

## *Curriculum Vitae*

### **Markus Kienast**

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#### **Academic and Research Positions:**

- 2009 - present      **Associate Professor** at the Dept. Oceanography, Dalhousie University, Halifax
- 2004 - 2009        **Assistant Professor** at the Dept. Oceanography, Dalhousie University, Halifax
- 2004 – present     **Adjunct Scientist** at the Woods Hole Oceanographic Institution
- 2003 - present     **Scholar** in the Canadian Institute for Advanced Research (CIFAR) *Earth System Evolution* program (re-appointment 2009)
- 2003 - 2004        **Postdoctoral scholar** at the Woods Hole Oceanographic Institution
- 1995 - 1996        **Research Assistant** of Prof. Dullo, Department of Paleooceanography  
Geomar, Kiel, Germany

#### **Education:**

- 1997 - 2002        **Ph.D.** in Oceanography at the University of British Columbia, Vancouver,  
“Sedimentary biogeochemistry and palaeoceanography of the South  
China Sea during the late Pleistocene”
- 1993 - 1997        **M. Sc.** (Diplom) in Geology at the Christian-Albrechts-University  
of Kiel, Germany "History of fluvial input from the Sunda Shelf: hemipelagic  
sediments from the South China Sea"
- 1990 - 1993        **B. Sc.** (Vordiplom) in Geology at the Technical University of Clausthal-  
Zellerfeld, Germany

#### **Special Appointments, Awards, and Fellowships:**

- 2013 - present     **Co-director of TOSST**, NSERC CREATE for Transatlantic Ocean System Science and  
Technology at Dalhousie University and at Kiel University/GEOMAR
- 2012 - present     **Associate Editor *G-Cubed***, *Geochemistry, Geophysics, Geosystems (G3)*
- 2011 - present     **Canadian alternate delegate on ESSAC** (Science Support and Advisory Committee of  
ECORD, the European Consortium of Ocean Research Drilling)
- 2011 - present     Member of the Executive Committee of the **Canadian Consortium for Ocean Drilling**  
(CCOD)
- 2009 - present     **Co-coordinator PAGES/IMAGES working group** on the *Nitrogen Cycle in the Ocean,*  
*Past and Present* (NICOPP)
- 2009 - present     Dalhousie representative in the **Canadian Consortium for Ocean Drilling** (CCOD)
- 2009 - present     **Member** Canadian National Committee for the Scientific Committee on Oceanic  
Research (CNC/SCOR)
- 2007 - present     **Canadian national representative of IMAGES** (The International Marine Past  
Global Change Study)
- 2007                **Co-editor PAGES newsletter** special section on Paleooceanography, editors Kienast M,  
Lynch-Stieglitz J, Newmann L, and Kiefer T.
- 2005                **Petro-Canada Young Innovator Award** at Dalhousie University

2005 - 2009	<b>Geology</b> editorial board
2003 - 2007	<b>Founding member</b> of the <b>IMAGES working group</b> on Past Equatorial Pacific Dynamics
2002 - 2003	Woods Hole Oceanographic Institution <b>Postdoctoral Fellowship</b>
2001	<b>Student Award</b> for outstanding research work and excellent standard of presentation at the 7 <sup>th</sup> Intl. Conf. on Paleoceanography in Sapporo, Japan
2001 - 2002	University of BC <b>Graduate Fellowship</b>
1999 - 2001	Izaak Walton <b>Killam Memorial Pre-Doctoral Fellowship</b>
1998 - 1999	University of BC <b>Graduate Fellowship</b>
1998	<b>Student Award</b> for outstanding student paper presentation at the 6 <sup>th</sup> International Conference on Paleoceanography in Lisbon, Portugal
1997 - 1998	German Academic Exchange Service ( <b>DAAD</b> ) <b>Fellowship</b>

### **Research Interests: The Geological Record of Ocean and Climate Change**

Our most significant contributions to research revolve around three topics, 1) environmental changes in the tropical Pacific during the late Quaternary, 2) nitrogen isotope evidence for past changes in the oceanic N cycling and inventory, and 3) improving our understanding of paleoceanographic proxies.

