

Sébastien Bertrand, Ph.D.

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Nationality: Belgian Date of birth: 12 June 1979
ResearcherID: G-9744-2011 Place of birth: Namur, Belgium



Research interests

- Sedimentary geochemistry in rivers, lakes and fjords
- Multiproxy sedimentary record of climate and environmental change (lakes, fjords and continental margins)
- Inorganic geochemistry, bulk organic geochemistry, grain-size, mineralogy, physical properties of sediments
- Paleoclimatology of southern South America

Education

February 2005	Ph.D. Geology (Sedimentology and paleoclimatology)	University of Liège , Highest honors (suma cum laude)
September 2002	M.Sc. Geology (DEA)	University of Liège , High honors
September 2001	B.Sc. Geology (Licence)	University of Liège , Highest honors

Professional experience

Research

Dec. 2009 – present	FWO postdoctoral fellow at the <i>Renard Centre of Marine Geology</i> , University of Ghent, Belgium. Also guest postdoctoral fellow at the <i>Woods Hole Oceanographic Institution</i> , MA, USA (2009-2015) and at the <i>Alfred Wegener Institute</i> , Bremerhaven, Germany (2009-2010). Late Quaternary paleoclimate and paleoenvironmental variability in southern South America: ocean-continent linkages.
Dec. 2008 – Nov. 2009	EU Marie Curie Postdoctoral research fellow at the <i>Alfred Wegener Institute</i> , Bremerhaven, Germany. CLIVASA project: The multi-proxy study of Chilean fjord sediments: a high-resolution record of CLimate VARIability in South America since the end of the Last Glacial Maximum (return phase). Advisor: F. Lamy
Nov. 2006 – Nov. 2008	EU Marie Curie Postdoctoral research fellow at the <i>Woods Hole Oceanographic Institution</i> , MA, USA. CLIVASA project: The multi-proxy study of Chilean fjord sediments: a high-resolution record of CLimate VARIability in South America since the end of the Last Glacial Maximum (outgoing phase). Advisor: K. Huguen
Nov. 2005 – Nov. 2006	BAEF Postdoctoral research fellow at the <i>Woods Hole Oceanographic Institution</i> , MA, USA. Late Holocene paleoclimate variability of southern Chile inferred from Chilean fjord sediments (44-47°S). Advisor: K. Huguen
Mar. 2005 – Oct. 2005	Postdoctoral Research Assistant at <i>Brunel University</i> (West London, UK). Reconstruction of the Late Holocene activity of the North Anatolian Fault from lake and coastal lagoon sediments, EU-FP5 RELIEF project. Advisor: S. Leroy
Oct. 2001 – Feb. 2005	PhD student at <i>University of Liège</i> , Belgium. Late Quaternary climate variability and seismotectonic activity in South-Central Chile (40°S) from Puyehue and Icalma lake sediment records. OSTC ENSO-Chile project. Supervisor: N. Fagel

Teaching

- January 2014** Invited lecturer at EULA Summer School "Siguiendo el cambio ambiental global a traves de los sedimentos lacustres" at the University of Concepción, Chile. Teaching of 4 classes on sedimentology, sedimentary geochemistry and age-depth modeling.
- March 2013** Guest lecturer at UQAR, Canada. Teaching of class on "Fjord sediments as high-resolution archives of paleoclimate and paleoenvironmental change"
- January 2013** Invited lecturer at EULA Summer School "Global environmental change" at the University of Concepción, Chile. Teaching of classes "Fjord sediments" and "Climate and Paleoclimate of southern South America".
- March 2012 – present** Lecturer for UGent MSc in Geology and MSc in Marine and Lacustrine Sciences. Teaching of theoretical and practical classes on "Interpretation of sediment core data".
- January 2008** Guest lecturer at the EULA Summer School "Cambio climático global: Una Perspectiva Paleoambiental", University of Concepción, Chile. Teaching of classes "Sedimentological proxies", "Paleoclimate reconstructions in southern Chile" and "Lake sediment coring"
- Sep. 2000 – Apr. 2001** Teaching assistant in Sedimentary Petrology, University of Liège, Belgium. Prof. F. Boulvain.

Supervision

- Aug. 2013 – present** Supervision of UGent MSc students Elke Vandekerkhove (Geochemistry and distribution of volcanic ash soils in Northern Chilean Patagonia) and Toon Van Dijck (Weathering in proglacial environments)
- April 2012 – Sep. 2013** Supervision of UGent MSc students Clara Paesbrugge (Nature of sediment sources to Laguna Parrillar, southern Chilean Patagonia) and Robin Bedert (Tephra from the Puyehue-Cordon de Caulle 2011 eruption)
- Oct. 2011 – Sep. 2012** Supervision of MSc student Astrid Bartels (UGent, Belgium): Distribution of volcanic ash soils in Northern Chilean Patagonia.
- Oct. 2010 – present** Co-supervision of PhD student Willem Vandoorne (UGent, Belgium): High-resolution geochemical records from Lake Castor (Chile, 46°S)
- Sep. 2009 – June 2011** Supervision of MSc student Zakaria Ghazoui (ULB, Belgium): Mineralogy of Patagonian river sediments.
- May 2008 – Aug. 2008** Training of WHOI research assistant Justin Ossolinski and summer Guest Student Kate Furby - trace element analysis of coral samples by ICP-AES
- May 2007 – Aug. 2007** Co-supervision and training of WHOI summer Guest Student Alysha Coppola (trace element analysis of coral samples by ICP-AES: sample preparation, method development and data analysis).
- Sep. 2003 – Sep. 2004** Supervision of BSc student Julie Castiaux (University of Liège, Belgium) and of visiting MSc student Alvaro Barrientos (University of Concepción, Chile).

Fieldwork and research cruises

- Jan-Feb 2013** Soil sampling and peat bog coring in Northern and Southern Patagonia, respectively. FWO and ANR projects, 22 days, chief scientist (part 1).
- Jan-Feb 2012** Sampling of sources of sediment to the fjords of Northern Chilean Patagonia, peat bog coring in Southern Patagonia, and sampling of tephra from the Puyehue-Cordon de Caulle 2011 eruption in Chile and Argentina. FWO, ANR and EU-COST projects, 42 days, chief scientist (parts 1 and 3).
- Oct-Nov 2011** ADCP profiling and sampling of water and suspended particles in North Patagonian rivers. FWO project, 28 days, chief scientist.
- Jan-Feb 2011** Sampling of river and soil sediments in Northern and Southern Chilean Patagonia. Land-based fieldwork. CHILT FWO project, 20 days, chief scientist (part 1).

- Jan-Feb 2009** Sampling of river and soil sediments in Chilean Patagonia. LSG Caldera, LT Cabo Tamar and land-based fieldwork. National Geographic project # 8379-07, 30 days, chief scientist.
- January 2008** Coring of lakes in Northern Chilean Patagonia (Cochrane, Chile, 47°S) in collaboration with the EULA research center (Concepción, Chile), 10 days.
- January 2007** Coring of lakes in Northern Chilean Patagonia (Coyhaique, Chile, 46°S) in collaboration with the EULA research center (Concepción, Chile) and the "Centro de Investigación en Ecosistemas de la Patagonia" (CIEP, Coyhaique, Chile), 15 days.
- July 2005** Sediment sampling in the watersheds of Hersek coastal lagoon and Lake Sapanca (Turkey). EU-FP5 RELIEF project, 10 days.
- Dec. 2003** Sediment sampling in the watersheds of Puyehue and Icalma lakes, Chile, 10 days.
- May-Jun. 2003** R/V Marion Dufresne, PICASSO and SEDICAR cruises. Sediment coring in the North Atlantic between Cancun, Mexico and Brest, France. Chief scientists: C. Laj (LSCE, Paris, France) and J.-F. Bourillet (IFREMER, Brest, France). IMAGES project (International Marine Past Global Change Study), 40 days.
- Dec. 2001- Mar. 2002** Sediment sampling and lake coring in the Chilean Lake District (40°S). OSTC project "A Late Holocene Record of ENSO Variability in Southern Chile". Coordinator: M. De Batist, U. Ghent, 80 days.

