

# Eric Calais - Publications

## I. International journals

### Published

- Calais, E., Mercier de Lépinay, B., Renard, V. and Tardy, M., Geometry and tectonic regime along a transcurrent plate boundary: the Caribbean-North America plate boundary from Cuba to Hispaniola (Greater Antilles), **C.R. Acad. Sci. Paris**, 308, 131-135, 1989.
- Calais, E., and Mercier de Lépinay, B., New data on the Cordillera Septentrional, Hispaniola: implications for the present-day transcurrent plate boundary between the Caribbean and North American plates, **C.R. Acad. Sci. Paris**, 308, 409-415, 1989.
- Calais, E., Stéphan, J.-F., Beck, C., et al., Paleogeographic and tectonic evolution of the Caribbean from Lias to Present: 14 steps for 3 main periods, **C.R. Acad. Sci. Paris**, 309, 1437-1444, 1989.
- Calais, E., and Mercier de Lépinay, B., A natural model of active transpressional tectonics: The *en échelon* structures of the Oriente Deep, along the northern Caribbean transcurrent plate boundary (southern Cuban margin). **Revue de l'Institut Français du Pétrole**, 45, 147-160, 1990.
- Calais, E. and Mercier de Lépinay, B., Neotectonic study of the southern coast of Cuba: Correlation with the submarine structures of the southern Cuban transcurrent margin, **C.R. Acad. Sci. Paris**, 310, 293-300, 1990.
- Stéphan, J.-F., Calais, E., et al. Tectonic reconstructions of the Caribbean domain from Lias to Present, **Bull. Soc. Géol. France**, 6, 915-919, 1990.
- Calais, E., B. Mercier de Lépinay, and N Béthoux, Stress-kinematics relations along a lithospheric strike-slip-fault – The Northern Caribbean plate boundary from Cuba to Hispaniola, **C.R. Acad. Sci. Paris**, 311, 1259-1266, 1990.
- Calais, E., and Mercier de Lépinay, B. From transpression to transtension along the northern Caribbean plate boundary off Cuba: implications for the recent motion of the Caribbean plate. **Tectonophysics**, 186, 329-350, 1991.
- Calais, E., Béthoux, N., and Mercier de Lépinay, B. From transcurrent faulting to frontal subduction: a seismotectonic study of the northern Caribbean plate boundary from Cuba to Puerto Rico. **Tectonics**, 11, 114-123, 1992.
- Calais, E., Mercier de Lépinay, B., Saint-Marc, P., Butterlin, J., and Schaaf, A., The northern Caribbean plate boundary in Hispaniola: Investigation of its Cenozoic paleogeographic and tectonic evolution, **Bull. Soc. Géol. France**, 163, 309-324, 1992.
- Calais, E., and Mercier de Lépinay, B. Semi-quantitative modeling of strain-kinematics relations along transcurrent plate boundaries: application to the present-day motion of the Caribbean plate relative to North America. **J. Geophys. Res.**, 98, 8293-8308, 1993.
- Calais, E., Carrier, A., and Buffet, G. Comparison of levelling and Global Positioning System data: application to the determination of the geoid in the Alpes Maritimes, France. **C.R. Acad. Sci. Paris**, 317, 1493-1500, 1993.
- Puntodewo, S.S.O., McCaffrey, R., Calais, E., GPS monitoring of plate kinematics and crustal deformation in the Australian/Pacific plate boundary zone (Irian Jaya, Indonesia). **Tectonophysics**, 237, 141-153, 1994.
- Tregoning, P., F. K. Brunner, Y. Bock, S. S. O. Puntodewo, R. McCaffrey, J. F. Genrich, E. Calais, J. Rais, and C. Subarya, First geodetic measurements of convergence across the Java trench. **Geoph. Res. Lett.**, 21, 2135-2138, 1994.

- Calais, E., and Mercier de Lépinay, B. Strike-slip processes in the Northern Caribbean between Cuba and Hispaniola (Windward Passage). **Marine Geophysical Researches**, 17, 63-95, 1995.
- Calais, E., and Minster, J.B., GPS detection of an ionospheric perturbation following the January 17, 1994, Northridge earthquake, **Geoph. Res. Lett.**, 22, 1045-1048, 1995.
- Genrich, J., Bock, Y., McCaffrey, R., Calais, E., et al., Current crustal kinematics of the eastern Indonesia island arc from three epochs of Global Positioning System measurements. **Tectonics**, 15, 288-295, 1996.
- Calais, E., and Minster, J.B., GPS detection of ionospheric perturbations following a Space Shuttle ascent. **Geoph. Res. Lett.**, 15, 1897-1900, 1996.
- Perrot, J., Calais, E., and Mercier de Lépinay, B., Waveform simulation of the May 25th, 1992, Ms=6.7 Cabo Cruz earthquake (Cuba): new constraints on the tectonic regime along the northern Caribbean plate boundary. **PAGEOPH**, v. 149, 3, 475-487, 1997.
- Prawirodirdjo, L., Bock, Y., McCaffrey, R., Genrich, J.F., Calais, E., Stevens, C., Puntodewo, S.S.O., Subarya, C., Rais, J., Zwick, P., and Fauzi, Geodetic observations of interseismic strain segmentation at the Sumatra subduction zone. **Geophys. Res. Lett.**, 12, 2601-2605, 1997.
- Calais, E., Minster, J.B., Hofton, M., and Hedlin, M., Ionospheric signature of surface mine blasts from GPS measurements, **Geophys. J. Int.**, 132, 191-202, 1998.
- Calais, E., Perrot, J., and Mercier de Lépinay, B., Strike-slip tectonics and seismicity along the Northern Caribbean plate boundary from Cuba to Hispaniola, **Geol. Soc. of Amer. Special Paper 326**, Edited by J.F. Dolan and P. Mann, 125-142, 1998.
- Calais, E., and Minster, J.B., GPS, earthquakes, the ionosphere, and the Space Shuttle. **Physics of the Earth and Planetary Interiors**, 105, 167-181, 1998.
- Lesne, O., Calais, E., Deverchère, J., Finite element modeling of present-day kinematics and strain in the Baikal rift zone, Siberia, **Tectonophysics**, 289, 327-430, 1998.
- Dixon, T., F. Farina, C. Demets, P. Jansma, P. Mann, and E. Calais, Relative motion between the Caribbean and North American plates and related boundary zone deformation based on a decade of GPS observations, **J. Geophys. Res.**, 103, 15157-15182, 1998.
- Calais, E., O. Lesne, J. Deverchère, V. Sankov, A. Lukhnev, A. Miroshnitchenko, V. Buddo, K. Levi, V. Zalutzky, and Y. Bashkuev, GPS measurements of crustal deformation in the Baikal rift zone, Siberia, **Geophys. Res. Lett.**, 25, 4003-4006, 1998.
- Deverchère J., K.G. Levi, E. Calais, et al., Contemporary geodynamics of the Lake Baikal region, **Proceedings of the International Conference on Baikal as a World Natural Heritage Site**, Ulan Ude, Russia, September 1998, p.185-195, 1999.
- Calais, E., Crustal deformation in the Western Alps from continuous GPS measurements, 1996-1998, **Geophys. J. Int.**, 138, 221-230, 1999.
- DeMets, C., P.E. Jansma, G.S. Mattioli, T.H. Dixon, F. Farina, R. Bilham, E. Calais, and P. Mann, GPS geodetic constraints on Caribbean-North America plate motion, **Geophys. Res. Lett.**, 27, 437-441, 2000.
- Calais, E., L. Galisson, J.-F. Stéphan, J. Delteil, J. Deverchère, C. Larroque, B. Mercier de Lépinay, M. Popoff, and M. Sosson, Crustal strain in the Southern Alps, 1948-1998, **Tectonophysics**, 319, 1-17, 2000.
- Calais, E., and S. Amarjargal, New constraints on current deformation in Asia from continuous GPS measurements at Ulan Baatar, Mongolia, **Geophys. Res. Lett.**, 27, 1527-1531, 2000.

