

Curriculum Vitae

Dr. Isabelle COUTAND

Associate Professor in Tectonics / Thermochronology

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EDUCATIONAL BACKGROUND

- 1999** **Doctoral Thesis** (eq. Ph.D. degree), Université de Rennes, France
Cenozoic Tectonics of the Puna plateau, Central Andes (NW Argentina)
 Advisor: Peter R. Cobbold
- 1994-1995** **Master degree**, Université de Rennes, France.
Structure and kinematics of a foothill transect, Santa Cruz province (Argentina), La Ultima Esperanza (Chile), southern Andes.
 Advisors: Peter R. Cobbold and Denis Gapais
- 1989-1994** **Undergraduate studies**, Université des Sciences et Technologies, Nantes, France

EMPLOYMENT HISTORY

- 2015–Present** Associate Professor, Director of Fission-Track Laboratory
 Department of Earth Sciences, Dalhousie University, Canada
- 2016** Visiting International Researcher (SNF)
 IDYST, Lausanne University, Switzerland
- 2015-2016** Visiting Professor
 Geologisches Institut, ETH Zürich, Switzerland
- 2015** Visiting Professor
 IDYST, Lausanne University, Switzerland
- 2009–2015** Assistant Professor, Director of Fission-Track Laboratory
 Department of Earth Sciences, Dalhousie University, Canada
- 2006–2008** Visiting Researcher
 Geological and Environmental Sciences, Stanford University, USA
- 2006** Visiting Researcher
 Geologisches Institut, ETH Zürich, Switzerland
- 2004–2008** Honorary Research Associate
 Department of Earth Sciences, Dalhousie University, Canada
- 2002–Present** Assistant Professor¹
 Département des Sciences de la Terre, Université de Lille, France
- 2000–2002** Postdoctoral fellow
 Institut für Geowissenschaften Potsdam Universität, Germany

1999–2000	Lecturer and Research Assistant Géosciences, Université de Rennes, France
1995–1998	Teaching Assistant Géosciences, Université de Rennes, France

TEACHING EXPERIENCE

Courses Taught at Dalhousie University

<i>Semester/Year</i>	<i>Course</i>	<i>Number</i>	<i>Enrolment</i>
• Winter 2020	Introduction to Geology I	ERTH1080	60
• Fall 2019	Field Methods	ERTH2110	14
• Summer 2019	Intermediate Fieldschool	ERTH3001	15
• Winter 2019	Geochronology and Thermochronology	ERTH6400	N/A
• Summer 2018	Intermediate Fieldschool	ERTH3001	17
• Winter 2018	Introduction to Geology 1	ERTH1080	55
• Fall 2017	Field Methods	ERTH2110	27
• Summer 2017	Intermediate Fieldschool	ERTH3001	20
• Winter 2017	Introduction to Geology 1	ERTH1080	57
• Fall 2016-Winter 2017	Research skills in Earth Sciences	ERTH6300	8
• Summer 2015-2016	Intermediate Fieldschool	ERTH3000	33
• Winter 2015	Introduction to Geology 1	ERTH1080	59
• Fall 2014-Winter 2015	Research skills in Earth Sciences	ERTH6300	3
• Fall 2014	Intermediate Field School	ERTH3000	35
• Winter 2014	Introduction to Geology 1	ERTH1080	62
• Fall 2013-Winter 2014	Research skills in Earth Sciences	ERTH6300	9
• Fall 2013-Winter 2014	Geochronology and Thermochronology	ERTH6400	6
• Fall 2013	Intermediate Field School	ERTH3000	33
• Winter 2013	Introduction to Geology 1	ERTH1080	41
• Fall 2012-Winter 2013	Research skills in Earth Sciences	ERTH6300	10
• Fall 2012	Computing Camp	ERTH3000	21
• Winter 2012	Introduction to Geology 1	ERTH1080	32
• Fall 2011	Computing Camp	ERTH3000	28
• Fall 2010-Winter 2011	Geochronology and Thermochronology	ERTH6400	6
• Fall 2010	Introduction to Geology 1	ERTH1080	45
• Fall 2010	Basic Field School	ERTH2000	32
• Winter 2010	Introduction to Geology 1	ERTH1080	36
• Fall 2009	Introduction to Geology 1	ERTH1080	46
• Fall 2009	Advanced Field School (Swiss Alps)	ERTH4000	12
• Winter 2009	Introduction to Geology 1	ERTH1080	48

Courses Taught at Université de Lille I

<i>Year</i>	<i>Course</i>	<i>Level (diploma, year)</i>
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• 2006-2007	Mapping Field School (Jura)	LICENCE 3
• 2005-2006	Geodynamics	LICENCE 3
	Geology of France	LICENCE 3
	Mapping Field School (Jura)	LICENCE 3
	Advanced Field School (French Alps)	MAITRISE 5
• 2004-2005	Geodynamics	LICENCE 3
	Geology of France	LICENCE 3
	Sedimentary Basins	MAITRISE 4
	Tectonic Geomorphology	MAITRISE 4
• 2003-2004	Geodynamics	LICENCE 3
	Sedimentary Basins	MAITRISE 4
	Thermochronology	MAITRISE 4
• 2002-2003	Geological Mapping	DEUG 2
	Mineralogy	DEUG 2
	Structural Geology	LICENCE 3