### **Scientific Cruises**

2013	<b>R.V. Sonne - 228 cruise</b> to the western equatorial Pacific with M. Mohtadi (chief scientist) <ul style="list-style-type: none"><li>- sediment coring (multi core, gravity core)</li><li>- water column sampling</li></ul>
2006	<b>R/V Marion Dufresne</b> expedition to the western equatorial Pacific, co-PI with C. Laj (chief scientist) <ul style="list-style-type: none"><li>- sediment coring</li></ul>
2002	<b>R/V Mirai cruise</b> to the NW Pacific with S. Honjo (chief scientist) <ul style="list-style-type: none"><li>- water column sampling of suspended particulate matter, using CTD rosettes and large volume pumps</li></ul>
1998	<b>CCGS Vector cruise</b> "Howe Sound, Strait of Georgia, Saanich Inlet" with Dr. S. E. Calvert (senior scientist) <ul style="list-style-type: none"><li>- water column sampling and mooring</li><li>- freeze coring</li></ul>
1996	<b>R.V. Sonne - 115 cruise</b> "Sunda Flood" in the South China Sea with K. Stattegger (chief scientist) <ul style="list-style-type: none"><li>- Handling coring equipment (gravity, piston and spade box core)</li><li>- Core descriptions and sampling, Sedimentology</li><li>- Magnetic susceptibility measurements</li></ul>
1995	<b>R.V. Viktor Hensen cruise</b> in the southern Baltic Sea, Germany, side scan sonar and parasound survey
1994	<b>R.V. Sonne - 95 cruise</b> "Monitor Monsoon" in the South China Sea with M. Sarnthein (chief scientist) <ul style="list-style-type: none"><li>- Handling coring equipment (gravity, piston and spade box core)</li><li>- Core descriptions and sampling</li><li>- Sedimentology</li></ul>

**Peer-reviewed publications (published and in press):**

- 2013** Galbraith ED, KIENAST M, NICOPP working group (2013) The acceleration of oceanic denitrification during deglacial warming. *Nature Geoscience*, doi: 10.1038/NGEO1832
- deGelleke L, Hill PS, KIENAST M, Piper DJW (2013) Sediment dynamics during Heinrich event H1 inferred from grain size. *Marine Geology*, 336, 160–169
- Tesdal J-E, Galbraith E.D., KIENAST M (2013) The marine sedimentary nitrogen isotope record. *Biogeosciences* 10, 101–118, doi:10.5194/bg-10-101-2013.
- 2012** Yu P-S, KIENAST M, Chen M-T, Cacho I, Flores JA, Mohtadi M, and Mix AC (2012) Subpolar influences on equatorial Pacific cold tongue variability during the past 160 kyr as revealed by faunal evidence of planktic foraminifers. *Journal of Quaternary Science*, 27(9) 921-931.
- Robinson R, KIENAST M, NICOPP working group (2012) A review of nitrogen isotopic alteration in marine sediments. *Paleoceanography*, 27, PA4203, doi:10.1029/2012PA002321
- KIENAST M, MacIntyre G, Dubois N, Normandeau C, Higginson S, Chazen C, and Herbert T (2012) Alkenone unsaturation in surface sediments from the eastern equatorial Pacific: Implications for SST reconstructions. *Paleoceanography*, 27, PA1210, doi:10.1029/2011PA002254
- 2011** Dubois N & KIENAST M (2011) Spatial reorganization in the equatorial divergence in the Eastern Tropical Pacific during the last 150 kyr. *Geophysical Research Letters*, 38, L16606, doi:10.1029/2011GL048325
- This paper was highlighted in “Research Highlights” in Nature Geoscience, Sept. 2011*
- Bolliet T, Holbourn A, Kuhnt W, Kissel C, Laj C, Beaufort L, KIENAST M, Andersen N, Dieter Garbe-Schönberg D (2011) Mindanao Dome variability over the last 160 kyr: Episodic glacial cooling of the West Pacific Warm Pool. *Paleoceanography* 26, doi:10.1029/2010PA001966
- Dubois N, KIENAST M, Kienast S, Normandeau C, Calvert SE, Herbert TD, Mix A (2011) Millennial-scale variations in hydrography and biogeochemistry in the Eastern Equatorial Pacific over the last 100 kyrs. *Quaternary Science Reviews* 30, 210-223.
- 2010** Dubois N, KIENAST M, Kienast S, Calvert SE, François R, Anderson RF (2010) Sedimentary opal records in the Eastern Equatorial Pacific: It’s not all about leakage. *Global Biogeochemical Cycles*, 24, GB4020, doi:10.1029/2010GB003821
- Kissel C, Laj C, KIENAST M, Bolliet T, Holbourn A, Hill P, Kuhnt W, Braconnot P (2010) Monsoon variability and deep oceanic circulation in the western equatorial Pacific over the last climatic cycle: insights from sedimentary magnetic properties and sortable silt. *Paleoceanography*, 25, doi:10.1029/2010PA001980
- 2009** Dubois N, KIENAST M, Normandeau C, Herbert T (2009) The east equatorial Pacific cold tongue during the Last Glacial Maximum as seen from alkenone paleothermometry. *Paleoceanography*, 24, doi:10.1029/2009PA001781
- MARGO project members (MARGO: *Multiproxy Approach for the Reconstruction of the Glacial Ocean Surface*; 2009) Constraints on the magnitude and patterns of ocean cooling at the Last Glacial Maximum. *Nature Geoscience*, doi:10.1038/NGEO411

