

Irina Overeem

Community Surface Dynamics Modeling System
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Education record

- 2002 PhD, Civil Engineering and Applied Earth Sciences, Delft University of Technology, The Netherlands. Thesis titled: "Process-response simulation of fluvio-deltaic stratigraphy".
- 1996 MSc. Summa cum Laude, Engineering Degree in Soil Science and Geology, Wageningen University, The Netherlands. Thesis titled: "The Holocene erosion and sedimentation history of the Volga delta related to Caspian Sea level change".
- 1993 BSc. Soil, Water and Atmosphere, Wageningen University, The Netherlands. Thesis titled: "The hydrogeology of the ice-contact Trandum Delta, Norway".
- 1990 Gymnasium β with honours, majors in Dutch, Latin, English, French, Physics, Mathematics, Chemistry, History, Dutch.

Professional experience

- 2009 – present Research Scientist III at Facility for Community Surface Dynamics Modeling System, and INSTAAR Fellow, University of Colorado.
- 2007 – 2009 Research Scientist II at Facility for Community Surface Dynamics Modeling System, INSTAAR, University of Colorado.
- 2005 - 2007 Assistant Professor, Department of Geotechnology, Delft University of Technology.
- 2002 - 2005 Research Scientist I and II, INSTAAR, University of Colorado.
- 1997 - 2001 Junior Researcher, Civil Engineering and Applied Earth Sciences Department, Delft University of Technology, The Netherlands.
- 1995 Engineering Trainee, Water Resources NGO, Hyderabad, India
- 1994 4 months Research Assistant, Department of Geology, Univ. of Oslo, Norway.

Teaching Experience

- 2010-2011 2-day hands-on clinics on 'Using Coupled Models in Earth Surface Dynamics'.
- 2010 – present Surface Process Modeling: applying the CSDMS Modeling Tool, 2 credits, 5000-level course in Department of Geology, University of Colorado.
- 2008 – present (Co-)supervision PhD (6)/MSc (2)/Bsc students (1), and postdoctoral fellows INSTAAR, as well as at Department of Geography and Geology, University of Colorado.
- 2005 – 2008 MSc. Course 'Geological Modeling', 4 credits, at Delft University of Technology.
- 2005 – 2008 3 weeks MSc. Fieldcourse 'Reservoir Geology' at Delft University of Technology.
- 2005 – 2008 Supervisor of 3 BSc. thesis projects, 8 MSc. thesis projects and 3 PhD projects at

2002 – present

Civil Engineering and Applied Earth Sciences Department, Delft University of Technology and INSTAAR, University of Colorado.
Training visiting researchers and students in using numerical model SedFlux2D, at the INSTAAR Environmental Computational and Imaging Facility and CSDMS Facility.

Organizational and Leadership Activities

- Review Panel Member for Geosciences, Icelandic Research Foundation, 2011.
- CSDMS- Community Surface Dynamics Modeling System, Education and Knowledge Transfer Specialist. Realize EKT objectives of CSDMS project, develop an online library of Educational Modeling Material. Supervision of software engineer responsible for the easy-to-use CSDMS Modeling software tool.
- Working Group Chair of Education and Knowledge Transfer, CSDMS, 2011 onwards.
- Steering Committee Member of BanglaPIRE project: Life in a Tectonically Active Delta, Bangladesh (<http://www.banglapire.org/>)
- Contributor to Strategic Plan to NSF-OPP. “Development of an Arctic System Model”, 2010.
- Session chair “Climate Controls on Sediment Supply”, AAPG Annual Meeting 2010.
- INSTAAR outreach and information technology committee: development for new website.
- Editor on White Paper for Policy Makers on “Dynamics and Vulnerability of Delta Systems”, published with international team of 19 scientists in July 2009. Published by LOICZ core project of International Geosphere-Biosphere Programme (IGBP).
- Session chair “Arctic Coasts at Risk”, AGU Annual Meeting 2009.
- Session co-organizer “Modeling deep-water systems; from understanding to prediction”, AAPG Annual Meeting 2009.
- Steering Group Member of the International Organization of Geomorphologists, IAG, Working Group on Sediment Budgets in Cold Environments (2007 onwards).
- Co-coordinator of the 2008 SEDIBUD meeting at the INSTAAR Mountain Research Station.
- Associate Editor of Arctic, Antarctic and Alpine Research, Quarterly interdisciplinary journal.
- Organizer of mini-symposium, “Numerical Sedimentary Systems: Limits to Upscaling?” March 2007, Delft University of Technology.
- Member of Advisory Board to Dean of the Faculty of Civil Engineering and Geotechnology on ‘Advancing female faculty careers in technical sciences’ 2005-2007.
- Chair of INSTAAR biannual report committee 2004-2005.
- INSTAAR Seminar Organizer in 2002.
- Reviewer for AAAR, GRL, Nature Geoscience, Sedimentary Geology, Marine Geology, Journal of Coastal Research.

