

Prof. Oğuz Hakan Gögüş

Personal Information

Office Phone: [+90 212 285 6108](tel:+902122856108)

Fax Phone: [+90 212 285 6210](tel:+902122856210)

Email: goguso@itu.edu.tr

Web: [https://+90 212 285 61 08](https://+902122856108)

International Researcher IDs

ScholarID: 83323

ORCID: 0000-0002-6199-303X

ScopusID: 25627976600

Yoksis Researcher ID: 185242

Education Information

Doctorate, University of Toronto, Faculty Of Arts And Sciences/Department Of Earth Sciences, Canada 2004 - 2010

Postgraduate, Oklahoma State University, College Of Arts And Sciences/School Of Geology, United States Of America 2002 - 2004

Undergraduate, Dokuz Eylul University, Mühendislik Fakültesi, Jeoloji Mühendisliği Bölümü, Turkey 1996 - 2001

Foreign Languages

English

Dissertations

Doctorate, Surface and Crustal Response to Lithospheric Removal Processes: Insights from Numerical and Analogue Modeling, University Of Toronto, Faculty Of Arts And Sciences/Department Of Earth Sciences, 2010

Postgraduate, Geometry and Tectonic Significance of Büyük Menderes Detachment in the Bascayır area, Büyük Menderes Graben, Western Turkey, Oklahoma State University, College Of Arts And Sciences/School Of Geology, 2004

Research Areas

Technical Sciences, Geophysical Engineering, Ground Physics, Geological Engineering, General Geology, Tectonics (Paleotectonics, Neotectonics, Seismotectonics)

Academic Titles / Tasks

Associate Professor, Istanbul Technical University, Avrasya Yer Bilimleri Enstitüsü, İklim Ve Deniz Bilimleri, 2016 - Continues

Assistant Professor, Istanbul Technical University, Avrasya Yer Bilimleri Enstitüsü, Katı Yer Bilimleri, 2014 - 2016

Research Assistant, Canakkale Onsekiz Mart University, Mühendislik Fakültesi, Jeoloji Mühendisliği Bölümü, 2002 - 2013

Advising Theses

- Göğüş O. H., Modeling the Structural Evolution of the Detachment Faults at Western Anatolia Back Arc System, Postgraduate, Ö.BODUR(Student), 2019
- Göğüş O. H., Mobile Cratons, Subcretion Tectonics and Formation of TTGs, Postgraduate, U.ÇETİNER(Student), 2019
- Göğüş O. H., SUBDUCTION ROLL BACK AND THE GENERATION OF WET AND DECOMPRESSION MELTING, Postgraduate, M.BARIŞ(Student), 2019
- Göğüş O. H., Eclogite Induced Deformation of the Siberian Craton, Postgraduate, A.BALLI(Student), 2019
- Göğüş O. H., Dynamic modelling of back-arc extension in the Aegean sea and Western Anatolia, Postgraduate, Z.MAZLUM(Student), 2016
- Göğüş O. H., Geodynamic modeling the styles of lithospheric delamination with application to the Eastern Anatolia, Postgraduate, Ö.CANER(Student), 2016
- Göğüş O. H., Numerical modelling of exhumation of high pressure - low temperature metamorphic rocks: A case study of Tavşanlı and Afyon zone in western anatolia, Postgraduate, Ö.FARUK(Student), 2016