- Lesne, O., E. Calais, J. Deverchère, J. Chéry, and R. Hassani, Dynamics of intracontinental extension in the Northern Baikal Rift zone, Siberia, using lithospheric-scale numerical models, **J. Geophys. Res.**, 105, 21,727-21744, 2000.
- Ge, M., E. Calais, and J. Haase, Reducing satellite orbit error effects in near real-time GPS zenith tropospheric delay estimation for meteorology, **Geophys. Res. Lett.**, 27, 1915-1918, 2000.
- Malet, J.P., S. Hartig, E. Calais, and O. Maquaire, Contribution of high precision GPS technique to the continuous survey of landslides: Application to the Super-Sauze earthflow, **C.R. Acad. Sci. Paris**, 331, 1-10, 2000.
- Jansma, P. E., A. Lopez, G. S. Mattioli, C. DeMets, T. H. Dixon, P. Mann, and E. Calais, Neotectonics of Puerto Rico and the Virgin Islands, northeastern Caribbean, from GPS geodesy, **Tectonics**, 19, 1021-1037, 2000.
- Calais, E., R. Bayer, J. Chéry, F. Cotton, M. Flouzat, F. Jouanne, J. Martinod, F. Mathieu, O. Scotti, M. Tardy, C. Vigny, REGAL: A permanent GPS network in the French Western Alps, Configuration and first results, **C.R. Acad. Sci. Paris**, 331, 435-442, 2000.
- Calais, E., R. Bayer, J. Chéry, F. Cotton, M. Flouzat, F. Jouanne, J. Martinod, F. Mathieu, O. Scotti, M. Tardy, C. Vigny, REGAL: Réseau GPS permanent dans les Alpes, configuration et premiers résultats, **Bull. Soc. Géol. France**, 172, 141-158, 2001.
- Nocquet, J.M., E. Calais, Z. Altamimi, P. Sillard, and C. Boucher, Intraplate deformation in Western Europe deduced from an analysis of the ITRF97 velocity field, **J. Geophys. Res.**, 106, 11239-11258, 2001.
- Larroque, C., J.-F. Ritz, J.-F. Stéphan, V.A. Sankov, A. Arzhannikova, E. Calais, J. Deverchère, and L. Loncke, Interaction compression-extension at the Mongolia-Siberia boundary: preliminary analysis of active and recent deformation in the Tunka basin, **C.R. Acad. Sci. Paris**, 332, 177-184, 2001.
- Ge, M., E. Calais, and J. Haase, Automatic orbit quality control for near real-time GPS zenith tropospheric delay estimation, **Physics and Chemistry of the Earth**, 26, 177-181, 2001.
- Haase, J.S., H. Vedel, M. Ge, and E. Calais, GPS zenith tropospheric delay (ZTD) variability in the Mediterranean, **Physics and Chemistry of the Earth**, 26, 439-443, 2001.
- Haase, J., Calais, E., Talaya, J., Rius, A., Vespe, F., Santangelo, R., Huang, X.-Y., Davila, J.M., Ge, M., Cucurull, L., The contributions of the MAGIC project to the COST 716 objectives of assessing the operational potential of ground-based GPS meteorology on an international scale **Physics and Chemistry of the Earth**, 26, 433-437, 2001.
- Walpersdorf, A., E. Calais, J. Haase, L. Eymard, M. Desbois, and H. Vedel, Atmospheric gradients estimated by GPS compared to a high resolution numerical weather prediction (NWP) model, **Physics and Chemistry of the Earth**, 26, 147-152, 2001.
- Malet, J.P., O. Maquaire O., and E. Calais, GPS for continuous monitoring of landslides, a case study on the Super Sauze earthflow (Alpes-de-Haute-Provence, France), **Geomorphology**, 43, 33- 54, 2002.
- Vigny, C., J. Chéry, T. Duquesnoy, F. Jouanne, J. Ammann, M. Anzidei, J.-P. Avouac, F. Barlier, R. Bayer, P. Briole, E. Calais, F. Cotton, F. Duquenne, K. L. Feigl, G. Ferhat, M. Flouzat, J.-F. Gamond, A. Geiger, A. Harmel, M. Kasser, M. Laplanche, M. Le Pape, J. Martinod, G. Ménard, B. Meyer, J.-C. Ruegg, J.-M. Scheubel, O. Scotti, and G. Vidal, GPS network monitors the western Alps over a five year period: 1993-1998, **J. of Geodesy**, 76, 63-76, 2002.
- Calais, E., M. Vergnolle, J. Deverchère, V. Sankov, A. Lukhnev, and S. Amarjargal, Are post-seismic effects of the M=8.4 Bolnay earthquake (July 12, 1905) still influencing GPS velocities in the Mongolia-Baikal area?, **Geophys. J. Int.**, 148, 1-12, 2002.

- Calais, E., J.M. Nocquet, F. Jouanne, and M. Tardy, Current extension in the central part of the Western Alps from continuous GPS measurements, 1996-2001, **Geology**, 30-7, 651-654, 2002.
- Petit, C., J. Deverchère, and E. Calais, Topography genesis in Mongolia: present-day tectonics and/or mantle dynamics? Constraints from gravity modeling, **Earth Planetary Science Letters**, 197, 133-149, 2002.
- Calais, E., Y. Mazabraud, B. Mercier de Lépinay, P. Mann, G. Mattioli, and P. Jansma, Strain partitioning and fault slip rates in the northeastern Caribbean from GPS measurements, **Geophys. Res. Lett.**, 29(18), 1856, doi: 10.1029/2002GL015397, 2002.
- Chemenda, A., J. Deverchère, E. Calais, and V. Sankov, Three-dimensional Laboratory Modelling of Rifting: Application to the Baikal Rift, Russia, **Tectonophysics**, 356 (4) : 253-273, 2002.
- Ge, M., E. Calais, and J. Haase, Sensitivity of Zenith Tropospheric Delay accuracy to GPS orbit errors and implications for Near-real-time GPS meteorology, **J. Geophys. Res.**, 107, 10.1029/2001LD001095, 2002.
- Mann, P., E. Calais, J.-C. Ruegg, C. DeMets, T.H. Dixon, P.E. Jansma, and G.S. Mattioli, Oblique collision in the northeastern Caribbean from GPS measurements and geological observations, **Tectonics**, 10.1029/2001TC001304, 2002.
- Vey, S., E. Calais, M. Llubes, N. Florsch, G. Woppelmann, J. Hinderer, M. Amalvict, M. F. Lalancette, B. Simon, F. Duquenne, and J. S. Haase, Ocean loading and zenith tropospheric delay estimates from GPS measurements: Results from an experiment in Brittany, France, **J. of Geodesy**, 76, 419-427, 2003.
- Nocquet, J.M., and E. Calais, The crustal velocity field in Western Europe from permanent GPS array solutions, 1996-2001, **Geophys. J. Int.**, 154, 72-88, 2003. (*one of the 3 most highly cited GJI articles in 2003*)
- Calais, E., J. Haase, and B. Minster, Detection of ionospheric perturbations using the SCIGN GPS array, Southern California, **Geophys. Res. Lett.**, 30(12), doi: 10.1029/2003GL017709, 2003.
- Calais, E., M. Vergnolle, V. Sankov, A. Likhnev, A. Miroshnichenko, S. Amarjargal, and J. Deverchère, GPS measurements of crustal deformation in the Baikal-Mongolia area (1994-2002): Implications for current kinematics of Asia, **J. Geophys. Res.**, Vol. 108, No. B10, 2501, doi: 10.1029/2002JB002373, 2003.
- Vergnolle, M., Pollitz, F., and E. Calais, Constraints on the viscosity of the continental crust and mantle from GPS measurements and postseismic deformation models in Western Mongolia, **J. Geophys. Res.**, Vol. 108, No. B10, i 2502, doi: 10.1029/2002JB002374, 2003.
- Pollitz, F., M. Vergnolle, and E. Calais, Fault interaction and stress triggering of 20th century earthquakes in Mongolia, **J. Geophys. Res.**, Vol. 108, No. B10, 2503, doi: 10.1029/2002JB002375, 2003.
- Bock, Y., L. Prawirodirdjo, J. F. Genrich, C. W. Stevens, R. McCaffrey, C. Subarya, S. S. O. Puntodewo, E. Calais, Microplate Tectonics of Indonesia from Global Positioning System Measurements, 1989-1994, **J. Geophys. Res.**, Vol. 108, No. B8, 2367, 10.1029/2001JB000324, 2003.
- Calais, E., C. DeMets, and J.M. Nocquet, Evidence for a post-3.16 Ma change in Nubia-Eurasia plate motion, **Earth and Planetary Science Letters**, 216, 81-92, doi: 10.1016/S0012-821X(03)00482-5, 2003.
- Haase, J., M. Ge, H. Vedel, and E. Calais, Accuracy and variability of GPS Tropospheric Delay Measurements of Water Vapor in the Western Mediterranean, **Bull. Am. Meteor. Soc.**, Vol. 42, 1547-1568, 2003.