Award and Professional Society Memberships

- Award recipient of National Oceanographic Partnership Program 2010; Excellence in partnering and outreach for project: “Toward a Predictive Model of Arctic Coastal Retreat in a Warming Climate.
- Awarded student research and travel grants of 5 different organizations, 1994-2000.
- Professional Member American Geophysical Union.

Funded Research Projects

- Co-PI: “Quantifying Accelerating Change in Arctic Ocean River Discharge Using Coupled Satellite- and Ground-based Measurements, 2002-Present”, NASA, \$178k, 2012-2013.
- PI: “Modeling Floodplain Dynamics: Can the Ganges-Brahmaputra Delta keep up with 21st Century Sea Level Rise?”, \$315k, NSF-EAR, 2011-2013.
- PI: “Modeling and Exploring Floodplain Architecture”, ConocoPhillips, \$85k, 2010-2012.
- PI “Greenlandic River Plumes as an Indicator of Ice Sheet Melt” NSF-OPP, \$358k, 2009-2012.
- PI “Uniqueness of Arctic Sedimentary Systems”, ConocoPhillips, \$150k, 2007-2009.
- Co-PI: “Towards a predictive model for Arctic Coastal Erosion, Beaufort Sea, AK”, National Oceanographic Partnership Program, \$577k, 2007-2010.
- PI: Sediment supply to the Arctic coastal zone’, IPY-Dutch Science Foundation, 235k EURO 2008-2012.
- Co-PI ‘Reservoir Geology of Ten Boer Claystone, North Sea Basin’, Shell, The Netherlands \$25k, 2006-2008.
- PI: ‘Modeling sediment delivery and related stratigraphy in a tidal dominated delta, the Fly River, Papua New Guinea’, \$69k, NSF-Ocean Sciences 2003-2005.
- Co-PI ‘Modeling the sediment flux of the Ganges-Brahmaputra River’, NSF EAR, 2002.
- PI ‘Channel switching in fluvio-deltaic systems draining land-ice’, NSF-OPP, 2004-2005.
- PDF and Co-PI: ‘Modeling seabed variability and its influence on acoustic prediction uncertainty’, Office of Naval Research, 2002-2005.

Outreach and Education Activities

- Taught lecture and hands-on science activity in Greenland Education Tour for 23 international high-school students on ‘Greenlandic Rivers as Indicators for Ice Sheet Melt’, July 2011.
- Interviews with 3 national papers & Magazines on “Eroding Coast of Northern Alaska”, December 2009-March 2011. Science News reported ‘Collapsing Coastlines’, July 2011.
- Interviews with over 20 national and international papers and magazines on ‘Sinking Deltas due to Human Activities’ 2009-2010.
- Invited Keynote talk on “World Deltas Dialogues Scoping Session”, for international group of policy makers, consulting firms and Louisiana State Senator, Mrs. Mary Landrieu, Washington DC, 3-4 November 2009.
- Contributed a movie on Arctic Coastal Erosion to Andrew Revkin’s DotEarth Blog of the New York Times, resulting of collaborative project between INSTAAR and CIRES, Sept. 2008.
- Participated in ‘IPY Dispatches from the field’, June 18th, discussing Arctic coastal erosion with participating teachers.
- IPY science correspondent for Dutch Science Television during polar fieldwork 2007 and 2008. An student weblog with short movies of fieldnotes can be found at: <http://pooljaar.nl/rivieren>
- Coordinated 5 days fieldwork participation of the science editor of the Dutch Magazine ‘Intermediair’ resulting in a cover story on ‘Ice Cold Research: How the climate changes in Greenland’, May 2008.
- Authored and collected the majority of contributions for CSDMS undergraduate education.
- INSTAAR noon seminar coordinator 2002-2003; inviting and facilitating weekly scientific talks.
- Worked with several (Dutch and international) popular science magazines to publish results of PhD research. Resulted in 5 newspaper articles and a 1-hour TV documentary in 2002.
- Judge on the Regional Highschool Students Science Fair, Boulder County, 2003-2007.
- Climbing instructor for Dutch Alpine Club and Colorado Mountain Club, 1999-2011.
- Photography and short articles for several Dutch Outdoor magazines, 1997-2007.