- 2008** KIENAST M, Lehmann M, Timmermann A, Normandeau C, Laj, C (2008). A Holocene deepening of the western equatorial Pacific thermocline ? *Geophysical Research Letters* 35, L23610, doi:10.1029/2008GL035464
- Steinke S, KIENAST M, Groeneveld J, Chen M-T, Rendle-Bühring R (2008) Proxy-dependence of the timing and pattern of deglacial warming in the tropical South China Sea: Resolving seasonality. *Quaternary Science Reviews* 27: 688-700
- Galbraith ED, KIENAST M, Jaccard S, Pedersen TF, Brunelle B, and Kiefer T (2008) Consistent relationship between global climate and surface nitrate utilization in western Subarctic Pacific throughout last 500 ky. *Paleoceanography*, 23, doi:10.1029/2007PA001518
- 2007** Kienast SS, KIENAST M, François R, Mix A, and Calvert SE (2007) Thorium-230 normalized particle flux and sediment focusing in the Panama Basin region during last 30,000 years. *Paleoceanography*, 22, doi:10.1029/2006PA001357
- Weaver AJ, Eby M, KIENAST M, and Saenko OA (2007) Changes in the Atlantic meridional overturning in response to increasing atmospheric CO<sub>2</sub>: Sensitivity to the mean climatic state. *Geophysical Research Letters* Vol. 34, No. 5, L05708, doi:10.1029/2006GL028756
- 2006** KIENAST M, Kienast SS, Calvert SE, Eglinton TI, Mollenhauer G, François R, and Mix A (2006) Eastern equatorial Pacific cooling and Atlantic meridional overturning circulation. *Nature*, 443, 846-849, doi:10.1038/nature05222
- Kienast SS, KIENAST M, François R, and Calvert SE (2006) Testing the silica leakage hypothesis with sedimentary opal records from the eastern Equatorial Pacific over the last 150 kyrs. *Geophysical Research Letters*, 33, L15607, doi:10.1029/2006GL026651
- 2005** Lehmann MF, Sigman DM, McCorkle DC, Brunelle BG, Hoffmann S, KIENAST M, Cane G, and Clement J (2005) Origin of the deep Bering Sea nitrate deficit – Constraints from the nitrogen and oxygen isotopic composition of water-column nitrate and benthic nitrate fluxes. *Global Biogeochemical Cycles*, 19, GB4005, doi:10.1029/2005GB002508
- KIENAST M, Higginson MJ, Mollenhauer G, Eglinton TI, Chen M-T, Calvert SE (2005) On the sedimentological origin of downcore variations of bulk sedimentary nitrogen isotope ratios. *Paleoceanography*, 20, PA2009, doi:10.1029/2004PA001081
- Mollenhauer G, KIENAST M., Lamy F, Meggers H, Schneider RR, Hayes J, Eglinton TI (2005) An evaluation of <sup>14</sup>C age relationships between co-occurring foraminifera, alkenones, and total organic carbon in continental margin sediments. *Paleoceanography*, 20, PA1016, doi:10.1029/2004PA001103
- Kiefer T & KIENAST M (2005) Patterns of deglacial warming in the Pacific Ocean: A review with emphasis on the time interval of Heinrich event 1. *Quaternary Science Reviews* 24/7-9, 1063-1081
- 2004** Galbraith E, KIENAST M, Pedersen TF, Calvert SE (2004) Glacial-interglacial modulation of the marine nitrogen cycle by high latitude O<sub>2</sub> supply to the global thermocline. *Paleoceanography*, 19, PA4007, doi:10.1029/2003PA001000