Teaching Assistantship at Université de Rennes I

<i>Year</i>	<i>Course</i>	<i>Level (diploma, year)</i>
• 1999-2000	Geological Mapping	DEUG 2
	Field School (Provence)	LICENCE 3
	Field School (Bretagne)	MAITRISE 4
	Field School (Massif Central/Mont. Noire)	MAITRISE 4
• 1998-1999	Geological Mapping	DEUG 2
	Field School (Provence)	LICENCE 3
	Field School (Bretagne)	MAITRISE 4
• 1997-1998	Geological Mapping	DEUG 2
• 1996-1997	Geological Mapping	DEUG 2
• 1995	Advanced Field School (Bretagne)	MAITRISE 5

Short Course

<i>Venue</i>	<i>Course</i>	<i>Date</i>
Geologisches Institut, ETH Zürich, Switzerland	Low-Temperature Thermochronology (co-taught with G. Fellin and S. Willett)	Winter 2016
Chinese Academy of Geological Sciences Beijing, China	Low-Temperature Thermochronology: Definition, theory, interpretation, and case examples	5-6 May 2014

TRAINING OF HIGHLY QUALIFIED PERSONNEL

Host of visiting Researcher

<i>Name</i>	<i>University</i>	<i>Project</i>	<i>Year</i>
Sherif Mansour	Port Said, Egypt	Rifting and opening of the Red Sea	2019-2020
Zongxing Li	Beijing, China	Cooling history of the Kunlun massif, Tibet	2014-
Zheng Yong	Beijing, China	Displacement history of the Wenchuan fault (Longmen Shan) from bedrock borehole thermochronology	2015
Sánchez N.	Bahia Blanca, Argentina	Thermal history of the Chos Malal Fold-and-Thrust Belt, Patagonian Andes	2017

Training of Technical Personnel

<i>Name</i>	<i>University</i>	<i>Role</i>	<i>Year</i>
Kliffer M.	Dalhousie	Technician and manager of the mineral separation lab (Currently pursues a career as a professional musician)	2009-2012

Supervision of PhD students

<i>Name</i>	<i>University</i>	<i>Thesis Title</i>	<i>Year</i>
Banjan M.	Dalhousie - GSC	Tectonic accretion of the Canadian Cordillera as unravelled by low-temperature Thermochronology Co-supervised with D. Kellett	2017-2018
Ronda G.	Buenos Aires, Argentina	Structural and kinematic evolution of the northern segment of the Austral Patagonian Andes (47°-48°S) Co-supervised with M. Ghiglione	2015-
Sánchez N.	Bahia Blanca, Argentina	Thermal history of the Chos Malal Fold-and-Thrust Belt, Patagonian Andes Co-supervised with L. Dimieri and M. Turienzo	2010-2015
Ghoorchi M.	Ferdowsi, Mashhad, Iran	Exhumation of the Halak Habad granitoid, Iran 15% with M.H. Karimpour (Main supervisor)	2009-2013

Supervision of M.Sc. students

<i>Name</i>	<i>University</i>	<i>Thesis Title</i>	<i>Year</i>
Vogler K.	Dalhousie	Rifting and opening of the Labrador Sea Hopedale, Labrador Co-supervised with D. Van Rooyen	2018-
Buckingham H.	UBC Okanagan	Late-stage deformation and exhumation history of the Kanchenjunga region, eastern Nepal 15% supervised with K. Larson (Main supervisor)	2013-2015
Louis B.	Dalhousie	Cooling history of the Shuswap metamorphic Complex, British Columbia, Canada Co-supervised with D. Gibson and L. Godin	2012-2015
Landry K.	Dalhousie	Late Tertiary exhumation of the Sikkim Himalaya	2011-2014
Letcher A.	Stanford	Post-Oligocene deformation and unroofing of the Central Puna plateau, NW Argentina 15% supervised with G. Hilley (Main supervisor)	2006-2009
Beaudouy L.	Lille	Shallow gravity-driven deformation by fluid	2004-2005

		Overpressure Co-supervised with B. Vendeville	
Joanne C.	Lille	Structure of the Hikurangi accretionary prism Co-supervised with F. Chanier	2003-2004