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Syn-Drift Plate Tectonics**
Gün E., Pysklywec R. N., Topuz G., Oğuz H. G., Heron P. J.
Geophysical Research Letters, vol.51, no.2, 2024 (SCI-Expanded)
- II. **Crustal flow driving twin domes exhumation and low-angle normal faulting in the Menderes Massif of western Anatolia**
Bodur Ö., Göğüş O. H., Brune S., Uluocak E. Ş., Glerum A., Fichtner A., Sözbilir H.
EARTH AND PLANETARY SCIENCE LETTERS, vol.1, no.1, pp.1-2, 2023 (SCI-Expanded)
- III. **The Atlas of Morocco: A Plume-Assisted Orogeny**
Lanari R., Faccenna C., Natali C., ŞENGÜL ULUOCAK E., Fellin M., Becker T., Göğüş O. H., Youbi N., Clementucci R., Conticelli S.
Geochemistry, Geophysics, Geosystems, vol.24, no.6, 2023 (SCI-Expanded)
- IV. **Symptomatic lithospheric drips triggering fast topographic rise and crustal deformation in the Central Andes**
Andersen J., Göğüş O. H., Pysklywec R. N., Santimano T., Şengül Uluocak E.
COMMUNICATIONS EARTH & ENVIRONMENT, vol.3, no.1, 2022 (SCI-Expanded)
- V. **Terrane geodynamics: Evolution on the subduction conveyor from pre-collision to post-collision and implications on Tethyan orogeny**
Gün E., Pysklywec R. N., Göğüş O. H., Topuz G.
Gondwana Research, vol.105, pp.399-415, 2022 (SCI-Expanded)
- VI. **Rapid surface uplift and crustal flow in the Central Andes (southern Peru) controlled by lithospheric drip dynamics**
Göğüş O. H., Sundell K., Uluocak E. S., Saylor J., Cetiner U.
SCIENTIFIC REPORTS, vol.12, no.1, 2022 (SCI-Expanded)
- VII. **Geodynamic experiments suggest that mantle plume caused Late Permian Emeishan Large Igneous Province in Southern China**
Göğüş O. H.
International Geology Review, vol.64, no.3, pp.375-389, 2022 (SCI-Expanded)
- VIII. **Geodynamics of East Anatolia-Caucasus Domain: Inferences From 3D Thermo-Mechanical Models, Residual Topography, and Admittance Function Analyses**
Uluocak E. S., Göğüş O. H., Pysklywec R. N., Chen B.
TECTONICS, vol.40, no.12, 2021 (SCI-Expanded)
- IX. **Pre-collisional extension of microcontinental terranes by a subduction pulley**
Gun E., Pysklywec R. N., Göğüş O. H., Topuz G.

NATURE GEOSCIENCE, vol.14, no.6, pp.443-453, 2021 (SCI-Expanded)

- X. **Long Wavelength Progressive Plateau Uplift in Eastern Anatolia Since 20 Ma: Implications for the Role of Slab Peel-Back and Break-Off**
Memiş C., Göğüş O. H., Şengül Uluocak E., Pysklywec R., Keskin M., Şengör A. M. C., Topuz G.
Geochemistry Geophysics Geosystems, vol.21, pp.1-24, 2020 (SCI-Expanded)
- XI. **Multidimensional Geodynamic Modeling in the Southeast Carpathians: Upper Mantle Flow-Induced Surface Topography Anomalies**
Sengul-Uluocak E., Pysklywec R. N., Gogus O. H., Ulugergerli E. U.
GEOCHEMISTRY GEOPHYSICS GEOSYSTEMS, vol.20, no.7, pp.3134-3149, 2019 (SCI-Expanded)
- XII. **A global framework for the Earth: putting geological sciences in context**
de Vries B. v. W., Byrne P., Delcamp A., Einarson P., Gogus O. H., Guilbaud M., Hagos M., Harangi S., Jerram D., Matenco L., et al.
GLOBAL AND PLANETARY CHANGE, vol.171, pp.293-321, 2018 (SCI-Expanded)
- XIII. **Peeling back the lithosphere: Controlling parameters, surface expressions and the future directions in delamination modeling**
Göğüş O. H., UEDA K.
JOURNAL OF GEODYNAMICS, vol.117, pp.21-40, 2018 (SCI-Expanded)
- XIV. **Mantle Lithosphere Rheology, Vertical Tectonics, and the Exhumation of (U)HP Rocks**
Bodur O. F., Göğüş O. H., Pysklywec R. N., Okay A.
JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH, vol.123, no.2, pp.1824-1839, 2018 (SCI-Expanded)
- XV. **Drip tectonics and the enigmatic uplift of the Central Anatolian Plateau**
Göğüş O. H., Pysklywec R. N., Şengör A. M. C., GUN E.
NATURE COMMUNICATIONS, vol.8, 2017 (SCI-Expanded)
- XVI. **Present-day dynamic and residual topography in Central Anatolia**
Uluocak E. S., Pysklywec R., Göğüş O. H.
GEOPHYSICAL JOURNAL INTERNATIONAL, vol.206, no.3, pp.1515-1525, 2016 (SCI-Expanded)
- XVII. **Postcollisional lithospheric evolution of the Southeast Carpathians: Comparison of geodynamical models and observations**
Göğüş O. H., Pysklywec R. N., FACCENNA C.
TECTONICS, vol.35, no.5, pp.1205-1224, 2016 (SCI-Expanded)
- XVIII. **Rifting and subsidence following lithospheric removal in continental back arcs**
Gogus O. H.
GEOLOGY, vol.43, no.1, pp.3-6, 2015 (SCI-Expanded)
- XIX. **Mantle flow uplift of western Anatolia and the Aegean: Interpretations from geophysical analyses and geodynamic modeling**
KOMUT T., Gray R., Pysklywec R., Gogus O. H.
JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH, vol.117, 2012 (SCI-Expanded)
- XX. **The surface tectonics of mantle lithosphere delamination following ocean lithosphere subduction: Insights from physical-scaled analogue experiments**
Gogus O. H., Pysklywec R. N., CORBI F., FACCENNA C.
GEOCHEMISTRY GEOPHYSICS GEOSYSTEMS, vol.12, 2011 (SCI-Expanded)
- XXI. **Insights from geodynamical modeling on possible fates of continental mantle lithosphere: collision, removal, and overturn**
Pysklywec R. N., Gogus O. H., PERCIVAL J., Cruden A. R., Beaumont C.
CANADIAN JOURNAL OF EARTH SCIENCES, vol.47, no.4, pp.541-563, 2010 (SCI-Expanded)
- XXII. **Near-surface diagnostics of dripping or delaminating lithosphere**
Gogus O. H., Pysklywec R. N.
JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH, vol.113, 2008 (SCI-Expanded)
- XXIII. **Mantle lithosphere delamination driving plateau uplift and synconvergent extension in eastern Anatolia**
Gogus O. H., Pysklywec R. N.