10 Key Publications

- Overeem, I., R. S. Anderson, C. Wobus, G. D. Clow, F. E. Urban, N. Matell, publ online 2011. Sea Ice Loss Enhances Wave Action at the Arctic Coast. *Geophysical Research Letters*, 38, L17503, doi:10.1029/2011GL048681, 2011.
- Overeem, I., Syvitski, J.P.M., 2010, Shifting Discharge Peaks in Arctic Rivers, 1977-2007, *Geografiska Annaler* 92: 285-296.
- McGrath, D., Steffen, K., Overeem, I., Mernild, S., Hasholt, B., van den Broeke, M., 2010. Sediment plumes as a proxy for local ice sheet runoff in Kangerlussuaq Fjord, West Greenland. *Journal of Glaciology* (09)116).
- Syvitski, J.P.M., Kettner, A.J., Hannon, M. T., Hutton, E.W.H., Overeem, I., Brakenridge, G.R., John Day, J. Vörösmarty, C., Saito, Y., Giosan, L., Nicholls, R.J., 2009. Sinking Deltas due to Human Activities. *Nature Geoscience* 2, 681 - 686.
- Overeem, I., Syvitski, J.P.M., 2009. Dynamics and Vulnerability of Delta Systems. LOICZ Reports and Studies No. 35. Germany.
- Donselaar, M.E., Overeem, I., 2008. Connectivity of fluvial point-bar deposits: An example from the Miocene Huesca Fluvial Fan, Ebro Basin, Spain. *AAPG Bulletin* 92, 1109 – 1129.
- Overeem, I., Syvitski, J.P.M., Hutton, E.W.H., 2005. Three-dimensional numerical modeling of deltas. *SEPM Spec. Issue*, 83. 'River Deltas: concepts, models and examples'. p.13-30.
- Overeem, I., Syvitski, J.P.M., Hutton, E.W.H., Kettner, A.J., 2005. Stratigraphic variability due to uncertainty in model boundary conditions: a case-study of the New Jersey Shelf over the last 40,000 years. *Marine Geology*, 224, 23-41.
- Overeem, I., Kroonenberg, S.B., Veldkamp, A., Groenesteijn, K., Rusakov, G. V.†, Svitoch, A.A., 2003. Small-scale stratigraphy in a large ramp delta: recent and Holocene sedimentation in the Volga delta, Caspian Sea. *Sedimentary Geology* 159, 133-157.
- Overeem, I., Veldkamp, A., Tebbens, L., Kroonenberg, S.B., 2003. Modelling Holocene stratigraphy and depocentre migration of the Volga delta due to Caspian Sea-level change. *Sedimentary Geology* 159, 159-175.