External Research activities and participation to workshops

- Sep. 2013** Workshop ANR project PARAD "PeAt bog Records of Atmospheric Dust flux - Holocene palaeoenvironmental and paleoclimatic implications for Southern South America", Oust, France, 3 days.
- August 2012** Select participant to the "Climate Reality Project" 2012 training event (San Francisco, California). Trained by US ex-vice President Al Gore and his team of scientists on "Communicating the science and facts about climate change to broad audiences".
- July 2011** Co-convenor of session "Late Quaternary paleoclimate and paleoenvironmental change from high latitude Southern Hemisphere regions, including Antarctica". 18th INQUA Congress, Bern, Switzerland. Co-convenor: S. Roberts (British Antarctic Survey, UK)
- Sep. 2010** Co-convenor of session "Environmental catastrophes and their sedimentary records". 18th International Sedimentological Congress, Mendoza, Argentina. Co-convenor: M. Schwab (GFZ, Potsdam, Germany)
- Sep. 2010** Convenor of session "Inorganic geochemistry of siliciclastic sediments". 18th International Sedimentological Congress, Mendoza, Argentina.
- Dec. 2009** Convenor of session "Late Quaternary paleoclimate and paleoenvironmental records in lakes from the southern Hemisphere". 11th International Paleolimnology Symposium, Guadalajara, Mexico. Co-convenors: K Saunders (Australia), E. Verleyen (Belgium) and S. Roberts (UK).
- Dec. 2009** Chairman of session "Magnetic susceptibility of Quaternary deposits". First IGCP-580 meeting: Magnetic susceptibility, correlations and paleoenvironments, Liège, Belgium.
- Sep. 2008** IODP-ICDP Workshop "Acquiring high to ultra-high resolution geological records of past climate change by scientific drilling", Potsdam, Germany, 3 days.
- April 2008** ESF EuroCLIMATE Spring School on "Late Quaternary timescales and Chronology", Piran, Slovenia, 5 days.
- May 2005** Workshop "Marine and continental paleoclimate records of Chile and Argentina". Gent, Belgium, 2 days.
- Sep. 2004** Chairman of session "Palaeoclimate and palaeoecology". Third Quaternary Research Association (QRA) international postgraduate symposium, Brussels, Belgium.
- June 2001** Co-leader (with C. Baeteman) of the Geologica Belgica Fieldmeeting: The western Belgian coastal plain, part 1: IJzer palaeovalley, Holocene geology and mapping.

Professional affiliations

European Geosciences Union (EGU), American Geophysical Union (AGU), International Association of Sedimentologists (IAS), Geochemical Society (GS)

Since September 2011 – Member of COST Action ES0907 (INTIMATE)

Skills

Technical experience

- Inorganic geochemistry: ICP-AES (JY Ultima-C, mono- and polychromator), iTrax XRF core scanner, ARL 9400 X-ray spectrometer, FAAS
- Bulk and clay mineralogy: X-ray diffraction (Bruker D8 Advance, Philips PW3710)
- Grain-size: Laser particle analyzers Malvern Mastersizer 2000, Coulter LS200, Coulter LS13320 and Ro-tap sieving
- Magnetic susceptibility, p-wave velocity and γ -density: Geotek multisensor track and Bartington MS2/3 meters.
- Organic geochemistry: Elemental analyzer and IR-MS (TOC, TON, $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$), ASE (Accelerated Solvent Extractor), chromatographic separation
- Acoustic Doppler Profiler: Teledyne RDI Rio Grande

Informatics

- Design, creation and maintenance of URAP lab website (2001-2005)
- Responsible of URAP computer network (2001-2005)
- Good knowledge of: Word, Excel, Power Point, Frontpage, Grapher, Origin, Photoshop, CorelDraw, Global mapper, Surfer, OceanDataView, XLStat.

Languages

French (mother tongue); English (fluent knowledge); Spanish (functional knowledge); Dutch (basic knowledge)

Synergistic activities

- Reviewer of manuscripts for: Quaternary Research, Quaternary Science Reviews, Quaternary International, Geochimica et Cosmochimica Acta, Chemical Geology, Earth and Planetary Science Letters, Geochemistry Geophysics Geosystems, Applied Geochemistry, Nature, Nature Geoscience, The Holocene, Natural Hazards, Global and Planetary Change, Palaeo3, Journal of Paleolimnology, Continental Shelf Research, Bulletin of the Seismological Society of America, Geoderma, Springer book series "Developments in Paleoenvironmental Research"
- Reviewer of research proposals for: US National Science Foundation, CNRS-INSU (France), CONICYT (Chile), Natural Sciences and Engineering Research Council of Canada (NSERC), Poland National Science Centre, National Geographic
- University of Liège, Doctoral college of Geology – PhD student co-representative (2003-2005)
- Organizer of the 4th WHOI Science Postdoctoral symposium (2007)
- WHOI Postdoctoral Association – Elected vice-president (2007-2008)
 - Marine Chemistry & Geochemistry department representative (Elected, 2007-2008)
- WHOI International Committee – Postdoctoral representative (2007-2008)
- Member of selection committee for a Professor in Sedimentary System Analysis (UGent, 2011)
- PhD thesis committee member: J. Moernaut (UGent, Geology, 2010), T. Verleye (UGent, Geology, 2011), A.K. Warriar (Mangalore University, India, Marine Geology, 2012), I. Tavernier (UGent, Biology, 2012)
- Master thesis committee member: W. Hertegonne (UGent, Geology, 2009), M. Eekhaut (UGent, Biology, 2010), Z. Verlaak (UGent, Geology, 2011); J. Vandenberghe (UGent, Geology, 2012); M. Ranschaert (UGent, Geology, 2012); H.-J. De Bock (UGent, Geology, 2012); T. Pille (UGent, Geology, 2013)