- 2003** Steinke S, KIENAST M, Hanebuth T (2003) The importance of sea-level variations and shelf palaeo-morphology in governing shelf margin and slope sedimentation: Examples from the southern South China Sea during the last deglaciation. *Marine Geology*, 201: 179-206
- KIENAST M Hanebuth TJJ, Pelejero C, Steinke S (2003) Synchronicity of Meltwater Pulse 1a and the Bølling warming: New evidence from the South China Sea. *Geology*, 31/1: 67-70
- 2001** KIENAST M, Steinke S, Statterger K, Calvert S E (2001) Synchronous tropical South China Sea SST change and Greenland warming during deglaciation. *Science*, 291: 2132-2134
- Steinke S, KIENAST M, Pflaumann U, Weinelt M, Statterger K (2001) A high-resolution sea surface temperature record from the South China Sea (16,500-3,000 yr B.P.) *Quaternary Research*, 55: 352-362
- KIENAST M, Calvert SE, Pelejero C, Grimalt JO (2001) A critical review of marine sedimentary  $\delta^{13}\text{C}_{\text{Org}}$ - $p\text{CO}_2$  estimates: New palaeo-records from the South China Sea and a revisit of other low-latitude  $\delta^{13}\text{C}_{\text{Org}}$ - $p\text{CO}_2$  records. *Global Biogeochemical Cycles*, 15/1: 113-127
- 2000** KIENAST M (2000) Constant nitrogen isotopic composition of organic matter in the South China Sea during the last climatic cycle: Global implications. *Paleoceanography* 15/2: 244-253
- 1999** Pelejero C, KIENAST M, Wang L, Grimalt J (1999) The flooding of Sundaland during the last deglaciation: Imprints in hemipelagic sediments from the southern South China Sea. *Earth and Planetary Science Letters* 171: 661-671
- Pelejero C, Grimalt JO, Heilig S, KIENAST M, Wang L (1999) High resolution  $\text{U}^{k}_{37}$ -temperature reconstructions in the South China Sea over the past 220 kyr. *Paleoceanography* 14/2: 224-231
- Jian Z, Wang L, KIENAST M, Sarnthein M, Kuhnt W, Lin H, Wang P (1999) Benthic foraminiferal paleoceanography of the South China Sea over the last 40,000 years. *Marine Geology* 156/1-4: 159-186
- Wang L, Sarnthein M, Erlenkeuser H, Grimalt J, Grootes P, Heilig S, Ivanova E, KIENAST M, Pelejero C, Pflaumann U (1999) East Asian monsoon climate during the late Pleistocene: High-resolution sediment records from the South China Sea. *Marine Geology* 156/1-4: 245-284

### **Non-refereed contributions**

#### **Editorials**

KIENAST M, Lynch-Stieglitz J (2008) Editorial: Paleocyanography. PAGES newsletter special section on Paleocyanography, Vol 16, No 1

#### **Reports:**

Hooker et al. (2012) The fifth SeaWIFS HPLC analysis round-robin experiment (SeaHARRE-5).  
Rafter P, Jaccard S, KIENAST M, Galbraith E, Kiefer T (2011) The nitrogen cycle in the ocean, past and present; report on the 2<sup>nd</sup> NICOPP Workshop, Halifax, Canada, 8-10 June 2011