Articles Published in Other Journals

- I. **Geodynamical Models for Continental Delamination and Ocean Lithosphere Peel Away in an Orogenic Setting**
Göğüş O. H., Pysklywec R. N., Faccenna C.
ACTIVE GLOBAL SEISMOLOGY: NEOTECTONICS AND EARTHQUAKE POTENTIAL OF THE EASTERN MEDITERRANEAN REGION, vol.225, pp.121-139, 2017 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Geodynamical Models for Continental Delamination and Ocean Lithosphere Peel Away in an Orogenic Setting**
Göğüş O. H., Pysklywec R., Faccenna C.
in: Neotectonics and-Earthquake Potential of-the-Eastern Mediterranean Region,: Neotectonics and-Earthquake Potential of-the-Eastern Mediterranean Region, Geophysical Monograph 225, İbrahim Çemen, Yücel Yılmaz, Editor, American Geophysical Union, Washington, D.C, pp.121-139, 2017
- II. **Postcollisional extensional tectonics and exhumation of the Menderes massif in the Western Anatolia extended terrane, Turkey**
Çemen İ., Catlos E., Göğüş O. H., Özerdem C.
in: Postcollisional Tectonics and Magmatism in the Mediterranean Region and Asia, Dilek Y, Pavlides S, Editor, Geological Society Of America, Boulder, Colorado, pp.353-379, 2006

Refereed Congress / Symposium Publications in Proceedings

- I. **Extensional Deformation in the Pacific Oceanic Plateaux**
Gün E., Pysklywec R., Topuz G., Göğüş O. H., Heron P.
AGU, California, United States Of America, 12 - 16 December 2022, pp.1-2
- II. **Effect of crustal flow on bivergent metamorphic core complex exhumation and detachment faulting in western Anatolia**
Bodur Ö., Göğüş O. H., Brune S., Şengül Uluocak E., Glerum A., Fichtner A., Sözbilir H.
AGU, California, United States Of America, 12 - 16 December 2022, pp.1-2
- III. **Quantifying observed surface topography anomalies with the mantle flow in the Southeast Carpathians**
ŞENGÜL ULUOCAK E., PYSKLYWEC R. N., GÖĞÜŞ O. H., ULUGERGERLİ E. U.
. 20th Anniversary of the 1999 Marmara Earthquakes: 23rd Active Tectonics Research Group Meeting, İstanbul, Turkey, 15 - 18 October 2019, pp.152
- IV. **The Integrated Analysis of Upper-Mantle Induced Anomalies Topography in Anatolia**
ŞENGÜL ULUOCAK E., PYSKLYWEC R., GÖĞÜŞ O. H.
EGU, Viyana, Austria, 7 - 12 April 2019, vol.21
- V. **Multidimensional mantle convection models in Eastern Anatolia, the North Arabian Platform and the Caucasus region.**
ŞENGÜL ULUOCAK E., SHAHNAS H., PYSKLYWEC R., GÖĞÜŞ O. H., EKEN T.
American Geophysical Union (AGU), 11 - 15 December 2017
- VI. **Multidimensional Mantle Convection Models in Eastern Anatolia, the North Arabian Platform, and Caucasus Region**
Sengul Uluocak E., Shahnas H., Pysklywec R., GÖĞÜŞ O. H., EKEN T.