Publications

A. In peer-reviewed journals (*Citation metrics as of March 4, 2014: h-index: 10; total citations: 219*)

Last update: 4/03/2014

1. **BERTRAND, S.**, & BAETEMAN, C. (2005) — Sequence mapping of Holocene coastal lowlands. The application of the Streif's classification system in the Belgian coastal plain. *Quaternary International*, 133-134, 151-158. IF 2005: 1.210, Ranking: 57/170 in Geosciences, multidisciplinary.
2. **BERTRAND, S.**, BOËS, X., CASTIAUX, J., CHARLET, F., URRUTIA, R., ESPINOZA, C., CHARLIER, B., LEPOINT, G., FAGEL, N. (2005) — Temporal evolution of sediment supply in Lago Puyehue (Southern Chile) during the last 600 years and its climatic significance. *Quaternary Research*, 64 (2), 163-175. IF 2005: 2.014, Ranking: 29/170 in Geosciences, multidisciplinary.
3. CHIRINOS, L., URRUTIA, R., FAGEL, N., **BERTRAND, S.**, GAMBOA, N., ARANDEA, A., ZAROR, C. (2005) — Chemical profiles in lake sediment of Laguna Chica de San Pedro (Bio-Bio Region, Chile). *Journal of the Chilean Chemical Society*, 50 (4), 697-710. IF 2005: 0.388, Ranking: 128/154 in Chemistry, multidisciplinary.
4. CRUCES, F., URRUTIA, R., PARRA, O., ARANEDA, A., TREUTLER, H., **BERTRAND, S.**, FAGEL, N., TORRES, L., BARRA, R., CHIRINOS, L. (2006) — Changes in diatom assemblages in an Andean lake in response to a recent volcanic event. *Archiv für Hydrobiologie*, 165 (1), 23-35. IF 2006: 1.362, Ranking: 11/19 in Limnology (now called Fundamental and Applied Limnology)
5. ARNAUD, F., MAGAND, O., CHAPRON, E., **BERTRAND, S.**, BOËS, X., CHARLET, F., MÉLIÈRES, M.A. (2006) — Radionuclides dating (^{210}Pb , ^{137}Cs , ^{241}Am) of recent lake sediments in a highly active geodynamic setting (Lakes Puyehue and Icalma, Chilean Lake District). *Science of the Total Environment*, 366, 837-850. IF 2006: 2.359, Ranking: 29/205 in Environmental Sciences
6. URRUTIA, R., ARANEDA, A., CRUCES, F., TORRES, L., CHIRINOS, L., TREUTLER, H., FAGEL, N., **BERTRAND, S.**, ALVIAL, I., BARRA, R., CHAPRON, E. (2007) — Changes in diatom, pollen, and chironomid assemblages in response to a recent volcanic event in Lake Galletué (Chilean Andes). *Limnologica*, 37, 49-62. IF 2007: 0.593, Ranking: 7/19 in Limnology.
7. ARANEDA, A., CRUCES, F., TORRES, L., **BERTRAND, S.**, FAGEL, N., TREUTLER, H., CHIRINOS, L., BARRA, R., URRUTIA, R. (2007) — Changes of sub-fossil chironomid assemblages associated with volcanic sediment deposition on an Andean lake (38°S), Chile. *Revista Chilena de Historia Natural*, 80, 141-156. IF 2007: 0.725, Ranking: 20/37 in Biodiversity, Conservation.
8. CHAPRON, E., JUVIGNÉ, E., MULSOW, S., ARIZTEGUI, D., MAGAND, O., **BERTRAND, S.**, PINO, M., CHAPRON, O. (2007) — Recent clastic sedimentation in Lake Puyehue (Chilean Lake District, 40.5°S). *Sedimentary Geology*, 201 (3-4), 365-385. IF 2007: 1.757, Ranking: 13/47 in Geology.
9. **BERTRAND, S.**, CHARLET, F., CHARLIER, B., RENSON, V., FAGEL, N. (2008) — Climate variability of Southern Chile since the Last Glacial Maximum: a continuous sedimentological record from Lago Puyehue (40°S). *Journal of Paleolimnology*, 39, 179-195. IF 2008: 2.160, Ranking: 4/19 in Limnology.
10. STERKEN, M., VERLEYEN, E., SABBE, K., TERRYN, G., CHARLET, F., **BERTRAND, S.**, BOËS, X., FAGEL, X., DE BATIST, M., VYVERMAN, W. (2008) — Late Quaternary climatic changes in Southern Chile, as recorded in a diatom sequence of Lago Puyehue (40°40'S). *Journal of Paleolimnology*, 39, 219-235. IF 2008: 2.160, Ranking: 4/19 in Limnology.
11. CHARLET F., DE BATIST M., CHAPRON E., **BERTRAND S.**, PINO M., URRUTIA R. (2008) — Seismic-stratigraphy of Lago Puyehue (Chilean Lake District): new views on its deglacial and Holocene evolution. *Journal of Paleolimnology*, 39, 163-177. IF 2008: 2.160, Ranking: 4/19 in Limnology.
12. **BERTRAND, S.**, FAGEL, N. (2008) — Nature, origin, transport and deposition of andosol parent material in south-central Chile (36-42°S). *Catena*, 73 (1), 10-22. IF 2008: 1.874, Ranking: 9/33 in Soil Science.
13. **BERTRAND, S.**, CHARLET, F., CHAPRON, E., FAGEL, N., DE BATIST, M. (2008) — Reconstruction of the Holocene seismotectonic activity of the Southern Andes from seismites recorded in Lago Icalma, Chile, 39°S. *Palaeogeography, Palaeoclimatology, Palaeoecology*. 259 (2-3), 301-322. IF 2008: 2.405, Ranking: 31/170 in Geosciences, multidisciplinary.
14. JUVIGNÉ, E, **BERTRAND, S.**, HEUSCHEN, B., & TALLIER, E. (2008) — Tephrostratigraphy of lake sediments located in an active geodynamic setting: Lessons from Lake Icalma (Chile, Southern Volcanic Zone, 38°S). *Quaternaire*, 19 (2), 179-193. IF 2009: 0.452, Ranking: 154/170 in Geosciences, multidisciplinary.
15. **BERTRAND, S.**, CASTIAUX, J., JUVIGNÉ, E. (2008) — Tephrostratigraphy of the Late Glacial and Holocene sediments of Puyehue Lake (Southern Volcanic Zone, Chile, 40°S). *Quaternary Research*, 70, 343-357. IF 2008: 2.457, Ranking: 29/170 in Geosciences, multidisciplinary.
16. REBOLLEDO, L., SEPÚLVEDA, J., LANGE, C., PANTOJA, S., **BERTRAND, S.**, HUGHEN, K., FIGUEROA, D. (2008) — Late Holocene marine productivity changes in Northern Patagonia-Chile inferred from a multi-proxy analysis of Jacaf channel

sediments. *Estuarine, Coastal and Shelf Sciences*, 80 (3), 314-322. IF 2008: 2.072, Ranking: 16/59 in Oceanography.

17. SCHWAB, M., WERNER, P., DULSKI, P., MCGEE, E., NOWACZYK, N., **BERTRAND, S.**, LEROY, S. (2009) — Palaeolimnology of Lake Sapanca: identification of historic earthquake signals at the Northern Anatolian Fault Zone (Turkey). *Quaternary Science Reviews*, 28 (11-12), 991-1005. IF 2009: 4.245, Citations: 22, Ranking: 7/170 in Geosciences, multidisciplinary.
18. SEPÚLVEDA, J., PANTOJA, S., HUGHEN, K., **BERTRAND, S.**, FIGUEROA, D., LÉON, T., DRENZEK, N., LANGE, C. (2009) — Late Holocene sea-surface temperature and precipitation variability in Northern Patagonia, Chile (Jacaf Fjord, 44°S). *Quaternary Research*, 72, 400-409. IF 2008: 2.675, Ranking: 29/170 in Geosciences, multidisciplinary.
19. **BERTRAND, S.**, STERKEN, M., VARGAS-RAMIREZ, L., DE BATIST, M., VYVERMAN, W., LEPOINT, G., FAGEL, N. (2010) — Bulk organic geochemistry of sediments from Puyehue Lake and its watershed (Chile, 40°S): Implications for paleoenvironmental reconstructions. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 294 (1-2), 56-71. IF 2010: 2.390, Ranking: 31/170 in Geosciences, multidisciplinary.
20. FAGEL, N., **BERTRAND, S.**, MATTIELLI, N., GILSON, D., CHIRINOS, L., LEPOINT, G., URRUTIA, R. (2010) — Geochemical evidence (C, N and Pb isotopes) of recent anthropogenic impact in South-Central Chile from two environmentally distinct lake sediment records. *Journal of Quaternary Science*, 25 (7), 1100-1112. IF 2010: 3.199, Ranking: 35/170 in Geosciences, multidisciplinary.
21. **BERTRAND, S.**, DONER, L., CAGATAY, N., AKCER, S., SANCAR, U., SCHUDACK, U., MISCHKE, S., LEROY, S. (2011) — Sedimentary record of coseismic subsidence in Hersek coastal lagoon (Izmit Bay, Turkey) and the Late Holocene activity of the North Anatolian Fault. *Geochemistry, Geophysics, Geosystems*, 12, Q06002, doi:10.1029/2011GC003511. IF 2011: 3.021, Ranking: 12/76 in Geochemistry and Geophysics.
22. **BERTRAND, S.**, HUGHEN, K., SEPULVEDA, J., PANTOJA, S. (2012) — Geochemistry of surface sediments from the fjords of Northern Chilean Patagonia (44-47°S): Spatial variability and implications for paleoclimate reconstructions. *Geochimica et Cosmochimica Acta*, 76 (1), 125-146. IF 2012: 3.884, Ranking: 6/76 in Geochemistry and Geophysics.
23. FERNANDEZ, R., ANDERSON, J., **BERTRAND, S.**, WELLNER, J. (2012) — Gualas Glacier sedimentary record of climate and environmental change, Golfo Elefantes, Western Patagonia (46.5°S). *The Holocene*, 22 (4), 451-463. IF 2012: 3.218, Ranking: 22/170 in Geosciences, multidisciplinary.
24. **BERTRAND, S.**, HUGHEN, K., LAMY, F., STUUT, J.-B., TORREJON, F., LANGE, C. (2012) — Precipitation as the main driver of Neoglacial fluctuations of Gualas glacier, Northern Patagonian Icefield. *Climate of the Past*, 8, 519-534. IF 2012: 3.556, Ranking: 16/170 in Geosciences, multidisciplinary.
25. MISCHKE, S., SCHUDACK, U., **BERTRAND, S.**, LEROY, S. (2012) — Ostracods from a Marmara Sea lagoon (Turkey) as tsunami indicators. *Quaternary International*, 261, 156-161. IF 2012: 1.962, Ranking: 58/170 in Geosciences, multidisciplinary.
26. **BERTRAND, S.**, ARANEDA, A., VARGAS, P., JANA, P., FAGEL, N., URRUTIA, R. (2012) — Using N/C ratios to correct bulk radiocarbon ages from lake sediments: Insights from Chilean Patagonia. *Quaternary Geochronology*, 12, 23-29. IF 2012: 4.015, Ranking: 10/170 in Geosciences, multidisciplinary.
27. ARANEDA, A., ORTEGA, C., JANA, P., TORREJÓN, F., **BERTRAND, S.**, VARGAS, P., FAGEL, N., ALVAREZ, D., URRUTIA, R. (2013) — Changes in sub-fossil chironomid assemblages in two Northern Patagonian lake systems associated with the occurrence of historical fires. *Journal of Paleolimnology*, 50 (1), 41-56. IF 2012: 2.209, Ranking: 5/20 in Limnology.
28. VARGAS, P., TORRES, L., ARANEDA, A., **BERTRAND, S.**, TORREJÓN, F., JANA, P., FAGEL, N., URRUTIA, R. — Reconstructing the environmental history of Lake Thompson watershed (Northern Chilean Patagonia) during the last millennium: Interactions between climate, vegetation, and anthropogenic fires. Submitted to *Review of Palaeobotany and Palynology*. IF 2012: 1.933, Ranking: 7/50 in Paleontology.
29. **BERTRAND, S.**, HUGHEN, K., SEPÚLVEDA, J., PANTOJA, S. — Covariability of precipitation seasonality and sea surface temperature in Northern Chilean Patagonia during the Late Holocene. Submitted to *Quaternary Science Reviews*.