Publications and Presentations 2012-1996

Pending 2011-2012

- Brakenridge, G.R., Syvitski, J.P.M., Overeem, I., Higgins, S. A., Kettner, A.J., Stewart-Moore, J.A., Westerhoff, R., (submitted 2011). Global Mapping of Storm Surges and the Assessment of Delta Vulnerability, *Natural Hazards*.
- Overeem, I., Berlin, M., Syvitski, J.P.M., (accepted 2012). Strategies for Integrated Modeling: the Community Surface Dynamics Modeling System Example. *Environmental Modeling & Software*.
- Chen, Y., Syvitski, J.P.M., Gao, S., Overeem, I., Kettner, A.J. (submitted 2011). Socio-economic Impacts on Flooding: a 4000 year History of the Yellow River, China. *AMBIO*.
- Campbell, K., Overeem, I., Berlin, M., (publ. online Nov. 2011). Taking it to the Streets: the Case for Modeling in the Geosciences Undergraduate Curriculum. *Computers and Geosciences*.
- Matell, N., R. S. Anderson, I. Overeem, C. Wobus, F. E. Urban, and G. D. Clow, (publ. online Nov. 2011). Subsurface thermal structure surrounding thaw lakes of different depths in a warming climate. *Computers and Geosciences*.
- De Winter, I., Storms, J., Overeem, I., (accepted 2011). Glacial valley sediment budgets during deglaciation: A numerical sediment source module. *Geomorphology*.

- Storms, J.E.A. de Winter, I., Overeem, I., Drikkoningen, G.G., Bakker, M., Lykke-Andersen, H., (accepted 2011). Sediment infill characterization of Kangerlussuaq Fjord during the Holocene deglaciation. *Quaternary Science Reviews*.

2011

- Overeem, I., Kettner, A.J., Syvitski, J.P.M. 2011. Management and human effects. In: Wohl, E., (ed.), 2011. *Treatise of Geomorphology: Fluvial Geomorphology*.
- Wobus, C., R.S. Anderson, I. Overeem, N. Matell, G. Clow, F. Urban, 2011. Thermal Erosion of a Permafrost Coastline: Improving Process-Based Models Using Time-Lapse Photography. *Journal of Arctic Antarctic and Alpine Research*, Vol. 43, No. 3, 2011, pp. 474–484
- Chen, Y., Overeem, I., Syvitski, J.P.M., Gao, S., Kettner, A.J. 2011. Controls of levee breaches on the Lower Yellow River during the years 1550-1855. IAHS Publ.
- Hudson, B., Overeem, I., McGrath, D., Rick, U., Syvitski, J., Zettlermann, A., 2011. Sediment Plumes as proxy for melt on the Greenland Ice Sheet: Possible evidence for a long and intense 2010 melt season. Presentation and abstract for Annual Arctic Workshop, Montreal, Canada, March 2011.
- Overeem, I., Hudson, B., Berlin, M., McGrath, D., Syvitski, J., Mernild, S., 2010. Fjord Sediment Plumes as Indicators of West Greenland Ice Sheet Freshwater Flux. Presentation and abstract at AGU Chapman Conference, Source to Sink Sedimentary Systems, January 2011.
- Rick, U., Abdalati, W., Overeem, I., Berlin, M., van den Broeke, M., 2011. Evidence for Substantial Englacial Retention of Surface Meltwater. IAG-workshop Mass balance of glaciers and icecaps, Presentation and abstract, February 2011.
- Overeem, I., Syvitski, J., Kettner, A.J., Hutton, E., Brakenridge, B., 2011. Sinking Deltas due to Human Activities, Invited talk for Tulsa Geological Society, March 2011, In: AAPG Search and Discovery #70094 (2011).