- Vedel, H., X.-Y. Huang, J. Haase, M. Ge, and E. Calais, Impact of GPS Zenith Tropospheric Delay data on precipitation forecasts in Mediterranean France and Spain, **Geophys. Res. Lett.**, 31, doi: 10.1029/2003GL017715, 2004.
- Mann, P., E. Calais, and V. Huerfano, Earthquake shakes “big bend” region of North America-Caribbean boundary zone, **EOS, Transactions, American Geophysical Union**, 85, 24 February 2004.
- Nocquet, J.M., and E. Calais, Geodetic measurements of crustal deformation in the Western Mediterranean and Europe, **Pure Appl. Geophys.**, 161, doi: 10.1007/s00024-003-2468-z, 2004.
- Yelles, K., K. Lammali, A. Mahsas, E. Calais, and P. Briole, Coseismic deformation of the May 21<sup>st</sup>, 2003,  $M_w=6.8$  Boumerdes earthquake, Algeria, from GPS measurements, **Geophys. Res. Lett.**, v.31, L13610, doi: 10.1029/2004GL019884, 2004.
- Delouis, B., M. Vallé, M. Meghraoui, E. Calais, S. Maouche, K. Lamalli, A. Mahsas, P. Briole, F. Benhamouda, and A. Yelles, Rupture process of the 2003 Boumerdes-Zemmouri earthquake, Algeria, from teleseismic, GPS, and coastal uplift data, **Geophys. Res. Lett.**, v.31, L18607, doi: 10.129/2004GL020687, 2004.
- Déverchère, J., K. Yelles, A. Domzig, B. Mercier de Lépinay, J-P. Bouillin, V. Gaullier, R. Bracène, E. Calais, B. Savoye, A. Kherroubi, P. Le Roy, H. Pauc, and G. Dan, Thrust tectonics offshore Algeria: Evidence from the 2003 Mw 6.9 Boumerdes earthquake region, **Geophys. Res. Lett.**, v.32, L04311, doi: 10.1029/2004GL021646, 2005.
- Nocquet, J.M., E. Calais, and B. Parsons, Geodetic Constraints on Glacial Isostatic Adjustment in Europe, **Geophys. Res. Lett.**, v.32, L06308, doi: 10.1029/2004GL022174, 2005.
- Calais, E., G. Mattioli, C. DeMets, J.M. Nocquet, S. Stein, A. Newman, and P. Rydelek, Tectonic Strain in the Interior of the North American Plate? **Nature**, 438, doi: 10.1038/nature04428, 2005.
- Freed, A.M., R. Bürgmann, E. Calais, J. Freymueller, S. Hreinsdottir, Implications of deformation following the 2002 Denali, Alaska, earthquake for postseismic relaxation processes and lithospheric rheology, **J. Geophys. Res.**, Vol. 111, No. B1, B01401 10.1029/2005JB003894, 2006.
- Domzig A., K. Yelles, C. Le Roy, J. Deverchère, J.-P. Bouillin, R. Bracène, B. Mercier de Lepinay P. Le Roy, E. Calais, A. Kherroubi, V. Gaullier, B. Savoye, H. Pauc, Searching for the Africa–Eurasia Miocene boundary offshore western Algeria (MARADJA03 cruise), **C.R. Géosciences**, 338, 8091, doi: 10.1016/j.crte.2005.11.009, 2006.
- López, A.M., S. Stein, T. Dixon, G. Sella, E. Calais, P. Jansma, J. Weber, and P. LaFemina, Is there a northern Lesser Antilles forearc block?, **Geophys. Res. Lett.**, 33, L07313, doi: 10.1029/2005GL025293, 2006.
- Walpersdorf, A., S. Baize, E. Calais, P. Tregoning, and J.M. Nocquet, Deformation in the Jura Mountains (France): First Results from Semi-Permanent GPS Measurements, **Earth and Planetary Sci. Lett.**, 245, doi: 10.1016/j.epsl.2006.02.037, 365-372, 2006.
- Calais, E., J.Y. Han, C. DeMets, and J.M. Nocquet, Deformation of the North American plate interior from a decade of continuous GPS measurements, **J. Geophys. Res.**, 111, B06402, doi: 10.1029/2005JB004253, 2006.
- Calais, E., C. Hartnady, C. Ebinger, and J.M. Nocquet, Kinematics of the East African Rift from GPS and earthquake slip vector data, In: Yirgu, G., Ebinger, C.J. & Maguire, P.K.H. (eds) Structure and Evolution of the Rift Systems within the Afar volcanic province, Northeast Africa, Geological Society of London Special Publications, 259, p.9-22, 2006.

- Nicolas, J., J.M. Nocquet, M. vanCamp, J.P. Boy, J. Hinderer, P. Gegout, E. Calais, and M. Amalvict, Seasonal effect on vertical positioning by Laser and GPS and on Absolute Gravity at the OCA geodetic station, Grasse, France, **Geophys. J. Int.**, 167, 3, 1127-1137, 2006.
- Freed, A.M., R. Bürgmann, E. Calais, and J. Freymueller, Stress-dependent power-law flow in the upper mantle following the 2002 Denali, Alaska, earthquake, **Earth and Planetary Science Letters**, 252, 481-489, 2006.
- Calais, E., L. Dong, M. Wang, Z. Shen, and M. Vergnolle, Continental deformation in Asia from a combined GPS solution, **Geophys. Res. Lett.**, 33, L24319, doi: 10.1029/2006GL028433, 2006.
- Dautermann, T., E. Calais, J. Haase, and J. Garrison, Investigation of ionospheric electron content variations before earthquakes in southern California, 2003–2004, **J. Geophys. Res.**, 112, B02106, doi: 10.1029/2006JB004447, 2007.
- Vergnolle, M., E. Calais, and L. Dong, Dynamics of continental deformation in Asia, **J. Geophys. Res.**, 112, B11403, doi: 10.1029/2006JB004807, 2007.
- Garrison, J.L, S.C. Lee, J. Haase, and E. Calais, A method for detecting ionospheric disturbances and estimating their propagation speed and direction using a large GPS network, **Radio Science**, Vol. 42, RS6011, doi: 10.1029/2007RS003657, 2007.
- Mahsas, A., K. Yelles, K. Lammali, E. Calais, A. Freed and P. Briole, Postseismic deformation following the May 21<sup>st</sup>, 2003,  $M_w=6.8$  Boumerdes earthquake, Algeria, **Geophys. J. Int.**, 172, 155-166, doi: 10.1111/j.1365-246X.2007.03594.x, 2008.
- Stamps, D.S., E. Calais, E. Saria, C. Hartnady, J. Nocquet, C.J. Ebinger, and R.M. Fernandes, A kinematic model for the East African Rift, **Geophys. Res. Lett.**, 35, L05304, doi: 10.1029/2007GL032781, 2008.
- Ebinger, C.J., D. Keir, A. Ayele, E. Calais, T.J. Wright, M. Belachew, J.O. Hammond, M.E. Campbell, and R. Buck, Capturing magma intrusion and faulting processes during continental rupture: Seismicity of the Dabbahu (Afar) rift, **Geophys. J. Int.**, doi: 10.1111/j.1365-246X.2008.03877.x, 2008.
- Ali, S.T., A.M. Freed, E. Calais, D. Manaker, and W.R. McCann, Evolution of stress in North-eastern Caribbean over the past 250 years from coseismic, postseismic, and interseismic stress changes, **Geophys. J. Int.**, 174, 904918 doi: 10.1111/j.1365-246X.2008.03634.x, 2008.
- Manaker, D., E. Calais, A.M. Freed, S.T. Ali, P. Przybylski, G. Mattioli, P. Jansma, C. Prépetit, and J.B de Chabalier, Plate coupling and strain partitioning in the Northeastern Caribbean, **Geophys. J. Int.**, 174, 889-903 doi: 10.1111/j.1365-246X.2008.03819.x, 2008.
- Calais, E., N. d'Oreye, J. Albaric, A. Deschamps, D. Delvaux, J. Deverchere, C. Ebinger, R.W. Ferdinand, F. Kervyn, A.S. Macheyeke, A. Oyen, J. Perrot, E. Saria, B. Smets, D.S. Stamps, and C. Wauthier, Aseismic strain accommodation by dyking in a youthful continental rift, East Africa, **Nature**, Vol 456, doi: 10.1038/nature07478, 2008.
- Keir, D., I.J. Hamling, A. Ayele, E. Calais, C. Ebinger, T.J. Wright, E. Jacques, K. Mohamed, J.O.S. Hammond, M. Belachew, E. Baker, J.V. Rowland, E. Lewi, and L. Bennati, Capturing lateral dike injection sourced beneath the center of the Dabbahu segment in the Afar rift, **Geology**, v. 37, doi: 10.1130/G25147A.1, 59-62, 2009.
- Dautermann, T., E. Calais, and G. S. Mattioli, Global Positioning System detection and energy estimation of the ionospheric wave caused by the 13 July 2003 explosion of the Soufriere Hills Volcano, Montserrat, **J. Geophys. Res.**, 114, B02202, doi: 10.1029/2008JB005722, 2009.

