Chuvilin E.M., Yakushev V. S., Perlova E. V., 2002. Natural gas and gas hydrate association in permafrost of Yamal peninsula (West Siberia). *Proceeding of the Fourth International Conference on Gas Hydrate, Yokohama.* p. 216-221.
4. Chuvilin E.M., Kozlova E. V., 2005. Experimental estimation of hydrate-containing sediments stability. *Proceedings of the Fifth International Conference on Gas Hydrate. Thermodynamic Aspects. V.5. Trondheim, Norway.* p. 1562-1567.
5. Chuvilin E.M., Petrakova S. Yu., Guryeva O. M., 2007. Experimental investigation of the possibility of relict gas hydrates formation in frozen sediments. *The Arctic Energy Summit. Technology Conference. Ext.10.*
6. Chuvilin E.M., Guryeva O. M., 2008. Experimental study of self-preservation effect of gas hydrates in frozen sediments. *Proceedings of the 9th International Conference on Permafrost. 2008. Fairbanks, Alaska,* p.263-267.
7. Chuvilin E.M., Guryeva O. M., 2008. Carbon dioxide gas hydrates accumulation in freezing and frozen sediments. *Proceedings of the 6th International Conference on Gas Hydrates (ICGH 2008), Vancouver, British Columbia, CANADA, July 6-10.*