Supervision of Honours (or equivalent) students

<i>Name</i>	<i>University</i>	<i>Thesis Title</i>	<i>Year</i>
Vahrenkamp S.	Dalhousie	Rifting and opening of the Labrador Sea Hopedale, Labrador Co-supervised with D. Van Rooyen	2018-2019
Chang C.	Dalhousie	Cooling history of the Scotian margin: insights from zircon and apatite (U-Th)/He thermochronology	2016-2017
Walsh M.	Dalhousie	Cooling history of the Olympus-Ossa massif: insights from zircon and apatite (U-Th)/He thermochronology	2012-2013
Cowan B.	Dalhousie	Climate proxies from Siwalik Group, Eastern Himalaya: An oxygen and hydrogen isotope record in authigenic clays Co-supervised with D. Grujic	2011-2012
Doon M.	Dalhousie	Detrital thermochronology of the Rangit window, Sikkim Himalaya Co-supervised with D. Grujic	2010-2011
Campbell D.	Dalhousie	Displacements along the South Tibetan Detachment, Sikkim and Bhutan Himalaya	2010- resigned
Landry K.	Dalhousie	Pliocene cooling of the Trumsing La area (Bhutan) from zircon (U-Th)/He thermochronology	2009-2010
Gressier J.B.	Lille	Analogue modeling of landscape response to climate change Co-supervised with S. Bonnet	2004-2005
Hanspeter S.	Potsdam	Geological mapping of the Angastaco Basin, NW Argentina Co-supervised with M. Strecker	2001-2002

Supervision of Course Project

<i>Name</i>	<i>University</i>	<i>Project Title</i>	<i>Year</i>
Braschi L.	Dalhousie	Exhumation of the Shillong plateau from 3D Thermo-kinematic modeling of thermochronometric data	2013-2014

Summer students

<i>Name</i>	<i>University</i>	<i>Project Title</i>	<i>Year</i>
Guðmundsdóttir M.H.	Stanford	Sampling of modern river sands for Terrestrial Cosmogenic Nuclides dating, Sikkim Himalaya	2008

Supervision of Teaching Assistants

<i>Name</i>	<i>Course#</i>	<i>Course name</i>	<i>Year</i>	<i>University</i>
Zhao Y.	ERTH3001	Intermediate Field School	Summer 2018	Dalhousie
Kellie S.	ERTH3001	Intermediate Field School	Summer 2018	Dalhousie
Kellie S.	ERTH2110	Field Methods	Fall 2017	Dalhousie
Keltie E.	ERTH3000	Intermediate Field School	Summer 2017	Dalhousie
Van De Kerckhove S.	ERTH3000	Intermediate Field School	Summer 2016	Dalhousie

Milligan R.	ERTH3000	Intermediate Field School	Summers 2016-2017	Dalhousie
Creason G.	ERTH3000	Intermediate Field School	Summer 2014	Dalhousie
Chapman G.	ERTH3000	Intermediate Field School	Summers 2013-2014-2016	Dalhousie
Ielpi A.	ERTH3000	Intermediate Field School	Summer 2013	Dalhousie
Steenkamp H.	ERTH3000	Computing Camp	Summers 2011-2012	Dalhousie
Louis B.	ERTH3000	Computing Camp/ Intermediate Field School	Summers 2011-2014	Dalhousie

Membership on supervisory, Thesis and Comprehensive examination committees

<i>Name</i>	<i>Degree</i>	<i>Role</i>	<i>Year</i>	<i>University</i>
Stadler N.	Ph.D.	Member of Supervisory Committee	2016-	Lausanne
Riesner M.	Ph.D.	Examining Committee	2017	IPG Paris
Abrahami R.	Ph.D.	Examining Committee	2015	Grenoble
Kellett D.	Ph.D.	Member of Supervisory Committee	2009-2010	Dalhousie
Griffith J.	M.Sc.	Chair of Examining Committee	2011	Dalhousie

RESEARCH PROJECTS IN THE LAST 5 YEARS (+COLLABORATORS AT DALHOUSIE AND COLLABORATIVE INSTITUTIONS)

- Interactions Tectonics-Climate (Monsoon) in the Eastern Himalaya (Coutand, Grujic, Institut de Physique du Globe de Paris, Lancaster University – UK, Géosciences Rennes, University of Amsterdam)
- Interactions Tectonics -Climate (Glaciations) in northern Patagonia (Coutand, Buenos Aires University) and in the Central Andes (Argentina and Chile) (Coutand, Lausanne University)
- Rifting and opening of the Labrador Sea (Coutand, Cape Breton University)
- Exhumation of the Bundelkhand massif, Central India (Coutand, Queen's University)
- Tectonic development of the Neuquén Andes, Argentina (Coutand, Bahia Blanca University)
- Tectonic accretion of the Canadian Cordillera (Coutand, Kellett – Geological Survey of Canada)
- Cooling history of the Shuswap metamorphic Complex, BC (Coutand, Queen's University, Simon Fraser University)
- Exhumation of different places in the Himalayas (Hindu Kush – Pakistan; Eastern Nepal) (Coutand, UBC Okanagan)
- Using U-Pb calcite dating to directly-date continental scale faults – applications to the Main Frontal Thrust (Bhutan Himalaya) and the North Anatolian Fault (Northern Greece), the Hellenic nappes (Swiss Alps) (Coutand, Grujic, Portsmouth University)
- Records of tectonic and erosional processes using detrital thermochronology from modern river sands: applications to the Bhutan and central Nepalese Himalaya (Coutand, University of Helsinki, Potsdam University)
- Cooling history of the Kunlun massif, Tibet (Coutand, China Academy of Geological Sciences)
- Ultra-low temperature OSL thermochronology: applications to measure erosion rates in sediments (Siwalik sediments, Bhutan) and quantifying displacement rates on active continental-scale faults (Wenchuan Fault, Sichuan) (Coutand, Grujic, Lausanne University)