B. Book chapters

1. **BERTRAND, S.**, HUGHEN, K., GIOSAN, L. (2013) — Limited influence of sediment grain-size on elemental XRF core scanner intensities. *Developments in Paleoenvironmental Research (Springer) volume on "Micro-XRF Studies of Sediment Cores"*. In press

C. In preparation

1. **BERTRAND, S.**, DAGA, R., BEDERT, R., FONTIJN, K. — Deposition of the 2011 Puyehue-Cordon de Caulle tephra in lakes of south-central Chile: Implications for tephrochronology and volcanology. *Limnology and oceanography*.
2. **BERTRAND, S.**, HUGHEN, K., GIOSAN, L. — Using the Rayleigh:Compton scattering ratio to calibrate XRF core scanner data from sediment cores. *Geochemistry, Geophysics, Geosystems*.

D. Conference abstracts

1. **BERTRAND, S.** (2001) — Holocene depositional history and profile type mapping of the IJzer palaeovalley (Belgian coastal plain). Abstract and oral communication. Abstract published in *Geologica Belgica*, 5 (1-2), p. 62.
2. **BERTRAND, S.**, FAGEL, N. (2003) — Use and limits of paleoclimatological proxies in lacustrine sediments: The case study of the volcanically active Lake District area (Southern Chile). IGBP, Punta Arenas, Chile. Abstract and Poster
3. CHAPRON, E., DE BATIST, M., FAGEL, N., PINO, M., URRUTIA, R., CHARLET, F., BRÜMMER, R., SAN MARTIN, W., MORA, A., DE RYCKER, K., **BERTRAND, S.**, BOËS, X., VARGAS, L., BECK, C., ARNAUD, F., LIGNIER, V., DE VLEESCHOUWER, F., MAGAND, O., LOUTRE, M.-F., RENSON, V., TARDY, M., JUVIGNE, E., ROCHE, E. (2003) — Multidisciplinary study of Holocene sedimentation in lakes Icalma and Puyehue (Chilean Lake District, SW Andes): First results and implications for climate variability reconstructions. IGBP, Punta Arenas, Chile. Abstract and oral communication.
4. CHARLET, F., **BERTRAND, S.**, CHAPRON, E., FAGEL, N., DE BATIST, M. (2003) — Characterization of the sedimentary environments in Lago Puyehue and Lago Icalma (Chilean Lake District, SW Andes). 3rd International Limnogeology Congress (ILIC3), Tucson (Arizona). Abstract.
5. DE BATIST, M., CHAPRON, E., FAGEL, N., PINO, M., URRUTIA, R., CHARLET, F., BRÜMMER, R., SAN MARTIN, W., MORA, A., DE RYCKER, K., **BERTRAND, S.**, BOËS, X., VARGAS, L., BECK, C., ARNAUD, F., LIGNIER, V., DEVLEESCHOUWER, F., MAGAND, O., LOUTRE, M.-F., RENSON, V., TARDY, M., JUVIGNE, E., ROCHE, E. (2003) — Multidisciplinary study of Holocene sedimentation in lakes Icalma and Puyehue (Chilean lake district, SW Andes): First results and implications for climate variability reconstructions. 3rd International Limnogeology Congress (ILIC3), Tucson (Arizona). Abstract
6. **BERTRAND, S.**, FAGEL, N., & THE ENSO-CHILE TEAM (2003) — Search for continuous paleoclimatic record in Holocene lacustrine sediments from the Lake District, Chile (40°S). EGS-AGU-EUG Joint Assembly, Nice. Abstract and oral communication.
7. CHARLET, F., **BERTRAND, S.**, CHAPRON, E., FAGEL, N., DE BATIST, M. (2003) — Geophysical characterization of the sedimentary environments in Lago Puyehue and Lago Icalma (Chilean Lake District, SW Andes). EGS-AGU-EUG Joint Assembly, Nice. Abstract and Poster.
8. DE BATIST, M., CHAPRON, E., FAGEL, N., PINO, M., URRUTIA, R., LOUTRE, M.-F., CHARLET, F., DE RYCKER, K., **BERTRAND, S.**, BOËS, S., DE VLEESCHOUWER, F., JUVIGNÉ, E., RENSON, V., ROCHE, E., VARGAS, L., BRÜMMER, R., MORA, A., SAN MARTIN, W., ARNAUD, F., BECK, C., LIGNIER, V., MAGAND, O., TARDY, M. (2003) — Multidisciplinary study of Holocene sedimentation in lakes Icalma and Puyehue, Chilean Lake District, SW Andes. EGS-AGU-EUG Joint Assembly, Nice. Abstract and Poster.
9. FAGEL, N., DE BATIST, M., CHAPRON, E., JUVIGNÉ, E., PINO, M., URRUTIA, R., LOUTRE, M.-F., CHARLET, F., DE RYCKER, K., **BERTRAND, S.**, BOËS, X., DE VLEESCHOUWER, F., RENSON, V., ROCHE, E., VARGAS, L., BRÜMMER, R., MORA, E., SAN MARTIN, W., ARNAUD, F., BECK, C., LIGNIER, V., MAGAND, O., TARDY, M., STERKEN, M., VERLEYEN, E., SABBE, K., VYVERMAN, W. (2003) — A Holocene Record of ENSO changes in lacustrine sediments from meridional Chile (38-40°S). The XVI INQUA congress, Reno, Nevada, USA. Abstract and Poster
10. **BERTRAND, S.**, CHARLET, F., RENSON, V., BOËS, X., VARGAS-RAMIREZ, L., ARNAUD, F., LIGNIER, V., CHAPRON, E., BECK, C., MAGAND, O., FAGEL, N., DE BATIST, M. (2003) — Holocene sedimentation in Icalma and Puyehue Lakes (Southern Chile): Instantaneous vs continuous records. 10° Congreso Geológico Chileno, Concepcion, Chile. Extended abstract and poster.
11. **BERTRAND, S.**, CHARLET, F., RENSON, V., CHAPRON, E., FAGEL, N., DE BATIST, M. (2003) — Dépôts événementiels holocènes enregistrés dans les sédiments du lac Icalma (Chili méridional). 9^{ème} Congrès des Sédimentologues Français (ASF), Bordeaux, France. Abstract and Poster
12. **BERTRAND, S.**, BAETEMAN, C., MARIEN, L., DECLERCQ, P.-Y. (2003) — Cartographie par types de profil des dépôts côtiers holocènes : application d'un système de classification lithogénétique (plaine côtière belge). 9^{ème} Congrès des Sédimentologues Français (ASF), Bordeaux, France. Abstract and poster.