- Galbraith E, KIENAST M, Kiefer T (2010) The nitrogen cycle in the ocean, past and present; report on the 1<sup>st</sup> NICOPP Workshop, Montreal, Canada, 14-16 May 2010
- KIENAST M & Reiners P (2007) CIFAR meeting report, Quebec City meeting in Sept. 2007
- KIENAST M & Reiners P (2006) CIFAR meeting report, Chicago meeting in Sept. 2006
- Stattegger K., et al. (1997) Cruise report SONNE 115: Sequence stratigraphy, late Pleistocene-Holocene sea level fluctuations and high resolution record of the post-Pleistocene trans-gression on the Sunda Shelf, Berichte - reports, Geol.-Paläont. Inst. Univ. Kiel, Nr. 86, 211pp
- Sarnthein M, et al. (1994) Preliminary report on SONNE-95 cruise "Monitor Monsoon" to the South China Sea, Berichte - reports, Geol.-Paläont. Inst. Univ. Kiel, Nr. 68: 224pp

### **Theses:**

- KIENAST M (2002) Sedimentary biogeochemistry and palaeoceanography of the South China Sea during the late Pleistocene. Doctoral Dissertation, Department of Earth and Ocean Sciences, University of British Columbia, Vancouver, Canada
- KIENAST M (1996) Geschichte des Flusseintrags vom Sunda Schelf: Abbild in hemipelagischen Sedimenten aus dem Südchinesischen Meer. Diplom Thesis, part I, Geologisches Institut, Universität Kiel, Germany.
- KIENAST M (1996) Geologie der Niederösterreichischen Voralpen südöstlich von Hainfeld an der Gölsen. Diplom Thesis, part II, Geologisches Institut, Universität Kiel, Germany.

### **Conference Organizer**

- 2012            **Co-convener** of session at the 2012 AGU Fall Meeting – session B051, Quantifying Fluxes in the Marine Nitrogen Cycle, Past and Present
- 2011            **Convener** of the 2<sup>nd</sup> workshop of the PAGES/IMAGES working group on the *Nitrogen Cycle in the Ocean, Past and Present* (NICOPP) in Halifax, Canada, June 2011
- 2011            **Co-organizer** of Canada-Germany Workshop on Cooperative Research in the North Atlantic Ocean, Dalhousie University June 2011, funded in part by DFAIT
- 2010            **Co-organizer** of the 1<sup>st</sup> workshop of the PAGES/IMAGES working group on the *Nitrogen Cycle in the Ocean, Past and Present* (NICOPP) in Montreal, Canada, May 2010
- 2010            **Co-convener** of sessions at the 2010 AGU Fall Meeting and the Annual Congress 2010 of CMOS (The Canadian Meteorological and Oceanographic Society)
- 2008            AGU Fall Meeting, session PP05 “Tropical Pacific Paleoceanography During the Late Quaternary”, **convener** F. Mekik, M. Kienast, A. Koutavas
- 2007 - 2009    member of the **Scientific Program Committee** for the Annual Congress 2009 of CMOS (The Canadian Meteorological and Oceanographic Society)
- 2001            AGU Fall Meeting, session PP02 “Amplitude and Phasing of Tropical Temperature Signals During the Quaternary”, **convener** M. Kienast, D.W. Lea, Y. Rosenthal