- Calais, E., and S. Stein, Space geodetic evidence for time-variable deformation in the New Madrid seismic zone, **Science**, 323, 10.1126/science.1168122, 2009.
- Hamling, I.J., A. Ayele, L. Bennati, E. Calais, C.J. Ebinger, D. Keir, E. Lewi, T.J. Wright, and G. Yirgu, Geodetic observations of the ongoing Dabbahu rifting episode: new dyke intrusions in 2006 and 2007, **Geophys. J. Int.**, doi: 10.1111/j.1365-246X.2009.04163.x, 2009.
- Stein, S., M. Liu, E. Calais, and Q. Li, Midcontinent earthquakes as a complex system, **Seismological Res. Letters**, doi: 10.1785/gssrl.80.4.551, 2009.
- Nooner, S.L., L. Bennati, E. Calais, W.R. Buck, I.J. Hamling, T.J. Wright, and E. Lewi, Post-rifting relaxation in the Afar region, Ethiopia, **Geophys. Res. Lett.**, **36**, L21308, doi: 10.1029/2009GL040502, 2009.
- Dautermann, T., E. Calais, P. Lognonné, and G. Mattioli, Lithosphere-Atmosphere-Ionosphere Coupling after the 2003 Explosive eruption of the Soufriere Hills Volcano, Montserrat, **Geophys. J. Int.**, **179**, 1537-1546 doi: 10.1111/j.1365-246X.2009.04390.x, 2009.
- Déverchère, J., B. Mercier de Lépinay, A. Cattaneo, P. Strzeczynski, E. Calais, A. Domzig, and R. Bracene (2010), Comment on "Zemmouri earthquake rupture zone (Mw 6.8, Algeria): Aftershocks sequence relocation and 3D velocity model" by A. Ayadi et al., **J. Geophys. Res.**, **115**, B04320, doi: 10.1029/2008JB006190, 2010.
- Frankel, A., S. Harmsen, C. Mueller, E. Calais, and J. Haase, Documentation for Initial Seismic Hazard Maps for Haiti, **U.S. Geological Survey Open-File Report 2010-1067**, 2010.
- Calais, E., A.M. Freed, R. Van Arsdale, and S. Stein, Triggering of New Madrid Seismicity by Late Pleistocene Erosion, **Nature**, 466, doi: 10.1038/nature09258, 2010.
- Stamps, D.S., L.M. Flesch, and E. Calais, Lithospheric Buoyancy Stresses in Africa from a Thin Sheet Approach, **International Journal of Earth Sciences**, doi 10.1007/s00531-010-0533-2, 2010.
- Hamling, I.J., T.J. Wright, E. Calais, L. Bennati, and E. Lewi, Stress transfer between thirteen successive dyke intrusions in Ethiopia, **Nature Geosciences**, doi 10.1038/NCEO967, 2010.
- Calais, E., A. Freed, G. Mattioli, F. Amelung, S. Jónsson, P. Jansma, S.H. Hong, T. Dixon, C. Prépetit, and R. Momplaisir, The January 12, 2010, Mw 7.0 earthquake in Haiti: context and mechanism from an integrated geodetic study, **Nature Geosciences**, doi 10.1038/NCEO992, 2010.
- Haase, J., T. Dautermann, M. Taylor, N. Chapagain, E. Calais, and D. Pautet, Propagation of Plasma Bubbles Observed in Brazil from GPS and Airglow Data, **Advances in Space Research**, **47**, 1758-1776, 2011.
- Frankel, A., S. Harmsen, C. Mueller, E. Calais, and J. Haase, Seismic Hazard Maps For Haiti, **Earthquake Spectra**, 27, pp. S23-S41 (2011); doi:10.1193/1.3631016, 2011.
- Wright, T.J., F. Sigmundsson, C. Pagli, M. Belachew, I. Hamling, B. Brandsdottir, D. Keir, R. Pedersen, A. Ayele, C. Ebinger, P. Einarsson, E. Lewi, E. Calais, Geophysical constraints on the dynamics of spreading centres from rifting episodes on land, **Nature Geosciences**, **5**, 242-250, doi: 10.1038/NCEO1428, 2012.
- Courboux, F., J-L Berenguer, A. Tocheport M.P. Bouin, E. Calais, Y. Esnault, C. Larroque, G. Nolet, and J. Virieux, Sismos à l'École: a worldwide network of real-time seismometers in schools, **Seismological Research Letters**, **83**, 870-873, doi: 10.1785/0220110139, 2012.
- Benford, B., C. DeMets, and E. Calais, GPS estimates of microplate motions, northern Caribbean: Evidence for a Hispaniola microplate and implications for earthquake hazard, **Geophys. J. Int.**, **191**, 481-490, doi: 10.1111/j.1365-246X.2012.05662.x, 2012.

- Bowling, T., E. Calais, and J. Haase, Detection and Modeling of the Ionospheric Perturbation Caused by a Space Shuttle Launch from a Network of Ground-based Global Positioning System Stations, **Geophys. J. Int.**, **1-8**, doi:10.1093/gji/ggs101, 2013.
- Karakhanyan, S., P. Vernant, E. Doerflinger, A. Avagyan, H. Philip, R. Aslanyan, C. Champollion, S. Arakelyan, P. Collard, H. Baghdasaryan, M. Peyret, V. Davtyan, E. Calais, and F. Masson, GPS constraints on continental deformation in the Armenian region and Lesser Caucasus, **Tectonophysics**, **592**, 39-45, 2013.
- Saria, E., E. Calais, Z. Altamimi, P. Willis, and H. Farah, A new Velocity field for Africa from Combined GPS and DORIS Space Geodetic Solutions: Contribution to the Definition of the African Reference Frame (AFREF), **J. Geophys. Res.**, **118**, doi:10.1002/jgrb.50137, 2013.
- Boyd, O., E. Calais, J. Langbein, H. Magistrale, S. Stein, and M. Zoback, Workshop on New Madrid Geodesy and the Challenges of Understanding Intraplate Earthquakes, **U.S. Geological Survey Open-File Report 2013-0031**, 184 p., 2013.
- Douilly, R., J.S. Haase, W.L. Ellsworth, M.P. Bouin, E. Calais, S. Symithe, J.G. Armbruster, B. Mercier de Lépinay, A. Deschamps, S.L. Mildor, M. Meremonte, and S. Hough, Improving the resolution of the 2010 Haiti earthquake fault geometry using temporary seismometer deployments, **Bull. Seism. Soc. America**, **103**, 2305-2325, doi: 10.1785/0120120303, 2013.
- Symithe, S.J., E. Calais, J.S. Haase, A.M. Freed, and R. Douilly, Coseismic Slip Distribution of the 2010 M7.0 Haiti Earthquake and Resulting Stress Changes on Regional Faults, **Bull. Seism. Soc. America**, **103**, 2326-2343, doi: 10.1785/0120120306, 2013.
- Paultre, P., Calais, E., Proulx, J., Prépétit, C. and Ambroise, S., Damage to engineered structures during the January 12, 2010, Haiti (Léogâne) earthquake, **Can. J. of Civ. Eng.**, **40**, 1-14, dx.doi.org/10.1139/cjce-2012-0247, 2013.
- Saria, E., Calais, E., Stamps, D.S., Delvaux, D., and H Hartnady, C.J., Present-day kinematics of the East African Rift, **J. Geophys. Res.**, **119**, doi:10.1002/2013JB010901, 2014.
- Hamling, I.J., T.J Wright, E. Calais, E. Lewi, and Y. Fukahata, InSAR observations of post-rifting deformation around the Dabbahu rift segment, Afar, Ethiopia, **Geophys. J. Int.**, **197**, 33-49, doi: 10.1093/gji/ggu003, 2014.
- Stamps, D. S., L. M. Flesch, E. Calais, and A. Ghosh, Current kinematics and dynamics of Africa and the East African Rift System, **J. Geophys. Res. Solid Earth**, **119**, 5161-5186, doi:10.1002/2013JB010717, 2014.
- Hamburger, M.W., Boyd, O.S., Calais, Eric, King, N.E., and Stein, S.A., Advancing geodesy in the U.S. Midcontinent-Workshop report, **U.S. Geological Survey Open-File Report 2014-1169**, 22 p., <http://dx.doi.org/10.3133/ofr20141169>, 2014.
- Pagli, C., Wang, H., Wright, T. J., Calais, E., and Lewi, E., Current plate boundary deformation of the Afar rift from a 3-D velocity field inversion of InSAR and GPS, **J. Geophys. Res.**, **119**, doi:10.1002/(ISSN)2169-9356, 2014.
- Craig, T. J., and E. Calais, Strain accumulation in the New Madrid and Wabash Valley seismic zones from 14 years of continuous GPS observation, **J. Geophys. Res.**, **119**, doi:10.1002/2014JB011498, 2014.
- Stamps, D.S., G. Iaffaldano, and E. Calais, Role of Mantle Flow in Nubia-Somalia Plate Divergence, **Geophys. Res. Lett.**, doi: 10.1002/2014GL062515, 2014.
- Douilly, R., Aochi, H., and E. Calais, 3D Dynamic Rupture Simulation Across Interacting Faults: the Mw7.0, 2010, Haiti Earthquake, **J. Geophys. Res.**, doi: 10.1002/2014JB011595, 2015.