2010

- Overeem, I., Syvitski, J.P.M., 2010, Shifting Discharge Peaks in Arctic Rivers, 1977-2007, *Geografiska Annaler* 92: 285-296.
- Overeem, I., Syvitski, J.P.M., 2010, Experimental exploration of the stratigraphy of fjords fed by glacio-fluvial systems, In: *Fjords: Depositional Systems and Archives*, J. Howe (Editor), Geological Society, London.
- Berlin, M., Overeem, I., McGrath, D., Rick, U., 2010. Regional Runoff Season Duration From Sediment Plume Analysis In The Kangerlussuaq Area, Greenland. 40th Arctic Workshop, Winterpark, CO, March 2010.
- McGrath, D., Steffen, K., Overeem, I., Mernild, S., Hasholt, B., van den Broeke, M., 2010. Sediment plumes as a proxy for local ice sheet runoff in Kangerlussuaq Fjord, West Greenland. *Journal of Glaciology* (09J116).
- Overeem, I., 2010. Arctic Coastal Erosion along the Beaufort Sea. Contribution to "A Science Plan for Regional Arctic System Modeling". In: Roberts et al., (eds.), 2010. A report by the Arctic Research Community for the National Science Foundation Office of Polar Programs.
- Rick, U., Abdalati, W., Berlin, M., Overeem, I., van den Broeke, M., 2010. Evidence for Substantial Englacial Retention of Surface Meltwater. AGU annual fall meeting 2010, San Francisco, 12-18 December.
- Brakenridge, G.R., Kettner, A.J., Overeem, I., Nghiem, S.V., De Groeve, T., Syvitski, J.P., 2010., Effects of Fluvial Morphology On Orbital Remote Sensing Measurements of River Discharge. AGU annual fall meeting 2010, San Francisco, 12-18 December.
- Wobus, C., Anderson, B., Overeem, I., Stanton, T., Clow, G., Urban, F., 2010. The Role of Summertime Storms in Thermoabrasion of a Permafrost Coast. AGU annual fall meeting 2010,

San Francisco, 12-18 December.

- Overeem, I., Anderson, R.S., Wobus, C., Matell, N., Urban, F., Clow, G., 2010. The impact of sea ice loss on wave dynamics and coastal erosion along the Arctic Coast. AGU Annual fall meeting 2010, San Francisco, 12-18 December.
- Barnhart, K., Anderson, R.S., Overeem, I., Wobus, C., Clow, G., Urban, F., Stanton, T., 2010. Modeling the rate and style of Arctic coastal retreat along the Beaufort Sea, Alaska. AGU Annual fall meeting 2010, San Francisco, 12-18 December.
- Overeem, I., 2010, Controls of Delta Sedimentation; A Delicate Balance. Invited Keynote at Symposium on behalf of Prof. Kroonenberg, March 2010.
- Overeem, I., Climatic Influences on Stratigraphy – Applications of Numerical Models. AAPG 2010 Abstract Vol, New Orleans, LA.
- Donselaar, M.E., Overeem, I., 2010. Processes and Reservoir Architecture of Terminal Sheet Sandstone in a Low-Gradient Fluvial Setting: Integrated Outcrop, Subsurface and Numerical Forward Modeling Approach. AAPG 2010 Abstract Vol, New Orleans, LA.
- Syvitski, J.P.M., Kettner, A.J., Overeem, I., Hutton, E.W.H., Hannon, M.T., 2010, Human and Natural Controls on a Delta's Surface Elevation Relative to Local Mean Sea Level, AAPG 2010 Abstract Vol, New Orleans, LA p 251.
- Overeem, I., 2010, Sea Ice Loss Induces Arctic Coastal Erosion. Program and Abstracts of the American Polar Society Meeting 2010, Institute of Arctic and Alpine research, Univ. of Colorado at Boulder.
- Wobus, C. W., R. S. Anderson, I. Overeem, G. Clow, F. Urban, and T. Stanton. Thermal erosion of an Arctic Coastline: Field observations and Model development. State of the Arctic Conference, Miami, FL, March 17, 2010.
- Storms, J.E.A. de Winter, I., Overeem, I., Drikkoningen, G.G., Bakker, M., Lykke-Andersen, H., 2010. Sediment infill characterization of Kangerlussuaq Fjord during the Holocene deglaciation Oslo, International Polar Year Science Conference, Oslo, Norway, June 8-12, 2010.
- Kettner, A.J., Overeem, I., Syvitski, J.P.M., 2010, Downscaling discharge variability: can we predict daily flow characteristics based on annual flow characteristics? Eos Trans. AGU, 91(26), West. Pac. Geophys. Meet. Suppl., Abstract H32A-06.
- Syvitski, J.P.M., Brakenridge, G.R., Kettner, A.J., Overeem, I., 2010, Storm Surge Flooding of Deltas Made Susceptible by Human Activities, Storm Surges Congress (LOICZ), Hamburg, Germany.
- Brakenridge, GR, Syvitski, JPM, Kettner, AJ, Overeem, I, Sneddon, C, Fox, C, 2010, Predicted Effects of Future Dams and Levees on Flood Hydrology, Sediment Fluxes, and Deltas: Implications for Sustainable River Management. The Global Dimensions of Change in River Basins - Threats, Linkages, and Adaptations, 6 – 8 December 2010, Bonn, Germany.