**Invited Meeting Presentations, Lectures, and Workshop Participation (1<sup>st</sup> author only)**

- 2011** KIENAST M Records of glacial sea surface temperatures in the eastern and western tropical Pacific during the last 100,000 years, ACER-INTIMATE joint workshop on “Last Glacial Abrupt Climate Changes and Sea Surface Temperature Response”, Bordeaux, France, Oct. 2011, *invited keynote*
- KIENAST M, Dubois N, Hill P, Holbourn A, Kuhnt W, Kissel C, and Laj C, Subsurface flow and ventilation of the tropical Pacific 0-150,000 years BP: New insights from grain size analysis and nitrogen isotopes, Western Pacific Paleoceanography IMAGES Workshop II: Land-Sea Linkage, Taipei, Taiwan, April 2011, *invited keynote*
- KIENAST M, Dubois N, Kienast S, MacIntyre G, Normandeau C, Francois R, Calvert SE, Herbert T, Anderson R, and Mix A, Millennial-scale variations in hydrography and biogeochemistry in the EEP over the last 100 kyr. IFM-GEOMAR/Kiel University SFB 754: Climate - Biogeochemistry Interactions in the Tropical Ocean, retreat, Lübeck, Germany, Feb. 2011, *invited talk*
- 2010** KIENAST M, Dubois N, Hill P, Kienast S, MacIntyre G, Normandeau C, Bolliet T, Holbourn A, Kuhnt W, Kissel C, Laj C. The tropical Pacific during the last glacial cycle: Proxy calibrations and new findings. *Invited deptl. seminar*, Bremen, Nov.1, 2010
- KIENAST M, Dubois N, Hill P, Kienast S, MacIntyre G, Normandeau C, Bolliet T, Holbourn A, Kuhnt W, Kissel C, Laj C. The tropical Pacific during the last glacial cycle: Proxy calibrations and new findings. *Invited SFB seminar*, Kiel, Oct 29, 2010
- KIENAST M, Dubois N, Kissel C, Laj C (2010) Western equatorial Pacific paleoceanography during the last 150,000 years: Novel insights from the *Marco Polo II* cruise. Western Pacific Paleoceanography Workshop I: Future Challenge, Jan. 2010, Taipei, Taiwan (*invited oral presentation*)
- 2008** KIENAST M, Lehmann M, Hill P, Timmermann A, Bolliet T, Holbourn A, Kissel C, Kuhnt W, and Laj C (2008) A Holocene deepening of the nitracline, a glacial maximum in bottom current intensity, and other preliminary results from site MD06-3067 off Mindanao. International Marco-Polo 2 post-cruise meeting, LSCE, Gif-sur-Yvette, France (*invited oral presentation*)
- 2007** KIENAST M, Kienast S, Calvert SE, François R, Mix A, Delworth T, and Normandeau C (2007) Linking eastern equatorial Pacific oceanography to high-latitude climate change during deglaciation. ESF Research Conference on Ocean Controls on Abrupt Climate Change, Obergurgl, Austria, 19-24 May 2007 (*invited poster presentation*)
- 2006** University at Sea, aboard R/V *Marion Dufresne*, invited lecturer, June 2006
- 2005** KIENAST M, Paleo-research in the context of SOLAS, SOLAS summer school, Corsica, France, Sept. 2005 (*invited lecturer*)
- C-GEOTRACES workshop, Vancouver, Canada, June 7-9, 2005
- 2004** KIENAST M, How important is the MOC really in global climate change? Reflections on Heinrich Event 1, Paleo-seminar, Woods Hole Oceanographic Institution (*invited lecture*)
- 2003** MARGO (Multiproxy Approach for the Reconstruction of the Glacial Ocean surface) workshop, Barcelona, Spain, September 15-17, 2003

Workshop on “Nitrogen and nitrogen isotopes in the marine environment”, Vancouver, Canada, July 24-25, 2003

National Science Foundation sponsored Tropical Influence on Global Climate Change Workshop, USC, Los Angeles, June 27-29, 2003

**2002** KIENAST M, Hanebuth TJJ, Pelejero C, Steinke S (2002) Synchronicity of the Bølling warming in the South China Sea (SCS) and Greenland: Implications for the regional diversity of deglacial warming, SCS reservoir ages, and the timing of MWP 1a. Goldschmidt Konferenz, Davos, Switzerland (*invited oral presentation*)

**2001** KIENAST M, Steinke S, Statterger K, Calvert SE (2001) High resolution deglacial sea surface temperature records from the tropical South China Sea. IMAGES, Western Pacific Margins (WEPAMA) Working Group Meeting II - Taipei, Taiwan. (*invited oral presentation*)

KIENAST M, Nitrogen isotopes in palaeoceanography: Tracing the past marine nitrogen cycle, Geological Sciences Department at UC Santa Barbara, USA (*invited lecture*)

KIENAST M, The Geochemistry of ancient oceans: A challenge for multi-proxy palaeoceanography, Geological Sciences Department at UC Santa Barbara, USA (*invited lecture*)

**1998** KIENAST M, Calvert SE, Nielsen B, Sarnthein M (1998) Enigmatic nitrogen isotope variations in the South China Sea during the last climatic cycle. Eos Trans. AGU, 79(45), Fall Meet. Suppl. F427 (*invited oral presentation*)