- Armitage, J.J., Ferguson, D.J., Goes, S., Hammond, J.O.S., Calais, E., Rychert, C.A., and Harmon, N., Upper mantle temperature and the onset of extension and break-up in Afar, Africa, **Earth and Planetary Science Letters**, **418(0)**, 78-90, doi:10.1016/j.epsl.2015.02.039, 2015.
- Symithe, S., E. Calais, J.B. de Chabalier, R. Robertson, and M. Higgins, Current Block Motions and Strain Accumulation on Active Faults in the Caribbean, **J. Geophys. Res. Solid Earth**, doi: 10.1002/2014JB011779, 2015.
- Koptev, A., E. Calais, E. Burov, S. Leroy, and T. Gerya, Contrasted continental rifts in East Africa via plume-craton interaction, **Nature Geoscience**, 1-5, doi:10.1038/ngeo2401, 2015.
- Ellsworth W.L., A.L. Llenos, A.F. McGarr, A.J. Michael, J.L. Rubinstein, C.S. Mueller, M.D. Petersen, and E. Calais, Increasing Seismicity in the U. S. Midcontinent: Implications for Earthquake Hazard, **The Leading Edge**, 34, 618-626, 2015.
- Gailler, A., E. Calais, H. Hébert, C. Roy, and E. Okal, Tsunami Scenarios and Hazard Assessment along the Northern Coast of Haiti, **Geophys. J. Int.**, 203(3), 2287-2302, doi:10.1093/gji/ggv428, 2015.
- Lewis, E., D. Keir, Y. Birhanu, J. Blundy, G. Stuart, T. Wright, and E. Calais, Understanding the process of oceanic crust formation and the role of melt at the Southern Red Sea Rift in Afar, using a high precision gravity survey, **Geological Society, London, Special Publications**, 420, 2015.
- Koptev, A., E. Burov, E. Calais, S. Leroy, T. Gerya, L. Guillou-Frottier, and S. Cloetingh, Contrasted continental rifting via plume-craton interaction: applications to Central East African rift, **Geoscience Frontiers**, 7, 221–236, 2016.
- Calais, E., S. Symithe, B. de Lépinay, and C. Prépetit, Plate Boundary Segmentation in the Northeastern Caribbean from Geodetic Measurements and Neogene Geological Observations, **Comptes Rendus Geosciences**, 348, 42–51, 2016.
- Walwer, D., E. Calais, and M. Ghil, Data-Adaptive Detection of Transient Deformation in Geodetic Networks, **J. Geophys. Res. Solid Earth**, 121, doi:10.1002/2015JB012424, 2016.
- Symithe, S., and E. Calais, Present-day Shortening in Southern Haiti from GPS Measurements and Implications for Seismic Hazard, **Tectonophysics**, 679, 117–124, 2016.
- Craig, T.J., E. Calais, L. Fleitout, L. Bollinger, and O. Scotti, Evidence for the release of long-term tectonic strain stored in continental interiors through intraplate earthquakes, **Geophys. Res. Letters**, 43, doi:10.1002/2016GL069359, 2016.
- Aiken, C., K. Chao, H. Gonzalez-Huizar, R. Douilly, Z. Peng, A. Deschamps, E. Calais, and J. Haase, Exploration of Remote Triggering: A Survey of Multiple Fault Structures in Haiti, **Earth and Planetary Science Letters**, 455, 14–24, doi:10.1016/j.epsl.2016.09.023, 2016.
- Calais, E., T. Camelbeeck, S. Stein, M. Liu and T.J. Craig, A New Paradigm for Large Earthquakes in Stable Continental Plate Interiors, **Geophys. Res. Letters**, 43, doi:10.1002/2016GL070815, 2016.
- Dobre, C., A. Deprez, F. Masson, A. Socquet, E. Lewi, R. Grandin, A. Necessian, P. Ulrich, J.-B. de Chabalier, I. Saad, A. Abayazid, G. Peltzer, A. Delorme, E. Calais, and T. Wright, Current deformation in Central Afar and triple junction kinematics deduced from GPS and InSAR measurements, **Geophys. J. Int.**, 208, 936-953, 2017.
- DeMets, C., E. Calais, and S. Merkouriev, Reconciling geodetic and geologic estimates of recent plate motion across the Southwest Indian Ridge, **Geophys. J. Int.**, 208, 118-133, doi:10.1093/gji/ggw386, 2017.

- Douilly, R., G.P. Mavroeidis, and E. Calais, Simulation of Broadband Strong Ground Motion for a Hypothetical Mw 7.1 Earthquake on the Enriquillo Fault in Haiti, **Geophys. J. Int.**, 211, 400-417, 2017.
- Craig, T.J., Chanard, K., and Calais E., Hydrologically-driven Seismicity in the New Madrid Seismic Zone, **Nature Communications**, 8:2143, doi: 10.1038/s41467-017-01696-w, 2017.
- Koptev A., Burov E., Gerya T., Le Pourhiet L., Leroy S., Calais E., Jolivet L., Plume-induced continental rifting and break-up in ultra-slow extension context: Insights from 3D numerical modeling, **Tectonophysics**, 746, C, 121-137, doi: 10.1111/ter.12317, 2018.
- Koptev, A., S. Cloetingh, T. Gerya, E. Calais, and S. Leroy, Non-uniform splitting of a single mantle plume by double cratonic roots: Insight into the origin of the central and southern East African Rift System, **Terra Nova**, doi: 10.1111/ter.12317, 2018.
- Chanard, K., L. Fleitout, E. Calais, S. Barbot, and J.P. Avouac, Constraints on transient viscoelastic rheology of the asthenosphere from seasonal deformation, **Geophys. Res. Letters**, 45, doi:10.1002/2017GL076451, 2328-2338, 2018.
- Chanard, K., Fleitout, L., Calais, E., Rebischung, P., and Avouac, J.-P., Toward a global horizontal and vertical elastic load deformation model derived from GRACE and GNSS station position time series. **J. Geophys. Res.**, Solid Earth, 123, 3225-3237, 10.1002/2017JB015245, 2018.
- Koptev, A, E. Calais, E. Burov, S. Leroy, and T. Gerya, Along-axis variations of rift width in a coupled lithosphere-mantle system, application to East Africa, **Geophys. Res. Letters**, 45, 10.1029/2018GL077276, 2018.
- Gardonio, B., R. Jolivet, E. Calais, and H. Leclère, The April 2017 Mw6.5 Botswana Earthquake: An Intraplate Event Triggered by Deep Fluids, **Geophys. Res. Letters**, 45, 10.1029/2018GL078297, 2018.
- Koptev, A., T. Gerya, E. Calais, S. Leroy, and E. Burov, Afar triple junction triggered by plume-assisted bi-directional continental break-up, **Scientific Reports**, 1–7, DOI: 10.1038/s41598-018-33117-3, 2018.
- Walwer, D., M. Ghil, and E. Calais, Oscillatory nature of the Okmok volcano's deformation, **Earth and Planetary Science Letters**, 506, 10.1016/j.epsl.2018.10.033, 76–86, 2019.
- Bougrine, A., A.K. Yelles-Chaouche, and E. Calais, Active deformation in Algeria from Continuous GPS measurements, **Geophys. J. Int.**, 10.1093/gji/ggz035, 2019.
- Possee, D., D. Keir, N. Harmon, C. Rychert, F. Rolandone, S. Leroy, G. Stuart, E. Calais, F. Illsley-Kemp, D. Boisson, K. Guerier, S. Ulysse, R. Momplaisir, C. Prépetit, The tectonics and active faulting of Haiti from seismicity and local tomography, **Tectonophysics**, 43, 1, 237–18, 2019.
- Yelles-Chaouche, A.K., K. Lammali, A. Bellik, A. Bougrine, A. Mahsas, W. Bacha, T. Terki, O. Meliani, F. Ouzzani, Y. Lekhal, A. Ait Amir, K. Khellaf, S.A. Khentari, A. Chouiref, A. Bendekan, and E. Calais, REGAT: a Permanent GPS Network in Algeria, Configuration and First Results, **Heliyon**, 5, 10.1016/j.heliyon.2019, 2019.
- Calais, E., D. Boisson, S. Symithe, R. Momplaisir, C. Prépetit, S. Ulysse, G.P. Etienne, F. Courboux, A. Deschamps, T. Monfret, J.P. Ampuero, B. de Lépinay, V. Clouard, R. Bossu, L. Fallou, and E. Bertrand, Can a Raspberry Shake Seismic Network Complement a National Seismic Network? A case study in Haiti, **Eos**, in press, 2019.

## Submitted

- Leclère, H., and E Calais, A Parametric Analysis of Fault Reactivation in the New Madrid Seismic Zone: the Role of Pore-Fluid Overpressure, **J. Geophys. Res.**, submitted, 2018.

Prevost, P., K. Chanard, L. Fleitout, E. Calais, D. Walwer, T. van Dam, and M. Ghil, Data-adaptive spatio-temporal filtering of GRACE data, **Geophys. J. Int.**, submitted, 2019.