CONTRIBUTIONS TO RESEARCH

(Students underlined)

Refereed publications

29. Ronda, G., Ghiglione, M.C., Barberón, V., **Coutand, I.**, and Tobal, J., 2019: Mesozoic–Cenozoic evolution of the Southern Patagonian Andes fold and thrust belt (47°–48° S): Influence of the Rocas Verdes basin inversion and onset of Patagonian glaciations. *Tectonophysics*, 765, 83–101
28. Sanchez N., **Coutand I.**, Turienzo M., Lebinson F., Araujo V., and Dimieri L., 2018: Tectonic evolution of the Chos Malal fold-and-thrust belt (Neuquén Basin, Argentina) from (U-Th)/He and fission-track thermochronometry. *Tectonics*, 37 (7), 1907–1929
27. Grujic, D., Govin, G., Barrier, L., Cowan, B., **Coutand, I.**, Hren, M. T., and Najman, Y., 2018: Formation of a rain shadow: O and H stable isotope 1 records in authigenic clays from the Siwalik Group in eastern Bhutan. *G-Cubed*, <https://doi.org/10.1029/2017GC007254>
26. Faisal S., Larson K. P., Camacho A., **Coutand I.**, 2018: Cooling, exhumation, and deformation in the Hindu Kush, NW Pakistan: New constraints from preliminary $^{40}\text{Ar}/^{39}\text{Ar}$ and fission track analyses, *Journal of Asian Earth Sciences*, 158, 415–427
25. Sanchez N., **Coutand I.**, Turienzo M., Lebinson F., Araujo V., and Dimieri L., 2017: Middle Miocene–Early Pliocene contraction in the Chos Malal fold-and-thrust belt (Neuquén Basin, Argentina): Insights from structural analysis and apatite fission tracks thermochronology. *Tectonics* – Published in October 2017 – retracted in December 2017
24. Grujic, D., **Coutand, I.**, Doon, M. and Kellett D. A., 2017: Northern provenance of the Gondwana formation in the Lesser Himalayan Sequence: constraints from $^{40}\text{Ar}/^{39}\text{Ar}$ dating of detrital muscovite in Darjeeling-Sikkim Himalaya. *Italian Journal of Geosciences*, 135, doi: 10.3301/IJG.2015.28
23. Larson K. P., Camacho A., Cottle J. M., Coutand I., Buckingham H. M., 2017: Cooling, exhumation and kinematics of the Kanchenjunga Himal, far east Nepal. *Tectonics* 36 (6), 1037–1052
22. **Coutand, I.**, Barrier, L., Govin, G., Grujic, D., Hoorn, C., Dupont-Nivet, G., Najman, Y., 2016: Late Miocene–Pleistocene evolution of India–Eurasia convergence partitioning between the Bhutan Himalaya and the Shillong plateau: New evidences from foreland basin deposits along the Dungsam Chu section, Eastern Bhutan, *Tectonics*. doi: 10.1002/2016TC004258
21. Landry, K. R., **Coutand, I.**, Whipp Jr, D. M., Grujic, D., Hourigan, J. K., 2016: Late Neogene tectonically driven crustal exhumation of the Sikkim Himalaya: Insights from inversion of multithermochronologic data. *Tectonics*, 35, 3, 833–859, doi: 10.1002/2015TC004102
20. Sanchez N., Turienzo M., Lebinson F., Araujo V., **Coutand I.**, and Dimieri L., 2015: Structural style of the Chos Malal fold and thrust belt, Neuquén basin, Argentina, *Journal of South American Earth Sciences*, 64, 399–417.
19. **Coutand I.**, Walsh M., Louis B., Chanier F., Ferrière J., and Reynaud J.Y., 2014: Neogene upper-crustal cooling of the Olympus range (northern Aegean): Major role of Hellenic back-arc extension over propagation of the North Anatolia Fault Zone, *Terra Nova*, doi: 10.1111/ter.12099.
18. **Coutand I.**, Whipp Jr. D.M., Grujic D., Bernet M., Fellin M.G., Bookhagen B., Landry K.R., Ghalley S.K. and Duncan C., 2014: Main Himalayan Thrust geometry and Neogene exhumation kinematics derived from inversion of low-temperature thermochronologic data, Bhutan Himalaya, *Journal of Geophysical Research – Solid Earth*, 10.1002/2013JB010891.
17. Hirschmiller J., Grujic D., Bookhagen B., **Coutand I.**, Huyghe P., Mugnier J-L., and Ojha T., 2014: What controls the growth of the Himalayan foreland fold-and-thrust belt?, *Geology*, doi:10.1130/G35057.1
16. Kellett D., Grujic D., **Coutand I.**, Cottle J. and Mukul M., 2013: The South Tibetan detachment system, Sikkim Himalaya facilitates ultra rapid cooling of granulite-facies rocks, *Tectonics*, doi:10.1002/tect.20014.
15. Long S.P., McQuarrie N., Tobgay T., **Coutand I.**, Cooper F.J., Reiners P.W., Wartho J.A., and Hodges K.V., 2012: Variable shortening rates in the eastern Himalayan thrust belt, Bhutan: Insights from multiple thermochronologic and geochronologic data sets tied to kinematic reconstructions, *Tectonics*, doi: 10.1029/2012TC003155.
14. Ferrière J., Chanier F., Reynaud J.Y., Pavlopoulos A., Ditbanjong P., Migiros G., **Coutand I.**, Stais A., and Bailleul J., 2011: Tectonic control of the Meteora conglomeratic formations (Mesohellenic basin, Greece), *Bulletin de la Société géologique de France*, v. 182, issue 5, p. 437–450.
13. Hilley, G.E., **Coutand, I.**, 2010: Links between topography, erosion, rheological heterogeneity, and deformation in contractional settings: Insights from the central Andes, *Tectonophysics*, doi:10.1016/j.tecto.2009.06.017.

