

Curriculum Vitae Prof. Lluís Fontboté

(additional data on http://cms.unige.ch/sciences/terre/people/personal_pages/LluisFontbote/LluisFontbote)

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Personal data: Spanish citizen, born 16 August 1952 in Barcelona, married, one child.

Languages: Spanish, Catalan, French, English, and German,

Employment

from 10/1990: Full Professor (“Professeur Ordinaire”) at the Département des Sciences de la Terre (until 15.7.2013 Département de Minéralogie)2013 at the University of Geneva (holder of the chair of Economic Geology).

10/1988 - 10/1990: Assistant Professor (“Hochschuldozent” C-2) for geochemistry, metallogeny, and ore microscopy at the Mineralogisch-Petrographisches Institut of the University of Heidelberg.

1981 - 1988: Full time postdoctoral Research Associate (“Wissenschaftlicher Mitarbeiter”) for projects supported by the Deutsche Forschungsgemeinschaft and the European Communities at the University of Heidelberg.

1975-1976 Exploration Geologist

Education

2/1988 “Habilitation” at the Faculty of Geosciences, University of Heidelberg

12/1981 Ph.D. Thesis (“Dr. rer. nat”), University of Heidelberg

1/1979 Master thesis in Mineralogy, University of Heidelberg

10/1976 Master thesis “tesina de licenciado” in Geology, University of Granada, Spain.

Administrative duties

- Vice-Dean of the Faculté des Sciences, Université de Genève, 15.7.2007 - 14.7.2014
- President of the Section des Sciences de la Terre et de l'environnement 15.7.2011 - 14.7.2013
- Chair of the Department of Mineralogy since 1.10.1994 to 31.8.2008
- Director of the “ELSTE” (Joint School of Earth and Environmental Sciences of the Geneva and Lausanne Universities), 15.7.2005 - 14.7.2007 (vice-director 15.7.2003-14.7.2005)

Other professional functions

- Member of the expert panel of the European Innovation Partnership (EIP) on Raw Materials (since 2013)
- President Society Economic Geologists (2012)
- Cochair Technical Committee of the SEG Conference Lima 2012
- Convenor of numerous sessions in congresses, including EUG 2012, 2013, Vienna
- SEG Honorary Lecturer since 2013 (and also period 2006-2009)
- Member of the Council to the Swiss National Research Foundation, from 1.1.1997 to 31.12.2006
- Chair of the organization committee of the annual UNESCO-SEG-SGA Latin American Metallogeny course, since 1999
- Member of the “Comité Scientifique du BRGM” (2003-2005)
- 2001-2002 SEG Regional Vicepresident Lecturer
- 1998-2002 Council Member of the Society of Economic Geologists.

- 1996-1998 Launching editor of SGA NEWS (newsletter of the Society for Geology Applied to Mineral Deposits , SGA)
- 1992-1997 Member of the Council of Society for Geology Applied to Mineral Deposits (SGA)
- 1992-2002 Member of the Council of the Swiss Society of Mineralogy and Petrology.
- Between 1992 and 1998 associate editor of Mineralium Deposita and between 1991 and 1996 member of the editorial board of the Chronique de la Recherche Minière.
- I regularly review research manuscripts for several journals and project proposals for institutions in USA, Germany, Austria, France, Canada, Spain, Chile and other countries.
- Board Member of the Schweizerische Geotechnische Kommission until 2005

Teaching activity

Economic Geology: Several Bachelor and Master courses.