## II. Other journals

- Calais, E., and Minster, J.B., Detection of ionospheric perturbations following an earthquake with the Global Positioning System: implications for nuclear tests discrimination. **NATO ASI Series, Partnership Sub-series, 2. Environment - Vol.4 Earthquakes Induced by Underground Nuclear Explosions**, Edited by R. Console and A. Nikolaev, Springer-Verlag Berlin Heidelberg, 1995.
- Calais, E., Le GPS, un positionnement précis à la portée de tous, **Technologies Internationales**, juin 1996.
- Calais, E., J. Deverchère, O. Lesne, C. Petit, V.A. San'kov, K.G. Levi, I. Yu.Koulakov. Active deformation in the Bakal rift from GPS measurements, seismotectonic analysis, gravity and finite element modelling. **Proceedings of the IGCP Workshop on Lithospheric Structure, Evolution, and Sedimentation in Continental Rifts**, Dublin, 20-22 March, 1997.
- Calais, E., and Virieux, J., Vers une approche intégrée de l'aléa sismique et autres risques naturels dans le bassin méditerranéen. **Hi Tech Info, Spécial Observation de la Terre et Environnement**, 4, Mai 1997.
- Haase, J., Garnesson, P., Calais, E., and D. Segundo, Global Positioning System et aménagement du territoire, un cas test. **Hi Tech Info**, 20, 1er trimestre 1998.
- Calais, E., Le projet REGAL: un réseau GPS permanent dans les Alpes, **Revue du Programme National Geofrance 3D**, 3, 1998.
- Calais, E., Un réseau GPS permanent dans les Alpes, **Revue XYZ**, 77, 42-45, 1998.
- Calais, E., REGAL : des stations GPS permanentes en région PACA, **Revue ExpressSig**, Comité Régional de l'Information Géographique en région PACA, 1998.
- San'kov V.A., Levi K.G., Calais E., Deverchère J., Lesne O., Lukhnev A.V., Miroshnichenko A.I., Buddo V.Yu., Zalutsky V.T., Bashkuev Yu.B., Ruzhich V.V. Preliminary data of recent horizontal movements in Baikal rift from satellite geodesy studies. **Journal of Earthquake Prediction Research**, v.7, 3, 443-450, 1998.
- Deverchère, J., E. Calais, La déchirure atypique de l'Asie, **La Recherche**, 324, October 1999.
- Meghraoui, M., E. Calais, and T. Camelbeeck, Active Deformation in Intraplate Europe: Faulting Processes and Related Seismic Hazard Assessment, **Proceedings of Congress "Paleosis"**, Han-sur-Lesse, March 2000.
- Larroque, C., N. Béthoux, E. Calais, F. Courboux, A. Deschamps, J. Deverchère, J.-F. Stéphan, J.-F. Ritz, and E. Gilli, Joint Multidisciplinary studies of active faults and seismic hazard at the junction between southern French Alps and Ligurian basin, **Proceedings of Congress "Paleosis"**, Han-sur-Lesse, March 2000.
- Calais, E., Les réseaux GPS permanents: de nouveaux outils de mesure géophysique, **Géomètres**, Mars 2000.
- San'kov V.A., Levi K.G., Calais E., Deverchère J., Lesne O., Lukhnev A.V., Miroshnichenko A.I., Buddo V.Yu., Zalutsky V.T., Bashkuev Yu.B., Present-day and Holocene horizontal movements on the Baikal geodynamic test ground, **Russian Geology and Geophysics**, 40, 422-430, 1999.

- Larroque, C., N. Béthoux, E. Calais, F. Courboulex, A. Deschamps, J. Deverchère, J.-F. Stéphan, J.-F. Ritz, and E. Gilli, Active and recent deformation at the Southern Alps - Ligurian basin junction, **Geologie en Mijnbouw**, **80 (3-4)**, :255-272, 2001.
- Meghraoui, M., E. Calais, T. Camelbeeck, and J.M. Nocquet, Active Deformation in Intraplate Europe: Faulting Processes and Related Seismic Hazard Assessment, **Geologie en Mijnbouw**, 2001.
- Amalvict, M., J. Hinderer, E. Calais, P. Exertier, J.-J. Walch, M.-F. Lalancette, N. Florsch & M. Llubes, 2001. Time stability of gravity at different sites in France, IAG Symposia, vol. 123, M. Sideris (ed.), Gravity, Geoid and Geodynamics 2000, Springer Heidelberg, 199-203.
- Naman, S., L. Alperovich, S. Wdowinski, S. Hayakawa and E. Calais, Comparison of simultaneous variations of the ionospheric electron content and the geomagnetic field associated with strong earthquakes, "Seismo Electromagnetics", TWSE, 3rd monograph, Ed. Prof. M. Hyakawa, Tokyo, Japan, 2001.
- Nocquet, J.M., E. Calais, and P. Nicolon, Reference frame activity: combination of national (RGP) and regional (REGAL) permanent networks solutions with EUREF-EPN and the ITRF2000, EUREF publication, 2002.
- Sankov V.A., Likhnev A.V., Levi K.G., Miroshnitchenko A.I., Buddo V.Yu., Zalutsky V.T., Bashkuev Yu.B., Deverchere J., Calais E., Lesne O., Amarjargal S. On estimation of rate of horizontal Earth crust movements of Baikal rift system on the base of GPS geodesy and seismotectonics. In: Tectonophysics today. V.N.Strakhov and Yu.G.Leonov eds. Moscow: United Institute of the Physics of the Earth RAS, 2002, 120-128. (In Russian)
- Timofeev, V.Y., Ardyukov, D.G., Duchkov, A.D., Zapreeva, E.A., and Calais, E., Modern geodynamics of the western Altai-Sayan region, from GPS data, **Geologiya i Geofizika**, **44 (11)**, 1208-1215, 2003.
- Sankov, V.A., Likhnev, A.I., Miroshnitchenko, A.I., Levi, K.G., Ashurkov, S.V., Bashkiev, Yu.B., Dembelov, M.G., (...), Amarzjargal, Sh., Contemporary crustal movements of Mongolia-Siberia region from GPS geodesy data, **Doklady Akademii Nauk** **392 (6)**, 792-795, 2003.
- Calais, E., M. Tardy, and H. Le Meur, Les Alpes battent en retraite, **La Recherche**, June 2003.
- San'kov, V.A., Chipizubov, A.V., Likhnev, A.V., Smekalin, O.P., Miroshnichenko, A.I., Calais, E., Deverchere, J., Assessment of a large earthquake risk in the zone of Main Sayan Fault using GPS geodesy and paleoseismology, **Geologiya i Geofizika** **45 (11)**, 1369-1376, 2004.
- Timofeev V., Ardukov D., Calais E., Duchkov A., Zapreeva E., Kazansev S., Roosbeek F., and Bruyninx C., Fields and models of movements for Altay Mountain, **Geologiya i Geofizika**, 2005.
- Timofeev, V.Y., Ardukov D.G., Zapreeva E.A., and Calais E., Experimental GPS-results and displacement models for Chuya earthquake, Altay, Proceedings of the APSG Symposium: Geodynamics and Natural Hazards, 15-17 June, 2005, Hong Kong. Edited by Cheng Huang. Shanghai Astronomical Observatory, Chinese Academy of Science, 6-18 pp, 2005.
- San'kov, V.A., Likhnev, A.V., Radziminovich, N.A., Mel'nikova, V.I., Miroshnichenko, A.I., Ashurkov, S.V., Calais, E., Deverchere, J., Quantification of present-day crustal deformations of Mongolian block using GPS geodesy and seismotectonic data, **Doklady Akademii Nauk** **403 (5)**, pp. 685-688, 2005.
- San'kov, V.A., Likhnev, A.V., Radziminovich, N.A., Mel'nikova, V.I., Miroshnichenko, A.I., Ashurkov, S.V., Calais, E., Deverchere, J., A quantitative estimate of modern deformations of the Earth's crust in the Mongolian block (based on GPS-geodesy and seismotectonic data), **Doklady Earth Sciences** **403 (6)**, 946-949, 2005.

- Timofeev, V.Yu., Ardyukov, D.G., Calais, E., Duchkov, A.D., Zapreeva, E.A., Kazanlsev, S.A., Roosbeek, F., Bruyninx, C., Displacement fields and models of current motion in Gorny Altai, **Geologiya i Geofizika** **47** (8), 923-937, 2006.
- d'Oreye, N., F. Kervyn, C. Wauthier, E. Calais, V. Cayol, J. Fernandez, P. Gonzalez, C. Frischknecht, S. Heleno, A. Oyen, and P. Marinkovic, Systematic InSAR Monitoring of African Active Volcanic Zones: What we have learned in three years, or an harvest beyond our expectations. Proceedings of the USEReST SYmposium: USE of Remote Sensing Techniques for Monitoring Volcanoes and Seismogenic Areas, **IEEE Conference Publications Program**, 2008.
- Lukhnev A.V., Sankov V.A., Miroshnichenko A.I., Ashurkov S.V. and Calais E., Rotations and deformations of a terrestrial surface in the Baikal-Mongolian area by GPS measurements, **Geology and Geophysics**, 2009.
- San'kov V.A., A.V. Lukhnev, A.I. Miroshnichenko, and E. Calais, Extension in the Baikal rift: Present-day kinematics of passive rifting. **Doklady Earth Sciences**, **425**, 1, 205-209, March 2009.
- Calais, E., S. Schwartz, and R. Arrowsmith, Biannual UNAVCO Science Workshop Boulder, Colorado 9-11 March 2010, **EOS**, 2010.
- Calais, E. and Haase, J.S., 2010. Earthquake, Liquefaction, and Tsunami Hazards (in French). In: S.M. Castro (Editor), Determination of the current level of multiple natural hazards in Hati: Report prepared for the United Nations, February-March 2010, pp. 9.
- Lukhnev, A.V., V.A. San'kov, A.I. Miroshnichenko, S.V. Ashurkov, E. Calais, GPS rotation and strain rates in the Baikal-Mongolia region, **Russian Geology and Geophysics**, 51-7, 785-793, 2010.
- Calais, E., The Haiti 2010 Earthquake, **McGraw Hill 2011 Yearbook**, 2011.
- A.V. Lukhnev, V.A. San'kov, A.I. Miroshnichenko, S.V. Ashurkov, L.M. Byzov, A.V. San'kov, Yu.B. Bashkuev, M.G. Dembelov, E. Calais, GPS-measurements of recent crustal deformation in the junction zone of the rift segments in the central Baikal rift system, **Russian Geology and Geophysics**, 54, 1417-1426, 2013.

### III. Books

Science et conscience dans la post-urgence du séisme d'Haïti, eds. L'Harmattan, Paris, 92 pages, mars 2017 [in French].

### IV. Communications

Prof. Calais co-authored about 150 presentations at national and international meetings, including the American Geophysical Union Fall and Spring meetings, the International Union of Geodesy and Geophysics General meetings, the European Geophysical Union annual meetings. Invited presentations are listed below.