12. Strecker M.R., Alonso R., Bookhagen B., Carrapa B., **Coutand I.**, Hain M.P., Hilley G.E., Mortimer E., Schoenbohm L., and Sobel E.R., **2009**: Does the topographic distribution of the central Andean Puna Plateau result from climatic or geodynamic processes?, *Geology*, doi: 10.1130/G25545A.1.
11. Biswas S., **Coutand I.**, Grujic D., Hager C., Stockli D., and Grasemann B., **2007**: Exhumation and uplift of the Shillong plateau and its influence on the eastern Himalayas: new constraints from apatite and zircon (U-Th-[Sm])/He and apatite fission track analyses, *Tectonics*, v. 26, TC6013, doi:10.1029/2007TC002125.
10. Mortimer E., Carrapa B., **Coutand I.**, Schoenbohm L., Sobel E., Strecker M.R., Sosa Gomez J., **2007**: Fragmentation of a foreland basin in response to out-of-sequence basement uplifts and structural reactivation: El Cajon-Campo del Arenal basin, NW Argentina, *Geological Society of America Bulletin*, v. 119, n° 5/6, p. 637-653, doi: 10.1130/B25884.1.
9. Deeken A., Sobel E., **Coutand I.**, Haschke M., Riller U., and Strecker M., **2006**: Development of the southern Eastern Cordillera, NW-Argentina, constrained by AFT-thermochronology: from early Cretaceous extension to middle Miocene shortening. *Tectonics*, v. 25, TC6003, doi:10.1029/2005TC001894.
8. Grujic D., **Coutand I.**, Bookhagen B., Bonnet S., Blythe A., and Duncan C., **2006**: Climatic forcing of the erosion, landscape and tectonics in the Bhutan Himalayas. *Geology*, v. 34, n° 10, p. 801-804, doi: 10.1130/G22648.1.
7. **Coutand I.**, Carrapa B., Deeken A., Schmitt A., Sobel E., and Strecker M., **2006**: Propagation of orographic barriers along an active range front: Insights from sandstone petrography and detrital apatite fission-track thermochronology in the Intramontane Angastaco basin, NW Argentina. *Basin Research*, v. 18, p. 1-26, doi: 10.1111/j.1365-2117.2006.00283.x.
6. Strecker M.R., Hilley G.E., Arrowsmith J., and **Coutand I.**, **2003**: Differential structural and geomorphic mountain-front evolution in an active continental collision zone: the NW Pamir, southern Kyrgyzstan. *Geological Society of America Bulletin*, v. 115, n°2, p.166-181.
5. **Coutand I.**, Strecker M.R., Thiede R., Arrowsmith J.R., Hilley G., Korjenkov A., and Omuraliev M., **2002**: Late Cenozoic tectonic development of the intramontane Alai Valley, [Pamir-Tien Shan region, central Asia]: An example of intracontinental deformation due to the Indo-Eurasia collision. *Tectonics*, v. 21, n°6, 1053, doi:10.1029/2002TC001358.
4. **Coutand I.**, Cobbold P.R., de Urreiztieta M., Gautier P., Chauvin A., Gapais D., Rossello E.A., and Lòpez-Gamundí O., **2001**: Style and history of Andean deformation, Puna plateau, Northwestern Argentina. *Tectonics*, v. 20, n°2, p. 210-234.
3. Castellort S., Guillocheau F., Nalpas T., Rouby D., Robin C., de Urreiztieta M., and **Coutand I.**, **2000**: Tectonically induced distortion of stratigraphic cycles, example of the Arguis anticline in the south central Pyrenees (Spain). *Geotemas*, v. 1 (2), p. 55-58.
2. **Coutand I.**, Roperch P., Chauvin A., Cobbold P.R. and Gautier P., 1999: Vertical-axis rotations across the Puna plateau (Northwestern Argentina) from paleomagnetic analysis of Cretaceous and Cenozoic rocks. *Journal of Geophysical Research*, v. 104, B10, p. 22965-22984.
1. **Coutand I.**, Diraison M., Cobbold P.R., Gapais D., Rossello E.A. and Miller M., 1999: Structure and kinematics of foothills transect, Lago Viedma, southern Andes (49°30'S). *Journal of South American Earth Sciences*, v. 12, p. 1-15.