2009

- Syvitski, J.P.M., Kettner, A.J., Hannon, M. T., Hutton, E.W.H., Overeem, I., Brakenridge, G.R., John Day, J. Vörösmarty, C., Saito, Y., Giosan, L., Nicholls, R.J., 2009. Sinking Deltas due to Human Activities. *Nature Geoscience* 2, 681 - 686.
- Overeem, I., Syvitski, J.P.M., 2009. Dynamics and Vulnerability of Delta Systems. LOICZ Reports and Studies No. 35. Germany.
- Overeem, I., Donselaar, R., 2009. Outcrop Characteristics of a Gradual Avulsion, AAPG Annual Conference, Denver, CO, 7-10 June 2009.
- Overeem, I., McGrath, D., Mernild, S., Hasholt, B., Steffen, K., Syvitski, J., 2009. Sediment Plumes as a proxy for Greenland Ice Sheet Runoff. SEDIBUD workshop. Sediment Budgets in Changing High-Latitude and High-Altitude Cold Environments, Kingston, Canada, 13-14 October 2009.
- Donselaar, R., Overeem, I., 2009. Gradual Avulsion in the Rock Records: outcrop example of the Huesca Fluvial Fan. From River to Rock Record Workshop, Aberdeen, 12-14 January

2009.

- De Winter, I., Storms, J., Drikkoningen, G., Overeem, I., 2009. Arctic River Systems: Sediment and water responses to climate change. IPY-The Netherlands, Closing Seminar, Vlissingen, The Netherlands, March 2009.
- McGrath, D., Steffen, K., Overeem, I., Rick, U.K., Bamber, J.L., 2009. Satellite observations of sediment plumes: an alternative metric for Greenland Ice Sheet ablation onset and cessation. AGU Fall Meeting, San Francisco, December 2009.
- Wobus, C.W., Anderson, R. S., Overeem, I., Clow, G.D., Urban, F.E., 2009. Calibrating thermal erosion models along an Arctic coastline. (Invited) AGU Fall Meeting, San Francisco, December 2009.
- Overeem, I., Wobus, C.W., Anderson, R. S., Clow, G.D., Urban, F.E., Stanton, T. P., 2009. Quantifying Sea-Ice Loss as a Driver of Arctic Coastal Erosion. AGU Fall Meeting, San Francisco, December 2009.
- Anderson, R. S., Wobus, C.W., Overeem, I., Clow, G.D., Urban, F.E., Stanton, T. P., 2009. Rapid coastal erosion on the Beaufort Sea coast: A triple whammy induced by climate change (Invited), AGU Fall Meeting, San Francisco, December 2009.