### V. Invited Lectures and Seminars

- Les Houches School of Physics, October 1998.
- National Committee of Geographic Information (CNIG), France, January 1999.
- Regional Council for Geographic Information (CRIGe), France, March 1999.

- Presentation to the Senate Committee for Space, France, July 1999.
- French National Program on Natural Hazards (PNRN), Paris, January 2000.
- French Ministry for Research and Technology, Paris, February 2000.
- 10th General Assembly of the Wegener Project, San Fernando, September 2000.
- International GPS Service Analysis Center Workshop, Washington DC, September 2000.
- American Geophysical Union, Fall meeting, San Francisco, 2000.
- National Committee for Geodesy and Geophysics (CNFGG, France), January 2001.
- Workshop on the Geodynamics of the western part of the Eurasia-Africa plate boundary (Azores-Tunisia), San Fernando, June 2001.
- International Conference on Seismic Risk in the Caribbean and Central America, Santiago, Dominican Republic, Fall 2001.
- Interamerican Development Bank Seminars Series on Natural Hazards, Port-au-Prince, Haiti, Fall 2002 (3 lectures).
- Workshop on the Geodynamics of Central Asia, Bishkek, Kyrgyzstan, Fall 2002.
- Heiskanen Conference, Ohio State University, Fall 2002.
- American Geophysical Union, Fall meeting, San Francisco, 2003.
- Sciencetech Club, Indianapolis, Spring 2004.
- U.S. - Africa workshop on "Anatomy of Continental Rifts", Addis Ababa, June 2004.
- U.S.-Japan Natural Resources (UJNR) Panel on Earthquake Research October 12-16, 2004, Pacific Grove, California.
- Workshop on the Geodynamics of Central Asia, University of Paris 6, France, January 2005.
- W. Hinze Geophysics Symposium, Purdue University, November 2005.
- Workshop on Faults, Earthquakes, and Geodesy, Invited Lecture, Nov. 2005, Montpellier, France.
- UNAVCO Science Workshop, "*Geodetic strain in plate interiors*", March 2006.
- USGS National Seismic Hazard Workshop, "*Intraplate deformation in North America, a CEUS perspective*", Boston, May 2006.
- Montreal Earth Observatory, "*Deformation of Continents: from stability fo breakup – Some constraints from GPS geodesy*", Montreal, April 2007.
- 26th ECGS Workshop on Active Volcanism and its Relation with Continental Rifting, Luxembourg, November 19-21, 2007.
- American Geophysical Union, Invited Speaker, session G13 Plate motions and Deforming Zones, December 2007.
- Geospatial Sciences for Sustainable Development in Africa - Global Dialogue on Emerging Science and Technology (GDEST), Cape Town, South Africa, March 17-19, 2008.
- European Geophysical Union, Keynote Speaker, Vienna, April 2008.
- AfricaArray meeting, Keynote Speaker, Cape Town, June 2008.
- University of Dar Es Salaam, Tanzania, August 2008 – Principles of GPS Data Processing.
- WEGENER 2008 - 14th General Assembly of WEGENER, Darmstadt, September 2008.
- IASPEI General Assembly, Invited speaker, Cape Town, January 2009.
- Workshop #2 of the Central and Eastern United States (CEUS) Seismic Source Characterization for Nuclear Facilities Project, Invited Expert, February 18-20, 2009, Electric Power Research Institute, Palo, Alto, CA.

- Lecturer and instructor, High Precision GPS Data Processing for Geodynamic Applications, African Institute for Mathematical Sciences, Cape Town, South Africa, July 20-24, 2009.
- Lecturer and instructor, Advanced Workshop on “Evaluating, Monitoring and Communicating Volcanic and Seismic Hazards in East Africa”, Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy, August 17-28, 2009.
- Invited panel member, “Monitoring North American Geoid Change”, NOAA workshop, Boulder, Co, October 21-23, 2009.
- Alliance for Risk Management and Continuity of Activities, Haiti (AGERCA), “*The January 12, 2010, Haiti earthquake, why it happened, how to prepare*”, January 2010.
- GRAHN colloquium (Groupe de Réflexion pour une Haiti Nouvelle), Montreal Polytechnic University, “*The January 12, 2010, Haiti earthquake and its tectonic context*”, March 2010.
- U.S. State Department conference on “Rebuilding for Resilience: How Science and Engineering Can Inform Haiti’s Reconstruction”, “*The January 12, 2010 and future seismic hazards in Haiti*”, March 2010.
- UNAVCO Science Workshop, “*The January 12, 2010, Haiti earthquake and its tectonic context*”, March 2010.
- Congressional briefing, Washington DC, “*The January 12, 2010, Haiti earthquake: chronicle of a disaster foretold*”, April 2010.
- Broad audience conferences in Haiti (Cap Haitien, Ouanaminthe, Fort Liberté), “*Seismic hazard in Haiti: scientific context*”, April 2010.
- Conference to high school science teachers in Haiti, “*The January 12, 2010, Haiti earthquake and its tectonic context*”, April 2010.
- Understanding Risk, organized by the World Bank, Washington DC, “*The January 12, 2010, Haiti earthquake and its tectonic context*”, June 2010.
- United Nations country team meeting, Haiti, “*Seismic threat in Haiti*”, September 2010.
- Southern California Earthquake Center annual meeting, “*The January 12, 2010, Haiti earthquake: a reality check*”, September 2010.
- Congress of Scientific Haitian Diaspora, “*Haiti’s tectonic context and the January 12, 2010 earthquake*”, Montréal, Canada, March 2010.
- UNAVCO Annual meeting, “*Haiti earthquake response*”, Boulder, Co, March 2010.
- U.S. State Department conference on “Science and Engineering for Earthquake Resilience”, “*The Haiti earthquake and future seismic hazards in Haiti*”, Miami, March 2010.
- U.S. Congressional Briefing on the 2010 Haiti earthquake, “*Chronicle of a Disaster Foretold*”, May 2010.
- Dominican Republic Geological Society meeting, “*The M7.0, 2010, Haiti earthquake: context and mechanism from an integrated geodetic study*”, Santo Domingo, July 2010.
- American Geophysical Union Joint Assembly, “*The M7.0, 2010, Haiti earthquake: context and mechanism from an integrated geodetic study*”, Brazil, August 2010.
- American Geophysical Union Joint Assembly, “*Engaging Haiti on the path toward earthquake safety*”, Brazil, August 2010.
- FUNDGLODE conference, “*Seismic hazard in Hispaniola, level of threat, ways to move forward*”, Santo Domingo, Dominican Republic, August 2010.
- Southern California Earthquake Center (SCEC) annual meeting, “*The M7.0, 2010, Haiti earthquake: context and mechanism from an integrated geodetic study*”, Palm Springs, Ca, September 2010.

- U.S. National Science Foundation workshop on RAPID grants for the Haiti 2010 earthquake, “*Science and engineering research for sustainable earthquake safety in Haiti*”, September 2010.
- Incorporated Research Institutions for Seismology (IRIS) workshop, “*Lessons for seismic hazard and societal impact in the Caribbean*”, San Jose, Costa Rica, October 2010.
- Meeting of the G12, Group of International Donors in Haiti, “*Seismic hazard in Haiti: the 2010 earthquake and beyond*”, October 2010.
- American Geophysical Union fall meeting, “*The January 12, 2010, Mw 7.0, Haiti earthquake: Context and mechanism from an integrated geodetic study*”, San Francisco, December 2010.
- American Geophysical Union fall meeting, “*The January 12, 2010, Haiti earthquake: Science and Engineering for Earthquake Resilience*”, San Francisco, December 2010.
- International Conference on “Building Back Better Communities” in Haiti, “*Seismic hazard in Haiti*”, Port-au-Prince, Haiti, January 2011.
- Workshop on Seismic Risk Reduction, Oxford University, U.K., “*The 2010 Haiti earthquake: moving forward*”, February 2011.
- American Association for the Advancement of Science (AAAS) annual conference, “*The January 12, 2010, Haiti earthquake: a science diplomacy opportunity*”, January 2011.
- Multidisciplinary Center for Earthquake Engineering Research (MCEER) seminar series, “*Quantification of seismic hazard in Haiti*”, March 2011.
- U.N. Fund for Population conference on Natural Disasters, Population, and Development, “*Population and seismic risk*”, March 2011.
- Seismological Society of America Annual Meeting, “*Present-day strain accumulation in the New Madrid seismic zone from GPS geodesy*”, April 2011.
- U.N. Headquarters Press Briefing on “*Seismic hazard and risk reduction in Haiti in the wake of the 2010 earthquake*”, April 2011.
- Clinton-Bellerive Commission on the Reconstruction of Haiti, invited presentation on “*Seismic hazard and risk reduction in Haiti in the wake of the 2010 earthquake*”, July 2011.
- UNDP office, Dominican Republic, conference on “*Seismic hazard and risk reduction in Hispaniola in the wake of the 2010 earthquake*”, September 2011.
- UN-Habitat workshop on Urban Planning for the Port-au-Prince Metropolitan Area, invited presentation on “*Risk Prevention Plans: A Tool for Reasoned Urban Planning*”, November 2011.
- World Bank workshop on Natural Hazards, invited presentation on “*Seismic hazard and risk reduction in Haiti*”, October 2011.
- Red Cross International Federation, workshop on Educating the Media on Risk Reduction, invited presentation on “*Natural hazards and risks: the proper messages*”, December 2011.
- Asian Seismological Commission, 9th Assembly, Ulan Baatar (Mongolia), “*Kinematics and Dynamics of Present-Day Deformation in Asia*”, September 2012.
- Syracuse University Department of Earth Sciences, Annual Holmes Lecture, Syracuse, USA, April 2013.
- UNESCO Expert Meeting on “*Earthquake and Tsunami Hazard in Northern Haiti: Historical Events and Potential Sources*”, Port-au-Prince, Haiti, July 2013.
- Ecole Normale Supérieure, Paris, Center for Environment Studies, invited lecture on “*Earthquake Hazard, Societal Impacts*”, Paris, October 2013.