Book Chapters/Special Volumes

2. Ferrière J., Chanier F., Reynaud J-Y., Pavlopoulos A., Ditbanjong P., and **Coutand I.**, **2014**: Evolution of the Mesohellenic Basin (Greece) : a synthesis. In: (Ed.) Skourtsos E. and Lister G.S., the Geology of Greece – Part II, *Journal of the Virtual Explorer*, Electronic Edition, ISSN 1441-8142, p. 99.
1. Alonso, R.N., Bookhagen B., Carrapa B., **Coutand I.**, Haschke M., Hilley G.E., Schoenbohm, L., Sobel E.R., Strecker M.R., Trauth M.H., and Villanueva A., **2006**: Tectonics, climate, and landscape evolution of the southern central Andes: The Argentine Puna Plateau and adjacent regions between 22 and 28 S lat, in The Andes: Active Subduction Orogeny, Frontiers Earth Sci., edited by Oncken O. et al., pp. 265 – 283, Springer, New York.

Theses

2. **Coutand I.**, **1999**: Tectonique cénozoïque du haut plateau de la Puna, Nord-Ouest argentin, Andes Centrales, 1999: *Thèse d'Université, Collection Mém. Géosci. Rennes*, v. 92, 391p.
1. **Coutand I.**, **1995**: Structure et cinématique d'un transect d'avant-pays, Lac Viedma, Andes Australes, 1995: *Mémoire de Diplôme d'Études Approfondies, Géosciences, Université de Rennes I.*

Conference proceedings

76. Grujic D, Ashley K, Coble M, Coutand I, Kellett D, Larson K, Whipp D, *Whynot N (2018) Inverted temperature fields: Peak metamorphic and deformational temperatures across the Lesser Himalayan Sequence. 34th Himalaya-Karakorum-Tibet workshop, 4-7 June 2019, Bozeman (MT, USA)
75. Vogler, K., Vahrenkamp, S., Coutand, I., Van Rooyen, D., and Corrigan, D., **2019**: Thermal and exhumational history of the Labrador passive margin: Insights from apatite and zircon (U-Th)/He thermochronology, Geological Association of Canada Annual meeting, 12-15 May 2019, Quebec city (Canada).
74. Coutand, I., Whipp Jr., D.M., Bookhagen, B., and Grujic, D., **2019**: Extracting tectonic and erosional signals from detrital thermochronology in the Eastern Himalaya, Geological Association of Canada Annual meeting, 12-15 May 2019, Quebec city (Canada). **INVITED**.
73. Mottram, C., Coutand, I., Grujic, D. and Kellett D., **2019**: Directly dating deformation with calcite U-Pb; the good, the bad and the ugly! EGU General Assembly, 7-12 April 2019. Vienna, Austria.
72. Coutand, I. **2018**: **Gwladys Govin's Legacy to Himalayan Geology**, Himalaya-Karakorum-Tibet Workshop, 10-12 September 2018, Lausanne (Switzerland).
71. Mottram, C., Grujic, D. and Coutand, I., **2018**, Using U-Pb calcite dating to directly-date continental-scale faults. Geophysical Research Abstracts, Vol. 20, EGU2018-14685 presented at the European Geosciences Union General Assembly 2018 Vienna (Austria).
70. Grujic, D., Coutand I., Jaquet Y., Duretz T., Masson H., and Schmalholz S.M., **2017**: Self-consistent shear zone formation with applications to thermochronological dataset interpretation. 13th Workshop on Alpine Geological Studies, Émile Argand Conference (EUG Series), Zlatibor, Serbia, 7-18 September 2017, pp.41. **KEYNOTE**.
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64. Mottram C., Grujic D., Bhattacharyya K., **Coutand I.**, **2016**: Direct dating of fault slip in the Himalayan orogen. Abstract T43D-3076 presented at *2016 Fall Meeting, AGU*, San Francisco, 12-16 December 2016.
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61. King, G., Grujic, D., **Coutand, I.**, and Herman, F., **2016**: Very low temperature OSL-thermochronometry applied to the Siwalik deposits in Nepal and Bhutan. *14th Swiss Geoscience Meeting*. 18 and 19 November 2016. Geneva, Switzerland.
60. Grujic, D., Ashley, K.T., Coble, M.A., **Coutand, I.**, Kellett, D.A. and Whynot, N., **2016**: Inverted temperature fields: peak metamorphic and deformational temperatures across the Lesser Himalayan Sequence. In: Canadian Tectonics Group, 36th Annual meeting, Bracebridge, Ontario, Canada, 21-23 October, 2016.
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51. Buckingham H.M., Larson, K.P., **Coutand I.**, Camacho A., and Ambrose T., **2014**: Late Stage Deformation and Exhumation of the Himalayan Metamorphic Core, Kanchenjunga Region, Eastern Nepal. 29th Himalaya-Karakorum-Tibet Workshop, Lucca (Italy), 2-4 September 2014.
50. Landry K.R., **Coutand I.**, Whipp Jr. D.M., and Grujic D., **2014**: Late Miocene-present exhumation kinematics of the Sikkim Himalaya derived from inversion of zircon (U-Th)/He and apatite fission-track ages using 3-D thermokinematic modelling. 29th Himalaya-Karakorum-Tibet Workshop, Lucca (Italy), 2-4 September 2014.
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45. **Coutand I.**, Whipp Jr. D.M., Grujic D., Bernet M., Fellin M.G., Landry K.R., Ghalley S.K., and Duncan C., **2014**: Geometry and kinematics of the Main Himalayan Thrust and Neogene crustal exhumation in the Bhutanese Himalaya derived from inversion of multi-thermochronologic data, Geophysical Research Abstracts. EGU2014-10200, EGU General Assembly 2014.
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using ZHe Thermochronology and 3-D Thermokinematic Modelling, 2013 Cordilleran Tectonics Workshop, Kingston, Ontario, Canada, February 2013.