### **Contributed meeting presentations (1<sup>st</sup> author only)**

**2012** KIENAST M, Galbraith E, Robinson R, NICOPP working group (2012) The NICOPP synthesis of the marine sedimentary nitrogen isotope record 0-30,000 years BP: Documenting deglacial changes in the marine N cycle. AGU Fall Meeting 2012 (*poster*)

KIENAST M, Galbraith E, Robinson R, NICOPP working group (2012) The NICOPP synthesis of the marine sedimentary nitrogen isotope record 0-30,000 years BP. AOGS-WPGM meeting 2012, Singapore (*oral presentation*)

KIENAST M, MacIntyre G, Dubois N, Normandeau C, Higginson S, Kienast SS, and Herbert T (2012) UK37' in eastern tropical Pacific surface sediments: Implications for alkenone paleothermometry at the ‘warm end’. Goldschmidt Conference 2012, Montreal (*oral presentation*)

KIENAST M, Normandeau C, Hill A, and François R (2012) Biomarkers as recorders of past high-latitude surface ocean conditions: GEOTRACES field observations and culture studies. IPY 2012 *From Knowledge to Action* Conference (*poster*)

**2010** KIENAST M, Galbraith E, Kiefer T, and 27 others (2010). NICOPP: Nitrogen Cycle in the Ocean, Past and Present. AGU Fall Meeting 2010 (*poster*)

KIENAST M, Galbraith E, Kiefer T, and 27 others (2010). NICOPP: Nitrogen Cycle in the Ocean, Past and Present. Intl. Conference on Paleocyanography X, San Diego, CA, Sept. 2010 (*poster*)

KIENAST M, Dubois N, Hill P, Kienast S, Normandeau C, Bolliet T, Holbourn A, Kuhnt W, Kissel C, Laj C (2010) Thermocline depth and bottom current flow in the western equatorial

- Pacific 0-150,000 years BP: New insights from nitrogen isotopes and grain size analysis. Intl. Conference on Paleoceanography X, San Diego, CA, Sept. 2010 (*poster*)
- KIENAST M, Dubois N, Hill P, Normandeau C, Bolliet T, Holbourn A, Kuhnt W, Kissel C, Laj C. (2010) Subsurface paleoceanography of the western equatorial Pacific 0-150,000 years BP: New insights from nitrogen isotopes and grain size analysis. Western Pacific Geophysics Meeting 2010, Taipei, Taiwan, (*oral presentation*)
- KIENAST M, MacIntyre G, Hill A, Dubois N, Normandeau C (2010) Alkenone paleothermometry: New insights from culture studies and eastern tropical Pacific surface sediments. CMOS/CGU Annual Congress 2010, (*oral presentation*)
- 2009** KIENAST M, Lehmann M, Timmermann A, Galbraith E, Normandeau C, Laj, C (2009) Nitrogen isotope evidence of a mid-Holocene deepening of the western equatorial Pacific thermocline ? CMOS congress 2009, Halifax, (*oral presentation*)
- 2008** KIENAST M, Lehmann M, Timmermann A, Galbraith E, Bolliet T, Holbourn A, Normandeau C, Laj, C (2008) A mid-Holocene transition in the nitrogen dynamics of the western equatorial Pacific: Evidence of a deepening thermocline ? AGU Fall Meeting 2008 San Francisco USA, (*poster presentation*)
- 2007** KIENAST M, Kienast S, Normandeau C, Calvert SE, François R, and Mix A (2007) Linking eastern equatorial Pacific hydrography and biogeochemistry to high-latitude climate change during the last deglaciation, International conference on Paleoceanography, Shanghai, China (*poster presentation*)
- 2005** KIENAST M, Kienast S, Calvert SE, Eglinton TI, Mollenhauer G, François R, Mix A (2005) Cooling of the Eastern Tropical North Pacific in Response to a Slow-Down of the Atlantic Meridional Overturning Circulation. Eos Trans. AGU, 86(52), Fall Meet. Suppl., Abstract PP34B-04 (*oral presentation*)
- 2004** KIENAST M, Higginson MJ, Mollenhauer G, Eglinton TI, Chen, M-T, Calvert SE (2004) On the sedimentological origin of downcore variations of bulk sedimentary nitrogen isotope ratios. International conference on Paleoceanography, Biarritz, France (*poster presentation*)
- 2003** KIENAST M, Higginson MJ, Mollenhauer G, Eglinton TI, Calvert SE (2003) On the potential sedimentological origin of downcore variations of bulk sedimentary  $\delta^{15}\text{N}$ . AGU fall meeting (*oral presentation*)
- KIENAST M, Hanebuth TJJ, Pelejero C, Steinke S (2003) Synchronicity of Meltwater Pulse 1a and the Bølling warming: New evidence from the South China Sea. EGS-AGU-EUG Joint Meeting, Nice, France (*poster presentation*)
- 2001** KIENAST M, Calvert SE, Pelejero C, Grimalt JO (2001) Is  $\delta^{13}\text{C}_{\text{org}}$  a reliable proxy for palaeo- $\text{pCO}_2$ ? Eos Trans. AGU, 82(47), Fall Meet. Suppl. F777 (*oral presentation*)
- KIENAST M, Calvert SE, Steinke S, Stettin K, Hastings D, (2001) High resolution sea surface temperature estimates from the tropical South China Sea: A comparison of alkenone(UK37), foraminiferal transfer function, and Mg/Ca SST estimates. 7th International Conference on Paleoceanography, Sapporo, Japan (*poster presentation*)
- 2000** KIENAST M, Steinke S, Stettin K, Calvert SE (2000) The geochemical record of monsoonal climate changes during the last deglaciation: Two high-resolution down-core records from the