AGU Fall Meeting, United States Of America, 11 - 15 December 2017

- VII. **A Numerical Approach to the Accretion of Micro-Continental Blocks and Subsequent Subduction Initiation**
Gün E., GÖĞÜŞ O. H., Pysklywec R., TOPUZ G., Bodur Ö. F.
AGU Fall Meeting 2017, 11 - 15 December 2017
- VIII. **Mediterranean Magmatism: Bimodal melting patterns inferred by numerical models**
GÖĞÜŞ O. H., UEDA K., GERYA T.
American Geophysical Union, 11 December 2017
- IX. **Magmatism by delamination: Bimodal melting patterns inferred by numerical models.**
GÖĞÜŞ O. H., UEDA K., GERYA T.
XV International Workshop on Modelling of Mantle and Lithosphere Dynamics, 27 - 31 August 2017
- X. **Magmatism in Lithosphere Delamination process inferred from numerical models.**
GÖĞÜŞ O. H., UEDA K., GERYA T.
EGU (European Geoscience Union), 23 - 28 April 2017
- XI. **Drip Tectonics and the uplift of Central Anatolia**
GÖĞÜŞ O. H., PYSKLYWEC R., ŞENGÖR A. M. C., GÜN E.
American Geophysical Union, 12 - 17 December 2016
- XII. **Geodynamical factors controlling the Plateau Uplift in the Eastern Anatolia Lesser Caucasus**
MEMİŞ C., GÖĞÜŞ O. H., PYSKLYWEC R., TOPUZ G., ŞENGÖR A. M. C., ŞENGÜL ULUOCAK E., KESKİN M.
American Geophysical Union, 12 - 17 December 2016
- XIII. **Mantle Lithosphere Rheology and Vertical Tectonics Driving Burial and Exhumation of Crustal Rocks**
BODUR O. F., GÖĞÜŞ O. H., PYSKLYWEC R., OKAY A.
American Geophysical Union, 12 - 16 December 2016
- XIV. **A comparison between north central Apennines and southeastern Carpathians in terms of present day geodynamic features**
ŞENGÜL ULUOCAK E., PYSKLYWEC R., GÖĞÜŞ O. H.
American Geophysical Union, 12 - 17 December 2016
- XV. **Geodynamical Factors Controlling the Plateau Uplift in the Eastern Anatolia Lesser Caucasus ID 190342**
MEMİŞ C., GÖĞÜŞ O. H., Pysklywec R., TOPUZ G., ŞENGÖR A. M. C., ŞENGÜL ULUOCAK E., KESKİN M.
AGU Fall Meeting, Session: T51A: Making the Mediterranean: From Mantle to Surface Processes, San-Francisco, Costa Rica, 12 - 16 December 2016, pp.190342
- XVI. **Geodynamic Evolution of Anatolia Inferred from Geodynamic Modeling**
GÖĞÜŞ O. H.
FaultLab workshop, 14 - 16 June 2016
- XVII. **Geodynamic evolution of the lithosphere beneath the Eastern Anatolia region Constraints from geodynamic modeling**
Memiş C., GÖĞÜŞ O. H., Pysklywec R., KESKİN M., ŞENGÖR A. M. C., TOPUZ G.
European Geosciences Union General Assembly 2016, Viyana, Austria, 17 - 22 April 2016, vol.18, pp.910
- XVIII. **Upper mantle driven Dynamic Topography in Central Anatolia**
ŞENGÜL ULUOCAK E., PYSKLYWEC R., GÖĞÜŞ O. H.
European Geoscience Union, 17 April 2016
- XIX. **Geodynamic Models for Various Styles of Melting in the Lithosphere Delamination Process**
GÖĞÜŞ O. H., UEDA K., GERYA T., ERKAN G.
European Geoscience Union, 17 - 22 April 2016
- XX. **Neotectonic Evolution of Anatolia**
GÖĞÜŞ O. H., MEMİŞ C., ERKAN G., ÖMER FARUK B., ZİYA M.
Humboldt Kolleg 2016, 10 - 12 March 2016
- XXI. **Present Day Dynamic Topography in Eastern Anatolia**
ŞENGÜL ULUOCAK E., PYSKLYWEC R., EKEN T., GÖĞÜŞ O. H.
Humboldt Kolleg, 10 - 12 March 2016