Direction of Ph. D. Thesis: Nicolas Saintilan (2015), Aldo Bendezú (2015), Honza Catchpole (2011), jointly with Kalin Kozmanov, Regine Baumgartner (2006), Ronner Bendezú (2006), Antoine de Haller (2005), Marc Polliand (2002), Karin Requia (2002), Yves Haeberlin (2001, co-direction with R. Moritz), Bernhard Dold (1999), François Lieben (1999, co-direction with R. Moritz), Robert Marschik (1996), Jorge Sáez (1996, Heidelberg), Jorge Spangenberg (1995), Silvia Rosas (1994, Heidelberg), Cesar Muñoz (1993, Heidelberg), Marcos Pincheira (1991, Heidelberg), Frank Wolf (1990, Heidelberg)

Direction of +20 MSc. Theses

Research interests

- Cordilleran polymetallic deposits related to porphyry mineralizing systems
- Fe-oxide Cu-Au deposits
- Orogenic Gold deposits
- Volcanic-Hosted Massive sulfides
- Mississippi Valley-type deposits
- Isotopic geochemistry applied to metallogeny
- Andean metallogeny
- Acid mining drainage, supergene enrichment, and exotic mineralization

Our investigations are presently concentrated in deposits occurring in geotectonic settings of plate convergence, mainly in the Andes. They are carried out in collaboration with other Swiss (in particular with ETHZ and the universities of Lausanne and Bern) and foreign scientific institutions and cooperative programs as well as with several mining companies.

Publications

Editor of two books and author of numerous scientific publications in international journals and books

Membership in professional societies

- Society of Economic Geology (SEG)
- Society for Geology Applied to Mineral Deposits (SGA)
- Member of national mineralogical and geological societies of Switzerland, Germany, Peru, and Spain.

Publications

(additional data on http://cms.unige.ch/sciences/terre/people/personal_pages/LluisFontbote/LluisFontbote)

- Saintilan NJ, Schneider J, Stephens MB, Kouzmanov K, Chiaradia M, Wälle M, Fontboté L (2015): A Middle Ordovician Age for the Laisvall Sandstone-Hosted Pb-Zn Deposit, Sweden: A Response to Early Caledonian Orogenic Activity. *Economic Geology*, v. 110,
- Catchpole H, Kouzmanov K, Bendezú A, Ovtcharova M, Spikings R, Stein H, Astorga C., Fontboté (2015): Timing of porphyry (Cu-Mo) and base metal mineralisation (Zn-Pb-Ag-Cu) in a magmatic-hydrothermal system – Morococha district, Peru. *Mineralium Deposita*, DOI 10.1007/s00126-014-0564-x
- Saintilan, N.J., Stephens, M.B., Lundstam, E. & Fontboté, L., (2015) Control of reactivated basement structures on sandstone-hosted Pb–Zn deposits along the Caledonian Front, Sweden: Evidence from airborne magnetic field data, structural analysis and ore grade modeling: *Economic Geology*, v. 110, p. 91-117.
- Catchpole H, Kouzmanov K, Putlitz B, Fontboté L, Seo JH (2015): Zoned base metal mineralization in a porphyry system: Origin and evolution of ore-forming fluids in the Morococha district, Peru. *Economic Geology*, v. 110, p. 39-71.
- Pinget, M.C., Dold, B., Zentilli, M., Fontboté, L. (2015) Reported "supergene" sphalerite rims at the Chuquicamata porphyry deposit (northern Chile) revisited: evidences for a hypogene origin. *Economic Geology*, v. 110, p. 253-262.
- Catchpole H, Kouzmanov K, Fontboté L (2012): Copper-excess stannoidite and tennantite-tetrahedrite series as proxies for hydrothermal fluid evolution in a zoned Cordilleran base metal district – Morococha, central Peru. – *Canadian Mineralogist*, 50, 719-743.
- Basta, F. F., Maurice A. E., Fontboté L., Favarger, P.Y., (2011). Petrology and geochemistry of the banded iron formation (BIF) of Wadi Karim and Urn Anab, Eastern Desert, Egypt: Implications for the origin of Neoproterozoic BIF. *Precambrian Research*, v. 187, 277-292.
- Catchpole H, Kouzmanov K, Fontboté L, Guillong M, Heinrich CA (2011): Fluid evolution in zoned Cordilleran polymetallic veins – insights from microthermometry and LA-ICP-MS of fluid inclusions. *Chemical Geology*, v. 187, 293-304.
- Fontboté, L., and Bendezú, R., 2010, Cordilleran or Butte-type veins and replacement bodies as a deposit class in porphyry systems. In: Williams et al., P.J. (ed) *Proceedings of the 10th Biennial Society of Geology Applied to Ore Deposits Meeting*, Townsville, Australia, p. 521-523.
- Baumgartner, R., Fontboté, L., Richard Spikings, R., Ovtcharova, M., Schaltegger, U. Schneider, J., Page, L. Gutjahr, M. (2009) Bracketing the age of magmatic-hydrothermal activity at the Cerro de Pasco epithermal polymetallic Deposit, Central Peru: A U-Pb and Ar-40/Ar-39 Study. *Economic Geology*, v. 104, p. 479-504.
- Bendezú, R. and Fontboté, L (2009)* Cordilleran epithermal Cu-Zn-Pb-(Au-Ag) mineralization in the Colquijirca district, central Peru: Deposit-scale mineralogical patterns. *Economic Geology*, v. 104, p. 905-944.
- Chiaradia, M., Vallance, J., Fontboté, L., Stein, H., Schaltegger, U., Coder, J., Richards, J., Villeneuve, M. and Gendall, I. (2009) U–Pb, Re–Os, and ⁴⁰Ar/³⁹Ar geochronology of the Nambija Au-skarn and Pangui porphyry Cu deposits, Ecuador: implications for the Jurassic metallogenic belt of the Northern Andes. *Mineralium Deposita*, v. 44, 371-387.
- Dold, B., Wade, C., Fontboté, L. (2009): Water management for acid mine drainage control at the polymetallic Zn-Pb-(Ag-Bi-Cu) deposit of Cerro de Pasco, Peru. *Journal of Geochemical Exploration*, 100 (2-3), 133-141.
- de Haller, A. and Fontboté, L. (2009) Raúl-Condestable iron-oxide copper gold deposit, central Coast of Peru: Ore and related hydrothermal alteration, sulfur isotopes, and thermodynamic constraints, *Economic Geology*, v. 104, 365-384.
- Fontboté, L., and Bendezú, R., 2009, Cordilleran or Butte-type veins and replacement bodies as a deposit class in porphyry systems. In: Williams et al., P.J. (ed) *Proceedings of the 10th*