2008

- Overeem, I., Briner, J.P., Kettner, A.J., Syvitski, J.P.M., accepted 2008. Valley filling during deglaciation: a case study of Clyde fjordhead, Baffin Island, Arctic Canada. *Sedimentary Geology*.
- Overeem, I., Syvitski, J.P.M., Kettner, A.J. 2008. Are Arctic Rivers Unique and Are They Changing? Extended Abstract, 38th Arctic Workshop, Boulder, Colorado, USA, 5-7th of March 2008.
- De Winter, I.L., Overeem, I., Storms, J.E.A., 2008. Sedimentary Architecture of a glacio-fluvial valley fill; West-Greenland Case-Study. Extended Abstract 38th Arctic Workshop, Boulder, Colorado, USA, 5-7th of March 2008.
- Overeem, I., Syvitski, J.P.M., 2008. Changing Sediment Supply in Arctic Rivers. *Sediment Dynamics in Changing Environments*, Proceedings of a symposium held in Christchurch, New Zealand, December 2008) IAHS Publ. 325, 2008.
- Donselaar, M.E., Overeem, I., 2008. Connectivity of fluvial point-bar deposits: An example from the Miocene Huesca Fluvial Fan, Ebro Basin, Spain. *AAPG Bulletin* 92, 1109 – 1129.
- Donselaar, M.E., Overeem, I., Reichwein, J.A., Visser, C.A., 2008. Reservoir potential of fluvial sheet sandstone, Ten Boer Claystone, Southern Permian Basin. *AAPG Annual Convention and Exhibition*, April 20-23 2008, San Antonio, Texas, USA.
- Syvitski, J.P.M., Overeem, I., 2008. Fjords: development of the Ultimate Sedimentary Clinoform with Falling Sea level. Abstract for, SEPM Research Conference. Clinoform sedimentary deposits: The processes producing them and the stratigraphy defining them, Rock Springs, WY, August 15-18, 2008.
- Overeem, I., Changing Circum-Arctic Sediment Supply. Abstract for I.A.G./A.I.G. Working Group SEDIBUD workshop. *Sediment Budgets in Changing High-Latitude and High-Altitude Cold Environments*, Boulder, CO, September 9-13, 2008.
- Hoogendoorn, R.M., Overeem, I., Storms, J.E.A., 2008. Process response modeling of fluvial deltaic systems, simulating evolution and stratigraphy on geological timescales. *Computer and Geosciences*, 34, 10, 1394-1416.
- Matell, N., R. S. Anderson, C. Wobus, I. Overeem, F. Urban, and G. Clow, 2008, "Thinking along 2 axes: Lakeshore erosion and subsurface effects of thaw lakes along Alaska's Arctic Coastal Plain", AGU Fall Meeting 2008.
- Wobus, C., R.S. Anderson, I. Overeem, N. Matell, F. Urban, G. Clow, B. Jones, and C. Holmes, 2008, "Monitoring coastal erosion on the Beaufort Sea coast: Erosion process and the relative roles of

thermal and wave energy". AGU Fall Meeting 2008.

2007

- Fagherazzi, S., Overeem I., 2007. Models of deltaic and inner continental shelf evolution. *Annual Review of Earth and Planetary Science Reviews*. Vol 35, 685-715.
- Briner, J.P., Overeem, I., Miller, G., Finkel, R., (2007). The deglaciation of Clyde Inlet, northeastern Baffin Island, Arctic Canada. *Journal of Quaternary Science* 22, 3, 223-232.
- Donselaar, M.E., Overeem I. 2007. On the connectivity of point bars. AAPG Annual Convention and Exhibition, April 1-4 2007, Long Beach, California, USA.
- Overeem, I. 2007. Sediment Supply to the Arctic Ocean. International Polar Year start-up meeting, Groningen, March 8-9th The Netherlands.
- Overeem, I., 2007. Modeling river response to deglaciation; using clues from Baffin Island, Arctic Canada. University Center in Svalbard, Norway, Invited talk, February 2008.
- Overeem, I., 2007. Exploring sheet sandstone geometries with numerical process modeling Colorado, School of Mines, Golden, November 2008, Invited talk
- Overeem, I., 2007. Resilient deltas, a case-study report on the Volga and Ganges delta systems. Dynamics and vulnerability of River Deltas. LOICZ-CSDMS Workshop, 26-28th September 2007.
- Wong, T.E., de Lugt, I.R., Kuhlmann, G., Overeem, I., 2007. Tertiary. In: Wong, T.E., Batjs, D.A.J., de Jager, J., (eds.), 2007. *Geology of the Netherlands*. 151-171. Royal Netherlands Academy of Arts and Sciences.
- Perillo, G.M.E., Syvitski, J.P.M., Amos, C.L., Depetris, P., Milliman, J., Pejrup, M., Saito, Y., Snoussi, M., Wolanski, E., Zajackowski, M., Stallard, R., Hutton, E., Kettner, A., Meade, R., Overeem, I., Peckham, S., 2007, *Estuaries and their Sediments: How they Deal with Each Other*. Inprint Newsletter of the IGBP/IHDP Land Ocean Interaction in the Coastal Zone 2007/3: 3-5.
- Overeem, I., Briner, J.P., Kettner, A.H.J., Syvitski, J.P.M., 2007. Modeling river response to deglaciation; using clues from Baffin Island, Arctic Canada. AGU, 85 (47), Fall Meet. Suppl., Abstract H53E-04.