northern and southwestern South China Sea. Eos Trans. AGU, 81(48), Fall Meet. Suppl. F646  
(oral presentation)

- 1999** KIENAST M, Pelejero C, Grimalt J, Wang L (1999) The flooding of Sundaland: Imprint in hemipelagic sediments from the southern South China Sea. Eos Trans. AGU, 80(46), Fall Meet. Suppl. F531 (oral presentation)

KIENAST M, Calvert SE, Nielsen B, Sarnthein M, Steincke S (1999) Stickstoff-Isotope im Südchinesischen Meer: Sedimentoberflächenverteilung und Zeitreihen für die letzten 30.000 und 140.000 Jahre. Statusseminar 1999: Meeresforschung mit FS Sonne, Freiberg, Germany, Tagungsband: 303-304 (poster presentation)

- 1998** KIENAST M, Calvert SE, Nielsen B, Sarnthein M (1998) N isotope variations in the South China Sea: surface sediment distribution and downcore variations during the last climatic cycle. 6th International Conference on Paleoceanography, Lisbon, Portugal, Abstract volume, p. 139. (poster presentation)

### **Student/postdoc supervision**

#### Graduate students, supervisor

- 2008 - 2010 Hastings, Katherine, MSc, NSERC scholar: "Terrestrial biomarker records of ENSO and ITCZ variability in the western equatorial Pacific during the late Quaternary"
- 2006 - 2010 Dubois, Nathalie, PhD: "On the paleoceanography of the eastern equatorial Pacific during the last 100,000 years"

#### Graduate students and postdocs, co-supervisor

- 2012 - Fillipova, Alexandra, PhD candidate, co-supervised with M. Frank (GEOMAR)
- 2012 - Kerrigan, Liz, MSc candidate, co-supervised with D. Wallace
- 2012 - 2013 Saint-Ange Francky, postdoc, co-supervised with D. Piper and D. Mosher
- 2010 - 2012 Bowen, David, MSc, co-supervised with J. Cullen: "The influence of irradiance and genotype on the change in carbon allocation by four species of microalgae under increasing nutrient stress"
- 2008 - 2011 DeGelleke, Laura, MSc, co-supervised with P Hill: "Sedimentology of Heinrich event layers in the North Atlantic"
- 2008 - 2009 Yu, Pai-Sen, visiting PhD candidate, co-supervised with M-T Chen: "Sea surface temperature variations of the eastern equatorial Pacific during MIS 1-6 and MIS 12-16"
- 2005 - 2009 Delaney, Lisa, MSc, co-supervised with M Lewis: "A phytoplankton pigment extraction protocol for marine sediments"