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Above, since joining Dalhousie

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32. Kellett D.A., Grujic D., **Coutand I.**, and Warren C., **2008**: Geochronologic, structural and metamorphic constraints on the evolution of the South Tibetan detachment system, Bhutan Himalaya. 23rd Himalayan-Karakorum-Tibet Workshop, Leh, India, August 2008.
31. Biswas S., **Coutand I.**, Grujic D., Hager C., Stockli D., and Grasemann B., **2007**: Exhumation and uplift of the Shillong plateau and its influence on the eastern Himalayas: new constraints from apatite and zircon (U-Th-[Sm])/He and apatite fission track analyses, AGU Fall meeting, San Francisco, Dec. 2007.
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28. Biswas S., **Coutand I.**, Grujic D., Hager C., Grasemann B., and Stockli D., **2006**: Exhumation of the Shillong Plateau and its Influence on Himalayan Tectonics, AGU Fall meeting, San Francisco, Dec. 2006.
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22. Grujic D., **Coutand I.**, Bookhagen B., Bonnet S., Blythe A., and Duncan C., **2005**: Tectonics leads – climate controls: Deformation and rainfall change in the Bhutan Himalayas. GSA Conference (Earth System Processes 2), Calgary, Canada, August 2005.
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15. Hilley G.E., Strecker M.R. and **Coutand I.**, **2002**: Eroding the wedge: linking convergence, climate, and rock erodibility to the critical coulomb wedge by bedrock incision. European Geophysical Society, Nice, France, April 2002.
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11. Roperch P., Arriagada C. and **Coutand I.**, **2000**: Tectonic rotations in the Central Andes: implications for the geodynamic evolution of the Altiplano-Puna plateau. AGU Fall Meeting, San Francisco, Dec. 2000.
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9. **Coutand I.**, Thiede R., Arrowsmith J.R., Hilley G.E., Omuraliev M. and Strecker M.R., **1999**: Late Cenozoic tectonic evolution of an asymmetric intramontane basin: the Western and Central Alai Valley (39°N, 072° to 075°E), Kyrgyzstan. AGU Fall meeting, San Francisco, Dec. 1999.

8. **Coutand I.**, Cobbold P.R., Chauvin A., Gapais D. and Roperch P., **1999**: Cenozoic Tectonics of the Puna plateau, Southern Central Andes, Argentina. European Union of Geosciences, Strasbourg, France, 28 Mars-01 Avril 1999 (EUG IX), Abstract supplément Terra Nova N°1, Vol. 9, p. 338.
7. **Coutand I.**, Cobbold P.R., Chauvin A., Rossello E.A. and Lopez-Gamundi O., **1999**: Cenozoic deformation and tectonic style of the Puna plateau (northwestern Argentina, Central Andes). International Symposium on Andean Geodynamics, Göttingen, Germany, 04-06 Octobre 1999.
6. **Coutand I.**, Cobbold P.R., Chauvin A., Gautier P., and Roperch P., **1999**: Curvatura oroclinal de los andes centrales durante el cenozoico. Actas del Cuatrigésimo Congreso Geológico Argentino, v. 1, p.31, Salta, Argentina, September 1999.
5. **Coutand I.**, P. Roperch, A. Chauvin, P.R. Cobbold and Gautier P., **1998**: Cretaceous and tertiary clockwise rotations in the Puna plateau (Argentina) : tectonic implications for the Central Andes. European Geophysical Society, Nice, France , 20-24 Avril 1998, Annales Geophysicae, Supplement I to Vol. 16, p. c97.
4. **Coutand I.**, P. Roperch, A. Chauvin, P. R. Cobbold and P. Gautier, **1998**: Rotations horaires crétacées et tertiaires sur le haut plateau de la Puna (Argentine) : implications tectoniques pour les Andes Centrales. 17^{ème} Réunion des Sciences de la terre, Brest, France, 31 Mars-3 Avril 1998, p. 96.
3. **Coutand I.**, Cobbold P.R., de Urreiztieta M., Roperch P., Chauvin A. and Rossello E.A., **1997**: Cenozoic tectonics of the Puna plateau, Central Andes, N. W. Argentina. European Union of Geosciences, Strasbourg, France, 23-27 Mars 1997 (EUG IX), Abstract supplément Terra Nova N°1, Vol. 9, p. 338.
2. Diraison M., **Coutand I.**, Cobbold P.R., Gapais D., Rossello E.A. and Olivero E.A., **1996**: Tectonique des Andes Australes et du bassin de Magellan (Patagonie). 16^{ème} Réunion des Sciences de la Terre, Orléans, France, 10-12 Avril 1996, p. 25.
1. **Coutand I.**, Le Dez Y., Diraison M., Cobbold P.R., Gapais D., Rossello E.A. and Miller M., **1996**: Structure and kinematics of a foothills transect, Lago Viedma, southern Andes (49°30'S). Third International Symposium on Andean Geodynamics, Saint Malo (France), September 17-19th, 1996. ORSTOM eds., p. 331-334.