13. FAGEL, N., **BERTRAND, S.**, BOËS, X., DEVLEESCHOUWER, F., JUVIGNE, E., RENSON, V., ROCHE, E., VARGAS, L., DE BATIST, M., CHARLET, F., CHAPRON, E., ARNAUD, F., PINO, M., URRUTIA, R., LOUTRE, M.-F., & THE ENSO-CHILE TEAM (2003) — A Holocene record of ENSO changes in lacustrine sediments from meridional Chile (38-40°S). Belqua, Louvain-la-Neuve. Abstract and oral communication.
14. **BERTRAND, S.**, CHARLET, F., URRUTIA, R., ESPINOZA, C., CHARLIER, B., RENSON, V., DE BATIST, M., FAGEL, N. (2004) — Paleoproductivity of Puyehue Lake (Southern Chile) during the Last Millennium: climatic significance. 1st General Assembly European Geosciences Union (EGU), Nice, France. Abstract and Poster.
15. CHAPRON, E., **BERTRAND, S.**, CHARLET, F., BOËS, X., DE BATIST, M., FAGEL, N., MAGAND, O., ARNAUD, F., MELIERES, M.-A., PINO, M., URRUTIA, R. (2004) — Sedimentary processes in lake puyehue over the last 500 years: implications for paleoenvironmental reconstructions in the chilean Lake District (41°S). GEOSUR, Buenos Aires, Argentina. Abstract.
16. CHARLET, F., MARCHAND, C., **BERTRAND, S.**, CHAPRON, E., PINO, M., URRUTIA, R., DE BATIST, M. (2004) — Geophysical reconstruction of the sedimentary infill of Lago Icalma (39°S, Chilean Lake District) since the last deglaciation. GEOSUR, Buenos Aires, Argentina. Abstract
17. **BERTRAND, S.** (2004) — Climate reconstruction of Southern Chile (40°S) since the Late Glacial: paleolimnological evidences. Quaternary Research Association 3rd International Postgraduate Symposium, Brussels, Belgium. Abstract and oral presentation.
18. CHAPRON, E., CHARLET, F., **BERTRAND, S.**, DE BATIST, M., PINO, M., ARNAUD, F., MAGAND, O., URRUTIA, R. (2005) — Normal versus earthquake-induced clastic sedimentation processes in Lago Puyehue, Chilean Lake District, 41°S. 2nd General Assembly European Geosciences Union (EGU), Vienna, Austria. Abstract
19. **BERTRAND, S.**, CHARLET, F., CHARLIER, B., RENSON, V., FAGEL, N. (2005) — Climate variability of Southern Chile since the Last Glacial Maximum : a continuous sedimentological record from Lago Puyehue (40°S). 2nd General Assembly European Geosciences Union (EGU), Vienna, Austria. Abstract and oral communication.
20. CHAPRON, E., PINO, M., CHARLET, F., **BERTRAND, S.**, MAGAND, O., ARNAUD, F., DE BATIST, M., URRUTIA, R. (2005) — Lago Puyehue sedimentary record of Valdivia 1960 major earthquake and associated volcanic eruption in the Chilean Lake District. Holocene environmental catastrophes in South America: from the lowlands to the Andes congress, Argentina. Abstract and poster.
21. DE BATIST, M., ARNAUD, F., BOËS, X., BECK, C., **BERTRAND, S.**, & 20 OTHERS (2005) — A 18,000-year multiproxy lacustrine record of variations in climate, volcanic activity and seismicity from Lago Puyehue, Chilean Lake District (40°S). New approaches to Quaternary Science in Fuego-Patagonia, Puerto Natales, Chile. Abstract
22. **BERTRAND, S.**, CHARLET, F., STERKEN, M., VARGAS, L., BOËS, X., RENSON, V., JUVIGNÉ, E., ROCHE, E., VYVERMAN, W., FAGEL, N., DE BATIST, M. (2005) — The multi-proxy study of Lago Puyehue sediments: A record of millennial-scale climate variability in Southern Chile since the Last Glacial Maximum. Workshop "Marine and continental paleoclimate records of Chile and Argentina". Gent, Belgium. Oral communication.
23. **BERTRAND, S.**, CAGATAY, N., DONER, L., SANCAR, U., AKCER, S., LEROY, S. (2005) — Evolution of the sedimentary infilling of Hersek lagoon (Tukey, Izmit Bay): Possible relationships with tsunamis in the Sea of Marmara. Dark Nature Como Meeting, Italy. Abstract.
24. **BERTRAND, S.**, BOËS, X., CASTIAUX, J., CHARLET, F., URRUTIA, R., ESPINOZA, C., CHARLIER, B., LEPOINT, G., FAGEL, N., DE BATIST, M. (2005) — Evolution temporelle des apports sédimentaires dans le lac Puyehue (Chili méridional) au cours des 600 dernières années: Un enregistrement du petit age glaciaire en Amérique du Sud. 10^{ème} Congrès de l'Association des Sédimentologues Français (ASF), Presqu'île de Giens, France. Abstract and oral communication.
25. **BERTRAND, S.**, CAGATAY, N., DONER, L., SANCAR, U., AKCER, S., LEROY, S. (2005) — Evolution du remplissage sédimentaire de la lagune d'Hersek (Turquie, Golfe d'Izmit) : Relations possibles avec les tsunamis en mer de Marmara. 10^{ème} Congrès de l'Association des Sédimentologues Français (ASF), Presqu'île de Giens, France. Abstract and oral communication.
26. **BERTRAND, S.**, STERKEN, M., LEPOINT, G., VYVERMAN, W., FAGEL, N. (2006) — Paleoclimate variability of Southern Chile during the last 17,900 years reconstructed by organic geochemical properties (C/N, $\delta^{13}\text{C}$) of Lago Puyehue sediments (40°S). European Geosciences Union (EGU), Vienna, Austria. Abstract and poster.
27. **BERTRAND, S.**, HUGHEN, K., GIOSAN, L., TIERNEY, J., SEPÚLVEDA, J., PANTOJA, S. (2006) — Late Holocene climate variability of South America reconstructed by a multi-proxy analysis of Chilean fjord sediments. European Geosciences Union (EGU), Vienna, Austria. Abstract and poster.

