

## Published scientific articles

Candioti, L. G., Duretz, T., & Schmalholz, S. M. (2022). Horizontal force required for subduction initiation at passive margins with constraints from slab detachment. *Frontiers in Earth Science*, 10, 581.

Vaughan-Hammon, Joshua D., et al. "Metamorphic Facies Distribution in the Western Alps Predicted by Petrological-Thermomechanical Models of Syn-Convergent Exhumation." *Geochemistry, Geophysics, Geosystems* 23.8 (2022): e2021GC009898.

Candioti, L. G., Duretz, T., Moulas, E., & Schmalholz, S. M. (2021). Buoyancy versus shear forces in building orogenic wedges. *Solid Earth*, 12(8), 1749-1775.

Candioti, L. G., Schmalholz, S. M., & Duretz, T. (2020). Impact of upper mantle convection on lithosphere hyperextension and subsequent horizontally forced subduction initiation. *Solid Earth*, 11(6), 2327-2357.

Kiss, D., Candioti, L. G., Duretz, T., & Schmalholz, S. M. (2020). Thermal softening induced subduction initiation at a passive margin. *Geophysical Journal International*, 220(3), 2068-2073.

McCarthy, A., Tugend, J., Mohn, G., Candioti, L., Chelle-Michou, C., Arculus, R., ... & Müntener, O. (2020). A case of Ampferer-type subduction and consequences for the Alps and the Pyrenees. *American Journal of Science*, 320(4), 313-372.

## Conference contributions

Candioti, L. G., Nathwani, C. L., and Chelle-Michou, C.: A neural network-based surrogate model to accelerate mineral phase equilibria calculations for silicate melts in arc settings, EGU General Assembly 2025, Vienna, Austria, 27 Apr–2 May 2025, EGU25-8644, <https://doi.org/10.5194/egusphere-egu25-8644>, 2025.

Candioti, L. G., Nathwani, C. L., & Chelle-Michou, C. (2024). Towards fully-coupled thermodynamic-thermomechanical two-phase flow models of transcrustal magmatic systems (No. EGU24-16936). *Copernicus Meetings*.

Candioti, L. G., Vaughan-Hammon, J. D., Duretz, T., & Schmalholz, S. M. (2021, April). Synconvergent and coherent (ultra) high-pressure crustal rock exhumation. In *EGU General Assembly Conference Abstracts* (pp. EGU21-11119).

Swiss Geosciences meeting (2020)

Candioti L. G., Vaughan-Hammon J. D., Schmalholz S. M., Duretz T.: Subduction channel vs. orogenic wedge model: numerical simulations, impact of serpentinites and application to the Alps

Candioti, L. G., Schmalholz, S. M., & Duretz, T. (2020, April). Subduction channel vs. orogenic wedge model: numerical simulations, impact of serpentinites and application to the Alps. In *European Geosciences Union General Assembly* (pp. EGU2020-10209).

Candioti, L. G., Schmalholz, S. M., & Duretz, T. (2019). Impact of convection in the mantle transition zone on long-term lithospheric extension and subsequent convergence and subduction initiation. *AGUFM*, 2019, T21G-0411.

Swiss Geosciences meeting (2019)

Candioti L.G., Schmalholz S.M., Duretz T.: Impact of convection in the mantle transition zone on long-term lithospheric deformation during the Alpine cycle

Candioti, L., Schmalholz, S., & Duretz, T. (2019, September). Impact of convection in the mantle transition zone on long-term lithospheric deformation during the Alpine cycle. In Emile Argand Conference on Alpine Geological Studies 2019 (p. 14).

Ada Lovelace Workshop, Siena (2019)

Impact of convection in the mantle transition zone on long-term lithospheric deformation during the Alpine cycle

Candioti, L. G., Schmalholz, S. M., & Duretz, T. (2019). The Alpine cycle: Modelling orogenic wedge formation from generation of hyper-extended passive margins and forced subduction to continent-continent collision. EGUGA, 16580.

Swiss Geosciences meeting (2018)

Candioti L.G., Schmalholz S.M., Duretz T., Picazo S.: The Alpine cycle: Modelling orogenic wedge formation from generation of hyper-extended passive margins and forced subduction to continent-continent collision

Candioti, L. G., & Schmalholz, S. M. (2018). Impact of potential weakening effects of mineral reactions in lithospheric scale geodynamic models. EGUGA, 19606.

Candioti, L. G., Schmalholz, S. M., Duretz, T., & Picazo, S. (2018). Modelling orogenic wedge formation from hyper-extended passive margins and exhumed sub-continental mantle with application to the Western Alps. EGUGA, 15423.

Candioti, L. G., Räss, L., & Podladchikov, Y. (2018). Towards iterative and matrix-free Finite Element solvers for geodynamic applications. EGUGA, 18066.

Swiss Geosciences Meeting (2017)

Candioti L.G., Duretz T., Picazo S., Schmalholz S.M.: Orogenic wedge formation starting from hyper-extended passive margins: a self-consistent modelling study with application to the Western Alps

Candioti, L. G., Duretz, T., Picazo, S., & Schmalholz, S. M. (2017). Orogenic wedge formation starting from hyper-extended passive margins: a self-consistent modelling study with application to the Western Alps. EGUGA, 4065.

Candioti, L., Bauville, A., Picazo, S., Mohn, G., & Kaus, B. (2016, April). Control of hyper-extended passive margin architecture on subduction initiation with application to the Alps and present-day North Atlantic ocean. In EGU General Assembly Conference Abstracts (pp. EPSC2016-8729).