- Royal Astronomical Society (U.K.) workshop on Earthquakes: from Mechanics to Mitigation, invited lecture on *“From hazard to mitigation in the wake of the 2010 Haiti earthquake”*, London, U.K., February 2014.
- INERIS Science Workshop on “Vulnerability, Risk, and Disasters”, invited lecture on *“Earthquake hazard, lessons learned from the 2010 Haiti earthquake”*, Nancy, France, November 2014.
- Workshop for the Delivery of the Post-earthquake ANR Program, invited lecture on *“An Integrative Curriculum in Disaster Risk Reduction for Haiti”*, Port-au-Prince, Haiti, December 2014.
- French Committee for Geodesy and Geophysics, Conference on GNSS and Science, invited lecture on *“Recent contributions of space geodesy to Earth’s deformation”*, Paris, January 2015.
- First International Congress of Engineers, Architects and Surveyors/Second Panamerican of Construction. Colegio Dominicano de Ingenieros, Arquitectos y Agrimensores (CODIA), Santo Domingo, Dominican Republic, May 2015.
- French Geological Society Conference on Seismic risk, *“Risk reduction in the aftermath of the 2010 Haiti earthquake”*, Paris, June 2015.
- University of Grenoble, Geophysics Department, Seminar series on Urban Seismology, Seismic hazard assessment and risk analysis, Grenoble, July 2015.
- French-Japanese Symposium on Earthquakes and Triggered Hazards, *“Large earthquakes in stable continental plate interiors: the need for a new paradigm”*, Orléans, France, September 2015.
- Colloquium on “Exploring the Unpredictable”, Institute for Risk Management, invited lecture on *“From ground motion prediction to preparedness decision: risk mitigation in the wake of the 2012 Haiti earthquake”*, Paris, November 2015.
- Scientific workshop of the SYNAPS project (Synergy between Scientists and Engineers to Improve Seismic Risk Assessment), Cachan, November 2015.
- Doctoral School Annual workshop, University of Montpellier, *“Risk reduction in the aftermath of the 2010 Haiti earthquake”*, Montpellier, France, March 2016.
- UNESCO Expert Meeting on *“Earthquake and Tsunami Hazard in the Southern Dominican Republic”*, Santo Domingo, Dominican Republic, May 2016.
- Académie Royale des Sciences d’Outre-Mer de Belgique, *“Risk reduction in the aftermath of the 2010 Haiti earthquake”*, Bruxelles, May 2016.
- French Academy of Sciences, Meeting of the Science Application Committee, *“Science and seismic risk: from pre-earthquake space geodesy to post-emergency reconstruction”*, Paris, May 2016.
- Academia dei Lincei, Colloquium on the Resilience of Art Cities to Natural Catastrophes, Rome, October 2016.
- Biennial meeting of the French Strong Ground Motion Network, *“Seismic risk reduction in Haiti: is there a before and after January 2010?”* Guadeloupe, November 2016.
- ENS–ENA colloquium on “Gouverner en connaissance de cause. Comprendre, prévoir et décider”, *“Du rôle de l’expert dans la décision publique”*, March 2017.
- Seismological Society of America, 2017 Annual Meeting, *“A New Paradigm for Large Earthquakes in Stable Continental Plate Interiors”*, Denver, Colorado, April 2017.

- Vienna Catchment Science Symposium, “Explaining phenomena through models of different complexity”, *“From observation to decision in aftermath of the 2010, Haiti, earthquake: complexity at the heart”*, Vienna, Austria, April 2017.
  - Geological Society of America, 2017 Annual Meeting, *“A New Paradigm for Large Earthquakes in Stable Continental Plate Interiors”*, Seattle, Colorado, October 2017.
  - European Seismological Commission, 2018 Annual Meeting, *“A New Paradigm for Large Earthquakes in Stable Continental Plate Interiors”*, Malta, September 2018.
  - WEGENER Meeting, *“Large Earthquakes in Stable Continental Plate Interiors”*, Grenoble, September 2018.
  - Geological Society of France Special Colloquium on Caribbean and Alpine Geodynamics, a Tribute to Marc Tardy, October 2018.
  - 6th International Colloquium Historical Earthquakes, Paleoseismology, Neotectonics and Seismic Hazard, *“Large Earthquakes in Stable Continental Plate Interiors”*, Han-sur-Lesse, Belgium, October 24-26, 2018.
  - Los Alamos National Laboratory Colloquium Series, USA, December 3, 2018.
  - Natural Resources Canada, Québec Office, Colloquium Series, December 6, 2018.
  - UNESCO Expert Meeting on *“Earthquake and Tsunami Hazard in the Lesser Antilles”*, Fort-de-France, Martinique, March 2019.
  - International Space Science Institute Workshop on “Natural and man-made hazards monitoring by the Earth Observation missions: current status and scientific gaps”, Bern, Switzerland, April 15-18, 2019.
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- Southwestern University, Georgetown, Texas, March 1993.
  - University of Texas, Austin, March 1994.
  - University of Strasbourg, School and Earth Observatory, France, March 1999.
  - Veinig Meinesz School of Geodynamics, Utrecht, March 1998.
  - University of Brest, European Institute of Marine Studies, France, March 2000.
  - Ecole Normale Supérieure, Paris, France, May 2000.
  - University of Montpellier, France, November 2000.
  - Côte d’Azur Observatory, France, April 2001.
  - University of Grenoble, France, Department of Geophysics, May 2001.
  - University of Illinois, Chicago, Dept. of Earth Science, October 2003
  - U.S. Geological Survey (USGS) Seminar Series, Menlo Park, May 2004
  - Oxford University, United Kingdom, Dept. of Earth Sciences, June 2004.
  - University of Illinois, Champaign-Urbana, Dept. of Geology, September 2004.
  - Northwestern University, Dept. of Geological Sciences, October 2004.
  - University of Arkansas, Dept. of Geology, February 2006.
  - Indiana University, Dpt. of Geology and Geophysics, February 2008.
  - University of Brest, UMR Oceanic Domains, May 2008.
  - University of Brest, European Institute for Marine Studies, June 2008.
  - University of Missouri, Dept. of Geosciences, October 2008.
  - Virginia Institute of Technology, Department. of Geosciences, October 2009.
  - Lamont Doherty Earth Observatory, and Department of Earth and Environmental Science at Columbia University, October 2009.

- Institut de Physique du Globe, Strasbourg, France, November 2009.
- Université d'État d'Haïti, Port-au-Prince, August 2010.
- Purdue University, College of Civil Engineering, February 2011.
- Northwestern University, Dept. of Earth Sciences, October 2011.
- Ecole Normale Supérieure, Paris, General Seminar, May 2012.
- Institut de Physique du Globe de Paris, General Seminar, May 2012.
- San Diego State University, Geophysics Seminar, October 2012.
- Institut de Radioprotection et de Sûreté Nucléaire (IRSN), General Seminar, February 2013.
- Ecole Normale Supérieure, Paris, Geophysics Seminar, February 2013.
- University of Leeds, Institute of Geophysics and Tectonics Seminar, May 2013.
- University of Nice, GeoAzur Seminar Series, May 2013.
- Ecole Normale Supérieure, Paris, Center for Environment Studies, October 2013.
- Oxford University, United Kingdom, Dept. of Earth Sciences Seminar Series, February 2014.
- University Pierre and Marie Curie (Paris 6), Geosciences Department Seminar Series, February 2014.
- University of Rennes, Geosciences Department Seminar Series, September 2014.
- University of Nancy, Research Center for Petrography and Geochemistry Seminar Series, November 2014.
- University of Montpellier, Earth Sciences Department Seminar Series, January 2015.
- University of La Rochelle, Geosciences Seminar Series, January 2015.
- University Antilles-Guyane, Earth Science Department Seminars, February 2015.
- Cambridge University, U.K., Bullard Labs Seminar Series, March 2015.
- GeoForschungZentrum (GFZ), Potsdam, Germany, March 2015.
- University of Utrecht Geophysics Seminar Series, The Netherlands, March 2015.
- University of Nantes, Geosciences Seminar Series, March 2015.
- Total (Pau, France), Geophysics Research Seminar, January 2016.
- Los Alamos National Laboratory Colloquium Series, USA, December 3, 2018.
- Natural Resources Canada, Québec Office, Colloquium Series, December 6, 2018.