28. **BERTRAND, S.**, CAGATAY, N., DONER, L., SANCAR, U., AKCER, S., LEROY, S. (2006) — Evolution of the Late Holocene sedimentary infill of Hersek Lagoon (Turkey, Izmit Bay): Use and limits for the reconstruction of past tsunamis in the Sea of Marmara. European Geosciences Union (EGU), Vienna, Austria. Abstract and oral communication.
29. LANGE, C., PANTOJA, S., REBOLLEDO, L., SEPULVEDA, J., WELLNER, J., ANDERSON, J., HUGHEN, K., **BERTRAND, S.** (2006) — The Chilean fjords. European Geosciences Union (EGU), Vienna, Austria. Abstract and oral communication.
30. **BERTRAND, S.**, FAGEL, S., CHARLET, F., LEPOINT, G., STERKEN, M., VYVERMAN, W., DE BATIST, M. (2006) — Climate variability of southern Chile since the Last Glacial Maximum: A continuous multi-proxy sedimentological record from Lago Puyehue (40°S). 10th International Paleolimnology Symposium. Duluth, Minnesota, USA. Abstract and oral communication.
31. URRUTIA R., ARANEDA A., CRUCES F., TORRES L., CHIRINOS L., TREUTLER H.C., FAGEL N., **BERTRAND S.**, BARRA R., ALVIAL I., CHAPRON E. (2006) — Changes in diatoms, chironomids and pollen assemblages as response to a recent volcanic event in lake Galletue (Chilean Andes). 10th International Paleolimnology Symposium. Duluth, Minnesota, USA. Abstract and poster.
32. **BERTRAND, S.**, HUGHEN, SEPÚLVEDA, J., PANTOJA, S., LANGE, C. (2007) — Late Holocene climate variability of Northern Patagonia reconstructed by a multi-proxy analysis of Chilean fjord sediments (44-47°S). European Geosciences Union (EGU), Vienna, Austria. Abstract and poster.
33. **BERTRAND, S.**, CHARLIER, B., FAGEL, N. (2007) — Inorganic geochemical analysis of Lago Puyehue sediments (Chile, 40°S): Reconstruction of the Late Quaternary paleoclimate variability and influence of the volcanic activity on paleoclimate proxies. European Geosciences Union (EGU), Vienna, Austria. Abstract and poster.
34. FAGEL, N., GILSON, D., MATTIELLI, N., **BERTRAND, S.**, LEPOINT, G., CHIRINOS, L., URRUTIA, R. (2007) — Tracking of anthropogenic influences in the last centuries in Southern Chilean lakes: Organic (C/N, δ13C) and Pb isotope geochemical signatures of Laguna Chica de San Pedro (36.4°S) and Lago Puyehue (40.7°S) sediments. European Geosciences Union (EGU), Vienna, Austria. Abstract and poster.
35. DE BATIST, M., ARNAUD, F., BOËS, X., BECK, C., **BERTRAND, S.**, & 20 OTHERS (2007) — An 18,000-year multiproxy lacustrine record of climate variability in south-central Chile (40°S): Lago Puyehue, Chilean Lake District. European Geosciences Union, Vienna, Austria, Abstract and poster.
36. **BERTRAND, S.**, FAGEL, N., DE BATIST, M. (2007) — Late Quaternary paleoclimate variability of Southern Chile from bulk organic and inorganic geochemical analyses of Lago Puyehue sediments (40°S). 4th International Limnogeology Congress, Barcelona, Spain. Abstract and oral communication.
37. **BERTRAND, S.**, FAGEL, N., GILSON, D., MATTIELLI, N., LEPOINT, G., CHIRINOS, L., URRUTIA, R. (2007) — Evidence of anthropogenic impact in Southern Chile from the geochemical sedimentary record (Pb isotopes, C/N and d13C) of Laguna Chica de San Pedro (36°S) and Lago Puyehue (40°S). 4th International Limnogeology Congress, Barcelona, Spain. Abstract and poster.
38. URRUTIA R., ARANEDA A., TORREJON, F., AGUAYO, M., TORRES L., CRUCES F., BARRA, R., **BERTRAND S.**, FAGEL N. (2007) — Matching the historical evidences of the Little Ice Age (LIA) occurrence in northern patagonia (Chile) with sedimentary lacustrine records. 4th International Limnogeology Congress, Barcelona, Spain. Abstract and poster.
39. **BERTRAND, S.**, HUGHEN, SEPÚLVEDA, J., PANTOJA, S., LANGE, C. (2007) — Climate variability of southern South America during the Late Holocene: The multi-proxy sedimentary record of Chilean fjord sediments (46°S). American Geophysical Union (AGU) Fall Meeting, San Francisco, USA. Abstract and poster.
40. URRUTIA, R., ARANEDA, A., TORREJÓN, F., TORRES, L., CRUCES, F., BARRA, R., DE LA FUENTE, M., ALVAREZ, D., **BERTRAND, S.**, FAGEL, N. (2008) — The last 2000-yr in Patagonia, an assessment of climatic and environmental change in Southern Chile: introducing the research project Fondecyt 1070508. European Geosciences Union (EGU), Vienna, Austria. Abstract and poster.
41. **BERTRAND, S.** (2008) — Paleoclimate reconstructions in southern Chile: How to improve the chronology of the Puyehue sedimentary record? ESF Spring School Late Quaternary Timescales and Chronology, Piran, Slovenia. Oral communication.
42. **BERTRAND, S.** (2008) — Sedimentary record of paleoclimate and paleoenvironmental changes during the Late Quaternary in south-central Chile (35-55°S). ESF Spring School Late Quaternary Timescales and Chronology, Piran, Slovenia. Poster.

43. **BERTRAND, S.**, STERKEN, M., FAGEL, N., DE BATIST, M. (2008) — Abrupt climate changes in south-central Chile during the last deglaciation (18-10 kyr) revealed by the bulk organic geochemical record of Puyehue Lake sediments (40°S). 4th Alexander von Humboldt International Conference. The Andes: Challenge for Geosciences, Santiago, Chile. Abstract and poster.
44. **BERTRAND, S.**, DE BATIST, M., STERKEN, M., FAGEL, N. (2008) — Abrupt climate changes in south-central Chile during the last deglaciation (18-10 kyr) revealed by the bulk organic geochemical record of Puyehue Lake sediments (40°S). American Geophysical Union (AGU) Fall Meeting, San Francisco, USA. Abstract and poster.
45. **BERTRAND, S.**, HUGHEN, SEPÚLVEDA, J., PANTOJA, S, LANGE, C. (2009) — Geochemical composition of surface sediments from the fjords of Northern Chilean Patagonia (44-47°S): Spatial variability and implications for paleoclimate reconstructions. European Geosciences Union (EGU), Vienna, Austria. Abstract and oral communication.
46. NUTTIN, L., FAGEL, N., **BERTRAND, S.**, ARANEDA, A., TORREJÓN, F., URRUTIA, R. (2009) — Holocene environmental changes in lakes sediments from Northern Chilean Patagonia (45-48°S). European Geosciences Union (EGU), Vienna, Austria. Abstract and poster.
47. **BERTRAND, S.**, HUGHEN, K., SEPÚLVEDA, J., LAMY, F., PANTOJA, S, LANGE, C. (2009) — The fjords of Northern Chilean Patagonia (44-47°S): Sedimentary geochemistry and Late Holocene precipitation records. Third International Conference Geologica Belgica, Ghent, Belgium. Abstract and oral communication.
48. **BERTRAND, S.** (2009) — Magnetic susceptibility of Late Quaternary lake and fjord sediments from southern South America: Geochemical origin and potential for high-resolution reconstructions of climate and environmental changes. IGCP 580 meeting "Magnetic susceptibility, correlations and paleoenvironments", Liege, Belgium. Abstract and oral communication. Abstract published in *Geologica Belgica* 13 (4).
49. ALVAREZ, D., CARDENAS, J., ARANEDA, A, BARRA, R., FAGEL, N., **BERTRAND, S.**, URRUTIA, R. (2009) — Reconstrucción climática de los últimos 1000 años en la Patagonia Norte (47S): Una aproximación al uso de isotopos estables en valvas de moluscos y ostracodos como paleotermometro. VI Congreso Sociedad Chilena de Limnología, Coyhaique, Chile. Abstract and poster.
50. **BERTRAND, S.**, DE BATIST, M., STERKEN, M., FAGEL, N. (2009) — Abrupt climate changes in south-central Chile during the last deglaciation (18-10 kyr) revealed by the bulk organic geochemical record of Puyehue Lake sediments (40°S). 11th International Paleolimnology Symposium, Guadalajara, Mexico. Abstract and oral communication.
51. **BERTRAND, S.**, HUGHEN, K., GIOSAN, L. (2010) — XRF scanning of sediment cores from the Chilean fjords: Wet chemistry calibration and potential to reconstruct precipitation and glacier variability during the Holocene. Itrax XRF scanner workshop, Lipari, Sicily, Italy. Abstract and oral communication.
52. FAGEL, N., NUTTIN, L., **BERTRAND, S.**, BORGNIE, G., SCHMIDT, S., ARANEDA, A., TORREJON, F., URRUTIA, R. (2010) — Late Holocene environmental changes recorded in the sediments of Lago Thompson, Northern Chilean Patagonia. European Geosciences Union (EGU), Vienna, Austria. Abstract and poster.
53. **BERTRAND, S.**, HUGHEN, K., LAMY, F., TORREJÓN, F., LANGE, C. (2010) — Holocene glacier variability in Northern Chilean Patagonia reconstructed from the glacio-marine sedimentary record of Golfo Elefantes (Chilean Fjords, 46°S). 18th International Sedimentological Congress, Mendoza, Argentina. Abstract and oral communication.
54. **BERTRAND, S.**, HUGHEN, K., GIOSAN, L., STUUT, J.-B. (2010) — Limited influence of sediment grain-size on elemental XRF core scanner intensities. 18th International Sedimentological Congress, Mendoza, Argentina. Abstract and poster.
55. **BERTRAND, S.**, HUGHEN, K., LAMY, F., FERNANDEZ, R., STUUT, J.-B., TORREJÓN, F., LANGE, C. (2010) — Precipitation as the main driver of Northern Patagonian glacier variability during the last 5400 years: Evidence from Chilean fjord sediments. 2nd PAGES international symposium LOTRED-SA, Valdivia, Chile. Abstract and oral communication.
56. FAGEL, N., NUTTIN, L., **BERTRAND, S.**, BORGNIE, G., SCHMIDT, S., ARANEDA, A., TORREJON, F., URRUTIA, R. (2010) — The 900-yr sedimentary record of Lago Thompson, Northern Chilean Patagonia. 2nd PAGES international symposium LOTRED-SA, Valdivia, Chile. Abstract and poster.
57. JANA, P., ARANEDA, A., TORREJON, F., ALVAREZ, D., FAGEL, N., **BERTRAND, S.**, URRUTIA, R. (2010) — Fire history and soil loss in Northern Patagonia: Evaluating the 20th century early settlement in the Aysen Region, Chile. 2nd PAGES international symposium LOTRED-SA, Valdivia, Chile. Abstract and poster.