Invited talks

- 2016 ETH Zürich, Switzerland
- 2016 UNIL, Lausanne, Switzerland
- 2016 ETH Zürich, Switzerland
- 2015 Institute of Seismology, University of Helsinki, Finland
- 2014 Chinese Academy of Geological Sciences, Beijing, China
- 2008 Fulbright Foundation, Monterey, CA, USA
- 2006 Department of Earth Sciences, Dalhousie University, Canada
- 2003 Climate change through the age, British Council, Paris
- 2002 Universidad Nacional de Tucumán, Argentina
- 2001 Department des Sciences de la Terre, Université de Lille, France
- 2001 Institut de Recherche pour le Développement (IRD), Paris, France
- 2001 Department des Sciences de la Terre, Université de Dijon, France
- 2000 Department des Sciences de la Terre, Université d'Orsay, France

SERVICE TO THE ACADEMIC COMMUNITY

Departmental and Faculty Committees

2019 – 2022	Associate Editor Journal of Geophysical Research – Solid Earth
2018 - 2020	Editorial board Lithosphere Journal
2018 -	Chair of the Geophysics professorship search committee, Department of Earth Sciences, Dalhousie University
2011 –	Department of Earth Science representative on Undergraduate Research Awards, Faculty of Science, Dalhousie University
2016 - 2017	Member of the curriculum committee, Department of Earth Sciences, Dalhousie University
2016-2017	Member of the CFREF professorship search committee, Department of Earth Sciences, Dalhousie University
2014 – 2015	Safety committee, Department of Earth Sciences, Dalhousie University
2013	Member of the Noble gas technician search committee, Department of Earth Sciences, Dalhousie University
2010 – 2013	Member of field schools curriculum committee, Department of Earth Sciences, Dalhousie University

Above, since joining Dalhousie

2005 – 2009	Member of new faculty search committee, Département de Géosciences, Université de Picardie
2002 – 2006	Member of new faculty search committee, Département de Géosciences, Université de Lille I

Conference Organization and Session Chair

- 29th Himalaya-Karakoram-Tibet International Workshop
Lucca, Italy (Sept 2-4, 2014)
Scientific Committee Member
- 26th Himalaya-Karakoram-Tibet International Workshop
Canmore, Canada (July 10-16, 2011)
Co-organizer with other Canadian colleagues
- AGU Fall Meeting
San Francisco, USA (December 10-14, 2007)
Co-convener/co-chair with B. Bookhagen of the session *Detrital Records in Active Mountain Belts*

Journal Reviewer

Basin Research	Journal of South American Earth Sciences
Geological Society of America Bulletin	Lithosphere
GSA Today	Tectonics
Geology	Tectonophysics
Geochemistry, Geophysics, Geosystems	Terra Nova
Journal of Asian Earth Sciences	

Research Grant and Scholarship Reviewer

Fondazione Cassa di Risparmio di Padova e Rovigo (Italy)
Fulbright Foundation
German Research Foundation (DFG)
US National Science Foundation (NSF)

Fieldwork experience (about two months per year since 1995)

Andes of Patagonia (Argentina, Chile)
Central Andes (Argentina, Chile, Bolivia)
Himalaya (Bhutan, Sikkim, Nepal, India)
Tien Shan-Pamirs (Kyrgyzstan)
Longmen Shan (eastern Tibet, Sichuan – China)
Alps (Switzerland, France, Corsica, Italy)

Hellenides (northern Greece)
Southern Alps (New Zealand)
North American Cordillera (Yukon, Alaska)
North Atlantic passive margin (Labrador)

Miscellaneous

Until 1993: semi-professional basketball player
2020: Iyengar yoga practitioner enrolled in Teacher Training