

## Tinna Jökulsdóttir

---

- ADDRESS** Department of the Geophysical Sciences *Phone: (312) 543-5209*  
5734 S. Ellis Avenue *Fax: (773) 702-9505*  
University of Chicago *e-mail: tinna@uchicago.edu*  
Chicago, IL 60637
- OBJECTIVE** Post-doctoral research in ocean biogeochemical cycling.
- EDUCATION** **University of Chicago**  
*Department of Geophysical Sciences*  
Ph.D. Geophysical Sciences, 2010 Dissertation: A Mechanistic Model of Biogenic Aggregates in the Ocean, Advisor: David Archer
- University of Iceland**  
*Department of Physics and Geophysics*  
B.S. Geophysics, 2003 Undergraduate thesis: Greenhouse Gases - relative importance of main contributors, Advisor: Haraldur Ólafsson
- University of Copenhagen**  
*Niels Bohr Institute*  
Exchange student autumn 2001
- RESEARCH** **University of Chicago**  
2004-2010: For my thesis I developed a particle-resolved mechanistic model of sinking particles in the ocean to understand what controls the flux of organic carbon down the watercolumn.  
2009: I brought a particle counter on the OSU research vessel Wacoma and hooked it up to the flow from Burke Hale's Super Soarer. The aim was to study particle spectrums of the coastal watercolumn in the hope of learning something about the bottom boundary layer.  
2007: Worked with Andreas Schmittner adding a particle tracer to the UVic model.  
Spring of 2004: Research assistant to David Archer. I wrote a 2-D idealized circulation model of the subtropical gyres that included two particle sizes and thorium chemistry. The objective was to analyze the role of particle dynamics and upwelling at the equator in thorium focusing in the sediments at the equator.
- TEACHING** *Teaching Assistant to:*  
-Global Warming: Understanding the forecast (Instructor: D. Archer)  
-Ice Age Earth (Instructors: D. MacAyeal, P. Martin, D. Rowley)  
-Evolution of the solar system and the earth (Instructor: F. Richter)  
-Environmental Chemistry (Instructor: D. Archer)  
-Oceanography Field Course (Instructor: D. Archer)
- CONFERENCE PRESENTATIONS** 2010 *Mechanistic model of sinking particles* Ocean Sciences, Portland, Oregon  
2009 *A mechanistic model of sinking biogenic particles in the ocean* AGU Chapman conference, Brockenhurst, Hampshire, England  
2008 *Effect of ocean chemistry changes on particle dynamics and sinking fluxes in the ocean* AGU Fall meeting, San Francisco, California (poster)  
2007 *A mechanistic model of biogenic particles in the ocean* AGU Fall meeting, San Francisco, California  
2006 *The role of ballast in controlling the Flux of POC: A 1-d Model* Ocean Sciences (poster)  
2005 *The Control of Ballast on the Particulate Organic Carbon Sinking Flux to the Sea Floor*, AGU Chapman conference, Woods Hole, Massachusetts (poster)

PUBLICATIONS      Jokulsdottir, T. and Archer, D. *in progress* A Mechanistic Model of Biogenic Aggregates in the Ocean, to be submitted to *Global Biogeochemical Cycles*.  
Jokulsdottir, T. and Archer, D. *in progress* Response of the Biological Pump to Changes in Ocean Temperature, pH and Productivity: Results of a 1-D Lagrangian Settling Particle Model, to be submitted to *Geophysical Research Letters*.

GRANTS              2009 Travel grant for the AGU Chapman conference  
2007 Glitnir Bank academic grant (\$5000)  
2006 Memorial grant for Helga Jónsdóttir and Sigurliði Kristjánson (\$6000)  
2006 Memorial grant for Margrét Björgólfsdóttir (\$2000)  
2005 Travel grant for the AGU Chapman conference  
2001 Nordplus student-exchange grant

NON-ACADEMIC  
EXPERIENCE        **Talnatök**  
2003-2006: Website administrator for Talnatok (private math tutoring program).

**Iceland Geosurvey**  
Summers 2001 - 2003: I wrote a program that collects geothermal data from an array of databases, interpolates and draws a 3-D map of the area specified by the user. I also did various kind of field work: transient electromagnetic soundings (to map temperature in the upper crust), seismic surveys and borehole measurements.

SKILLS              **Programming:** FORTRAN 90, C, Octave/Matlab, Python, Unix, ferret  
**Languages:** Icelandic, English, Danish, Norwegian, French (only for culinary purposes).

REFERENCES        David Archer, Professor  
Department of the Geophysical Sciences, University of Chicago  
5734 S. Ellis Avenue, Chicago, IL 60637  
*Phone:* (773) 702 0823, *email:* d-archer@uchicago.edu

                          Pamela Martin, Assistant Professor  
Department of the Geophysical Sciences, University of Chicago  
5734 S. Ellis Avenue, Chicago, IL 60637  
*Phone:* (773) 834 5245, *email:* pmartin@uchicago.edu

                          Andreas Schmittner, Assistant Professor  
College of Oceanic and Atmospheric Sciences, Oregon State University  
104 COAS Admin Bldg, Corvallis, OR 97331-5503  
*Phone:* (541) 737 9952, *email:* aschmitt@coas.oregonstate.edu