



Activity Report 2024 – Task Forces / Coordination Committees

Project Title: ANATEC (Anatolian Tectonics)

Project No.: 2021-CC3

PI(s): Oğuz H Göğüş, Taylor Schildgen, Andreas Fitchner, Douwe Van Hinsbergen

1. Highlights of recent ILP Task Force work/results

- We have a new paper published in Nature Comms where the subsidence of the central Anatolia (Konya) basin was explained by a secondary lithospheric drip event.
- A new project started between Göğüş and colleagues from Tongji uni in China as the fault mechanics and the earthquake triggering mechanism was explored for the earthquake doublets of the Kahramanmaraş region in Eastern Anatolia.
- Meanwhile, Göğüş recently received funding from TÜBİTAK national research programme where the activity of normal faults in western Anatolia region will be investigated.

2. Presence at international meetings/workshops (this year)

EGU (2024)

1. **On The Timing of Collision Induced Slab Break-Off and Polarity Reversal**
Erkan Gün, Philip Heron, Russell Pysklywec, Gültekin Topuz, and **Oğuz Göğüş**
Thu, 18 Apr, 16:15–18:00 (CEST) | Hall X2 | X2.74
2. **The role of hydration-induced processes in the deformation of the North China craton**
Açelya Ballı Çetiner, **Oğuz Göğüş**, Jeroen van Hunen, and Ebru Şengül Uluocak
Fri, 19 Apr, 14:10–14:20 (CEST) Room D1
- 3) **Dynamics of Plateau Growth: Geodynamic Modeling of the East Anatolian Plateau Uplift Through Double Subduction Processes**
Uğurcan Çetiner, Jeroen van Hunen, Andrew P. Valentine, **Oğuz H. Göğüş**, and Mark B. Allen
Thu, 18 Apr, 16:15–18:00 (CEST) | Hall X2 | X2.79
- 4) **A twisted ribbon of subducted lithosphere beneath southeast Anatolia and its seismotectonic implications**
Sonia Yeung, Gordon Lister, Wim Spakman, **Oğuz Göğüş**, Marnie Forster, Adam Simmons, and Hielke Jelsma
Fri, 19 Apr, 14:50–15:00 (CEST) | Room D1

3. Important publications of ILP Task Force members (max. five)

1. Chen, J., Liu, C., Dal Zilio, L., Cao, J., Wang, H., Yang, G., **Gögüş, O.H.**, et al. (2024). Decoding stress patterns of the 2023 Türkiye-Syria earthquake doublet, Journal of Geophysical Research: Solid Earth, 129, e2024JB029213. <https://doi.org/10.1029/2024JB029213>
2. Andersen**, J., **Gögüş, O.H.**, Pysklywec, R.N., Şengül Uluocak, E., Santimano, T., Multistage lithospheric drips control active basin formation within an uplifting orogenic plateau, Nature communications. <https://doi.org/10.1038/s41467-024-52126-7>
3. Gün**, E., Pysklywec, R.N., Topuz, G., **Gögüş, O.H.**, Heron, P., Syn-Drift plate tectonics (in review) Geophysical Research Letters. 51, e2023GL105452. <https://doi.org/10.1029/2023GL105452> .

4. New contacts (this year)

- Chang Liu (Tongji Uni)
- Joel Saylor (University of British Columbia)
- Jeroen Van Hunen (Durham Uni)
- Mark Allen (Durham Uni)

5. Usage of ILP funding (this year)

I would repeat what I wrote for the last year's report. Unfortunately we are not able to run a meeting to use the funds from ILP yet but we are in the process of planning a meeting about this coordinating committee (ANATEC). It is also foreseen that the project leaders may attend an international meetings (e.g EGU-AGU) to engage in research activities and promoting the project objectives, developing key collaborative partnerships and accomplished results so far.