58. DE BATIST, M., MOERNAUT, J., HEIRMAN, K., VAN DAELE, M., **BERTRAND, S.**, ABARZUA-VASQUEZ, A.M., PINO, M., BRÜMMER, R., URRUTIA, R., VILA, R., ROBERTS, S., KILIAN, R., VERLEYEN, E., VYVERMAN, W., KEPPENS, E., FAGEL, N., GIELES, R., SINNINGHE DAMSTÉ, J., HEBBELN, D., GILLI, A., BRAUER, A. & THE ENSO-CHILE AND CHILT PROJECT MEMBERS (2010) - Reconstruction of Late-Glacial to Holocene climate and earthquake histories across southern Chile based on the sedimentary record of 21 lakes. Geosur 2010, Mar del Plata, Argentina. Abstract and oral communication.
59. FERNANDEZ, R., ANDERSON, J., **BERTRAND, S.**, WELLNER, J. (2010) — The Holocene sedimentary record of climate change from Gualas glacier, Golfo Elefantes, Northern Patagonia. American Geophysical Union (AGU) Fall Meeting, San Francisco, USA. Abstract and poster.
60. FAGEL, N., EL OUAHABI, M., LEPOINT, G., **BERTRAND, S.**, SCHMIDT, S., ALVAREZ, D., ARANEDA, A., TORREJON, F., URRUTIA, R. (2011) — The Last Millenium sedimentary record in Chilean Patagonian lakes. European Geosciences Union (EGU), Vienna, Austria. Abstract and poster.
61. **BERTRAND, S.**, HUGHEN, K., SEPÚLVEDA, J., PANTOJA, S (2011) — Covariability of precipitation and sea surface temperature changes in Northern Chilean Patagonia during the last 2000 years. XXVIII INQUA congress, Bern, Switzerland. Abstract and oral communication
62. **BERTRAND, S.**, ARANEDA, A., VARGAS, N., JANA, P., FAGEL, N., URRUTIA, R. — Correcting bulk radiocarbon ages from lake sediments: Insights from Chilean Patagonia. XXVIII INQUA congress, Bern, Switzerland. Abstract and poster.
63. **BERTRAND, S.**, HUGHEN, K., SEPÚLVEDA, J., PANTOJA, S (2011) — Interactions between precipitation and sea surface temperature in Northern Chilean Patagonia during the Late Holocene. Goldschmidt conference, Prague, Czech Republic. Abstract and oral communication.
64. **BERTRAND, S.** (2012) — Inorganic geochemistry of fjord sediments as a tool for paleohydrological reconstructions: Examples from Patagonia and potential for the Arctic. Quebec-Ocean Symposium, Montreal, Canada. Abstract and poster.
65. **BERTRAND, S.** (2013) — Late Holocene climate change in Northern Patagonia and response of the Northern Patagonian Icefield. South Pacific Integrated Ecosystem Studies (SPICES) symposium. Concepción, Chile Abstract and oral presentation.
66. **BERTRAND, S.**, HUGHEN, K., SEPÚLVEDA, J., PANTOJA, S. (2013) — Interactions between precipitation and sea surface temperature in Northern Chilean Patagonia during the Late Holocene. 4th PAGES Open Science Meeting, Goa. India. Abstract and oral presentation.
67. DAGA, R., **BERTRAND, S.**, BEDERT, R., RIBEIRO GUEVARA, S., GHAZOU, Z. (2013) — Lacustrine records of the June 2011 eruption of the Puyehue-Cordón Caulle Volcanic Complex, Central Chile (40°30'S, 72°10'W). European Geosciences Union (EGU) general assembly, Vienna, Austria. Abstract and poster.
68. DE VLEESCHOUWER, F., VANNESTE, H., **BERTRAND, S.**, CORONATO, A., GAIERO, D., LE ROUX, G., PARAD TEAM (2013) — Peat bog Records of Atmospheric Dust fluxes - Holocene palaeoenvironmental and paleoclimatic implications for South America. European Geosciences Union (EGU) general assembly, Vienna, Austria. Abstract and oral communication.
69. DAGA, R., **BERTRAND, S.**, BEDERT, R., FONTIJN, K., GHAZOU, Z., RIBEIRO GUEVARA, S. (2014) — La erupción del 2011 del complejo volcánico Cordón Caulle: Análisis de registros lacustres para mejorar la interpretación de registros estratigráficos de tefras. 19th Argentinean Geological Congress, Cordoba, Argentina. Abstract and poster.
70. **BERTRAND, S.**, HUGHEN, K., SEPÚLVEDA, J., PANTOJA, S. (2014) — Late Holocene covariability of the southern westerlies and sea surface temperature in northern Chilean Patagonia. 3rd PAGES international symposium LOTRED-SA, Medellín, Colombia. Abstract and oral presentation.
71. DE VLEESCHOUWER, F., VANNESTE, H., **BERTRAND, S.**, PIOTROWSKA, N., CORONATO, A., LE ROUX, G., PARAD TEAM (2014) — Holocene peat bog records of atmospheric dust fluxes in southern South America. 3rd PAGES international symposium LOTRED-SA, Medellín, Colombia. Abstract and poster.

E. Theses, reports, field guides and publications in other journals

1. BAETEMAN, C., **BERTRAND, S.** (2001) — IJzer palaeovalley, Holocene geology and mapping. Geologica Belgica Field Meeting, 2nd June 2001, 19 p.

2. **BERTRAND, S.** (2001) — Evolution des environnements sédimentaires holocènes et cartographie par types de profils de la partie centrale de la paléovallée de l'IJzer (plaine côtière belge). BSc (licence) thesis, ULg, 54 p. + appendices.
3. **BERTRAND, S.** (2002) — Caractérisation des apports sédimentaires de la région des lacs, Chili méridional – Exemple des lacs Icalma et Puyehue. MSc (DEA) thesis, ULg, 51 p. + appendices.
4. **BERTRAND, S.** (2005) — Sédimentation lacustre postérieure du Dernier Maximum Glaciaire dans les lacs Icalma et Puyehue (Chili méridional) : Reconstitution de la variabilité climatique et des évènements sismo-tectoniques. PhD thesis, ULg, 266 p.
5. **BERTRAND, S., & LEROY, S.** (2005) — Sedimentology of Hersek Lagoon, NW Turkey. Relationships with tsunamis in the Sea of Marmara. Report for the European Project RELIEF, 32 p. + appendices.
6. **BERTRAND, S., BURNETT, A., SAUNDERS, K., STRIBERGER, J., AXFORD, Y., COULTER, S.** (2008) — PAGES workshop report - ESF EuroCLIMATE Spring School: "Late Quaternary Timescales and Chronology" PAGES Newsletter 16 (3), 36-37.
7. **TORREJON, F., BIZAMA, G., ARANEDA, A., AGUYAO, M., BERTRAND, S., URRUTIA, R.** (2013) — Deciphering the environmental history of the Aysen archipelagos, Chile: Colonial influence and commercial exploitation during the republican era (XVI-XIX centuries). *Magallania* 41(1), 29-52.