- Biennial Society of Geology Applied to Ore Deposits Meeting, Townsville, Australia, p. 521-523.
- Vallance, J., Fontboté, F., Chiaradia, M., Markowski, A. Schmidt, S. and Vennemann, T. (2009) Magmatic-dominated fluid evolution in the Jurassic Nambija gold skarn deposits (southeastern Ecuador), *Mineralium Deposita*, v. 44, p. 389-413.
- Bendezú, R., Page, L. Spikings, R., Pecskey, Z., Fontboté, L. (2008) New $^{40}\text{Ar}/^{39}\text{Ar}$ alunite ages from the Colquijirca District, Peru. Evidence of long period of magmatic SO_2 degassing during formation of epithermal Au-Ag and Cordilleran polymetallic ores. *Mineralium Deposita*, v. 43, p. 777-789. DOI 10.1007/s00126-008-0195-1
- Baumgartner, R., Fontboté, L., & Vennemann, T (2008)* Mineral zoning and geochemistry of epithermal polymetallic Zn-Pb-Ag-Cu-Bi mineralization at Cerro de Pasco, Peru. *Economic Geology*, p. 493-537.
- Chiaradia, M., Tripodi, D., Fontboté, L., Reza, B. (2008) Geologic setting, mineralogy, and geochemistry of the Early Tertiary Au-rich volcanic-hosted massive sulfide deposit of La Plata, Western Cordillera, Ecuador. *Economic Geology* v. 103, p. 161-183.

* SEG 2010 B. Skinner Award to the Best Economic Geology Article 2009

Previous publications and extended abstracts and selected abstracts under:

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