2006

- Kraft, B.J., Overeem, I., Holland, C.W., Pratson, L.F., Syvitski, J.P.M., Mayer, L.A., (2006). Stratigraphic Model Predictions of Geoacoustic Properties, *Journal of Ocean Engineering*.
- Syvitski, J.P.M., Hutton, E.W.K., Overeem, I., Kubo, Y. (2006). Integrating field data into numerical surface dynamic predictions. Abstract for IAS Japan, August 2006.
- Fagherazzi, S., Overeem I., (2006). Tidal landforms in the Gulf of Papua; sediment transport and morphology. Abstract for NSF MARGINS Source to Sink Workshop, California September 17-21, 2006.
- Overeem, I., Briner, J.P. Miller, G., Syvitski, J.P.M. (2006). Sediment supply to the Arctic coastal zone. Invited talk, Wageningen University, The Netherlands, November 2006.
- Overeem, I., Wobus, C., Anderson, R.S., Clow, G., 2005. Toward a predictive model of Arctic coastal retreat in a warming climate, Beaufort Sea, Alaska. Invited talk, Meeting on Longterm Coastal Modeling, Department of Civil Engineering, Delft University of Technology, The Netherlands, November 2006.

2005

- Goodbred, Jr., S.L., Overeem, I., 2005. Close coupling of source and sink in the Ganges dispersal system. 8th International Conference on Fluvial Sedimentology, August 7-12, 2005, Delft, The Netherlands.

- Overeem, I., Goodbred, Jr., S.L., 2005. Numerical modeling of the impact of an enhanced monsoon on the Ganges-Brahmaputra River System. 8th International Conference on Fluvial Sedimentology, August 7-12, 2005, Delft, The Netherlands.
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- Chen, Y, 2008 and further. Application of numerical models to the study of the formation of the Holocene stratigraphy over the Bohai and Yellow Seas, in response to sediment input from the Yellow River. Joint PhD project between INSTAAR, University of Colorado and Nanjing University, China.
- De Winter, I. 2008 and further. Sediment Supply to the Arctic Coastal Zone, Joint PhD project between INSTAAR, University of Colorado and Delft University of Technology, The Netherlands.
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Completed MSc and BSc Students Projects

- McGrath, D., 2009. Sediment Plumes in Kangerlussuaq, West Greenland, as a proxy for runoff from the Greenland Ice Sheet. Co-supervisor. MSc. Thesis. Department of Geography, University of Colorado.
- Matell, N., 2009. Shoreline erosion and thermal impact of thaw lakes in a warming landscape, Arctic Coastal Plain, Alaska. Co-supervisor. MSc. Thesis. Department of Geology, University of Colorado.
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- Ernens, F. 2006. The quantitative geometry of deposited sand bodies and the preservation potential of point bars in the Irtysh River System. BSc. Thesis, Delft University of Technology. Co-supervised with Prof. S. Luthi.
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- Bron, A.W. 2006. Sediment mass balance study of the Late-Holocene prodelta on the Northern Adriatic Shelf, MSc. Thesis Delft University of Technology. Committee member.

Participants in Short courses on HydroTrend and SedFlux

- Dr. Marina Rabineau, Gwenael Jouet (Phd student), University of Brest, France, 2002
- Dr. Steve Goodbred, Penny Youngs (Phd student), Stony Brook University, 2003
- Ruth Mugford (Phd student), Scott Polar Research Institute, Cambridge University, UK, 2004
- Thomas Gerber (Phd student), Duke University, NC, 2004
- Dr. Liviu Giosan, Woodshole Oceanographic Institution, 2005
- Dr. Ted Lewis (PDF), Queens University, Canada, 2008
- Ilja de Winter (Phd student), Delft University of Technology, The Netherlands, 2008 and 2009.
- Yunzhen Chen (Phd student), Nanjing University, China, August 2008- September 2009.
- Bjorn Heise, (PDF), University of Kiel, Germany, 2009.