F. Seminars and invited talks

November 2004 – University of Liège, Belgium. Paléoclimatologie en milieu lacustre. Seminars of the Department of Geology.

September 2005 – Brunel University, UK. The multi-proxy study of Lago Puyehue sediments: A record of millennial scale climate variability in Southern Chile since the Last Glacial Maximum. GESWAT seminars (Geography and Earth Sciences Weekly Afternoon Talks).

May 2006 – Woods Hole Oceanographic Institution, USA. Climate variability of southern Chile since the Last Glacial Maximum: A multiproxy sedimentological record from Lago Puyehue (40°S). Paleo-lunch seminars.

September 2006 – Massachusetts Institute of Technology, USA. Climate variability of southern Chile since the Last Glacial Maximum: A multiproxy sedimentological record from Lago Puyehue (40°S). MIT Chemical Oceanography seminar series. Invited.

September 2006 – Brown University, Providence, Rhode Island, USA. Climate variability of southern Chile since the Last Glacial Maximum: A multiproxy sedimentological record from Lago Puyehue. Geological Sciences department. Invited.

October 2006 – Woods Hole Oceanographic Institution, MA, USA. Chilean fjord sediments: A high resolution record of paleoclimate variability in southern South America. 3rd WHOI Postdoctoral symposium.

January 2007 – Centro Atómico Bariloche, San Carlos de Bariloche, Argentina. The sedimentary record of Lago Puyehue. Laboratorio de Análisis por Activación Neutrónica. Invited.

October 2007 – Woods Hole Oceanographic Institution, MA, USA. Has it always been raining cats and dogs in Chilean Patagonia? Insights from lake and fjord sediments. 4th WHOI Postdoctoral symposium.

April 2008 – Woods Hole Oceanographic Institution, MA, USA. Paleoclimate reconstructions in Southern Chile: Insights from lake and fjord sediments. Marine Chemistry and Geochemistry Department weekly seminar.

October 2008 – Woods Hole Oceanographic Institution, MA, USA. High resolution paleoclimate reconstructions from lake and fjord sediments of southern Chile. 5th WHOI Postdoctoral symposium.

January 2009 – Alfred Wegener Institute, Bremerhaven, Germany. Sedimentary record of paleoclimate variability in southern Chile: Results from Lake Puyehue and the Patagonian fjords (Cimar Fiordo 7 and Nathaniel Palmer 0505 cruises). Department seminar.

November 2009 – Woods Hole Oceanographic Institution, USA. Paleoclimate and paleoenvironmental reconstructions from the fjords of Chilean Patagonia. Paleo-lunch seminars.

May 2010 – Skidaway Institute of Oceanography, GA, USA. The fjords of Northern Chilean Patagonia: Sedimentary geochemistry and sedimentary records of climate and environmental change. Institute seminar. Invited.

September 2010 – NIOZ (Netherlands Institute for Sea Research), Texel, The Netherlands. Sedimentary geochemistry of the Chilean fjords: Spatial variability and potential to reconstruct Holocene climate and environmental change. XRF core scanning workshop, Abstract and oral communication. Invited speaker.

September 2010 – CEREGE, Aix-Marseille, France. The fjords of Northern Chilean Patagonia: Sedimentary geochemistry and sedimentary records of Holocene climate and environmental change. Institute seminar. Invited.

September 2010 – EDYTEM, Université de Savoie, France. Sedimentary record of climate and environmental change in Chilean Patagonia during the Holocene. Institute seminar. Invited.

October 2010 – Universidad Católica del Norte, Coquimbo, Chile. The fjords of Northern Chilean Patagonia: Sedimentary geochemistry and sedimentary records of Holocene climate and environmental change. Institute seminar. Invited.

October 2010 – COPAS, Universidad de Concepción, Chile. Sedimentary geochemistry of the Chilean fjords: Spatial variability and potential to reconstruct Holocene climate and environmental change. Institute seminar. Invited.

June 2011 – ISMER, Université du Québec à Rimouski (UQAR), Canada. Sedimentary geochemistry of the fjords of Chilean Patagonia: Present-day dynamics and paleoclimate records. Institute seminar. Invited.

September 2012 – EAWAG, Zurich, Switzerland. Sedimentary geochemistry in the fjord-river systems of Northern Chilean Patagonia and implications for paleoclimate reconstructions. Institute seminar. Invited.

March 2013 – INRS-ETE, Quebec City, Canada. Inorganic geochemistry of fjord sediments as a tool for paleoclimate reconstructions. Department seminar.

March 2013 – UQAR, Rimouski, Canada. Sedimentary geochemistry in the fjord-river systems of Chilean Patagonia: From modern hydrology to paleoclimate reconstructions. UQAR-BOREAS seminar.

G. Dissemination articles and press releases

January 2009 – Reading the climatic signs. eStrategies, Projects 8, 77-79.

March 2012 – WHOI press release "Study of Patagonia's glaciers rise and fall adds to understanding of global climate change". <http://www.whoi.edu/main/news-releases?tid=3622&cid=132729> Published on Science Daily, science-news.eu, and in GeoQ (EGU Newsletter), the Newsletter of the Geochemical Society, and The Patagon Journal

Awards

September 2002 – Grant and medal « Clément Guion » for the best BSc dissertation in Geology, University of Liège, Belgium.

March 2011 – Elsevier award "Quaternary Research most cited articles 2005-2010"

Grants

June 2005 – BAEF Fellowship (Belgian American Educational Foundation) to support a one-year postdoctoral research stay at the Woods Hole Oceanographic Institution, USA. \$40,000

June 2006 – EU Marie Curie outgoing international fellowship to support a three-year postdoctoral research project at the Woods Hole Oceanographic Institution, USA (outgoing phase) and at the Alfred Wegener Institute, Germany (return phase). 257,000 €

December 2007 – National Geographic Society, Committee for Research and Exploration. Grant supporting a fieldwork expedition in the fjords of Chilean Patagonia. \$18,000

September 2009 – Flemish Research Foundation (FWO) postdoctoral fellowship to support a three-year postdoctoral research project at the Renard Centre of Marine Geology, University of Ghent, Belgium, with two 6-month research stays at the AWI, Germany and at WHOI, USA. 180,000 €

November 2010 — Flemish Research Foundation (FWO) research grant. Sedimentary geochemistry of North Patagonian rivers: Understanding the terrestrial processes recorded in Chilean fjord sediments. 29,100 €

June 2011 – Co-PI on French National Research Agency (ANR) project PARAD. Peat bog records of Atmospheric dust fluxes – Holocene paleoenvironmental and paleoclimatic implication for southern South America. Lead-PI: F. De Vleeschouwer, Ecolab, Toulouse. 383,020 €

December 2011 – Collaboration project with the Centro Atomico Bariloche, Argentina. Funding from COST action INTIMATE, ABEST, MINCyT and FWO. 14,500 €

December 2011 – TOURNESOL collaboration project on Patagonian river sediments. Funding from French and Flemish governments. 14,000 €

September 2012 — Flemish Research Foundation (FWO) postdoctoral fellowship renewal. Project POCISSA: Postglacial Ocean-Continent Interactions in Southern South America. Project at the Renard Centre of Marine Geology, University of Ghent, Belgium, and WHOI, MA, USA. 185,000 €

November 2012 — Flemish Research Foundation (FWO) research grant. Testing the potential and limits of tephrostratigraphy: The June 2011 eruption of Puyehue-Cordon de Caulle volcano. 25,400 €

Submitted – Source and age of organic carbon released from the receding outlet glaciers of the Northern Patagonian Icefield – Submitted to National Geographic Global Exploration Fund – Northern Europe. Requested amount: 22,730 EUR