- XXII. **The Role of Lithospheric Removal in Geodynamic Evolution of the Mediterranean**
GÖĞÜŞ O. H.
Humboldt Kolleg 2016, 10 - 12 March 2016
- XXIII. **Upper mantle flow driven Dynamic Topography in Eastern Anatolia**
ŞENGÜL ULUOCAK E., Pysklywec R., EKEN T., GÖĞÜŞ O. H.
European Geoscience Union, 17 - 22 April 2016
- XXIV. **Geodynamic models for the post orogenic exhumation of the lower crust**
ÖMER B., GÖĞÜŞ O. H., KARABULUT H., ROBERT P., OKAY A.
AMERICAN GEOPHYSICAL UNION 2015 FALL MEETING, SAN FRANCISCO ABD, 14 - 18 December 2015
- XXV. **Modeling the evolution of lithospheric delamination under the Eastern Anatolia by testing various rheological and compositional properties**
OMER CANER M., GÖĞÜŞ O. H., KESKİN M., CELAL S., RUSSELL P., TOPUZ G.
American Geophysical Union, San-Francisco, Costa Rica, 14 - 18 December 2015
- XXVI. **Transient Surface Tectonics Controlled by the Convective Thinning of the Lithosphere Geodynamic Modeling perspective**
OMER FARUK B., GÖĞÜŞ O. H., KARABULUT H., PYSKLYWEC R., OKAY A.
American Geophysical Union General Assembly, United States Of America, 14 - 18 December 2015
- XXVII. **The Eastern Anatolia Plateau Uplift in Response to Mantle Upwelling Comparison of Geodynamic Models and Observations**
CANER M., GÖĞÜŞ O. H., KESKİN M.
Doğu Anadolu Jeoloji Sempozyumu, VAN, Van, Turkey, 7 - 11 September 2015, pp.7-11
- XXVIII. **Dynamic Modeling of Back arc extension in the Aegean sea and western Anatolia**
ZIYA M., GÖĞÜŞ O. H., SOZBILIR H., KARABULUT H., RUSSELL P.
European Geosciences Union General Assembly, Austria, 12 - 17 April 2015
- XXIX. **Surface and crustal expression of ocean subduction retreat vs delamination sub crustal retreat Implications for the Apennines tectonics EGU Annual meeting**
GÖĞÜŞ O. H., CLAUDIO C., RUSSELL P., CLAUDIO F., LAURENT H.
European Geoscience Union, Viyana, 12 - 14 April 2015
- XXX. **Geodynamic Mechanisms of plateau uplift and strain distribution in Eastern Anatolia**
CANER M., GÖĞÜŞ O. H., Russell N P., KARABULUT H., KESKİN M.
EGU General Assembly 2015, Viyana, Austria, 12 - 17 April 2015, pp.6846
- XXXI. **Postcollisional extensional tectonics and exhumation of the Menderes massif in the Western Anatolia extended terrane, Turkey**
Cemen I., Catlos E. J., Goegues O. H., Oezerdem C.
4th International Symposium on Eastern Mediterranean Geology, Thessaloniki, Greece, 01 April 2004, vol.409, pp.353-379

Supported Projects

- Şen Ö. L., Özcan O., Göğüş O. H., Akay S. S., Project Supported by Higher Education Institutions, Topoğrafyanın Artzamanlı İzlenmesi ve Modellenmesinde Yeni Teknikler Büyük Menderes Nehrindeki menderes yapıların hacimsel değişiminin İHA tabanlı modellenmesi ve ekstrem olayların etkisi, 2017 - 2020
- Göğüş O. H., Project Supported by Higher Education Institutions, 3 boyutlu levha modelleri yardımıyla Orta Anadolu'daki topoğrafik yükselme ve volkanizmanın araştırılması, 2018 - 2019
- Göğüş O. H., Project Supported by Higher Education Institutions, Litosfer sıyrılması/yitimi sırasında gelişen farklı türdeki eriyiklerin jeodinamik modelleme çalışmaları, 2016 - 2018
- Göğüş O. H., Project Supported by Higher Education Institutions, Surface And Crustal Expression Of Ocean Subduction Retreat vs. Delamination (Sub-Crustal), 2015 - 2018
- Göğüş O. H., Project Supported by Higher Education Institutions, Levha Tektoniği, Manto Konveksiyonu ve Wilson Döngüsünün Jeolojik Veriler Yardımıyla İlişkilendirilmesi, 2014 - 2018

Göğüş O. H., Project Supported by Higher Education Institutions, Rifting, Subsidence and Anomalous Topography Following the Lithospheric Removal in the Western Anatolia-Aegean Sea Back-Arc, 2014 - 2018

Göğüş O. H., TUBITAK Project, DOĞ U VE BATI ANADOLU LI TOSFERLERI NI N JEODINAMI K EVRI MI NI ORTAYA KOYMAYA YO NELI K SAYISAL MODELLEME PROJESI, 2013 - 2016

Activities in Scientific Journals

Tectonics, Assistant Editor/Section Editor, 2016 - Continues

Metrics

Publication: 59

Citation (WoS): 680

Citation (Scopus): 724

H-Index (WoS): 11

H-Index (Scopus): 12