

## Assoc. Prof. MELİH ÇALAMAK

### Personal Information

Office Phone: [+90 312 210 5457](tel:+903122105457)

Fax Phone: [+90 312 210 7991](tel:+903122107991)

Email: [calamak@metu.edu.tr](mailto:calamak@metu.edu.tr)

Web: <https://avesis.metu.edu.tr/calamak>

### International Researcher IDs

ScholarID: Ys9tZpcAAAAJ

ORCID: 0000-0002-0183-0263

Publons / Web Of Science ResearcherID: L-1701-2019

ScopusID: 55454486900

Yoksis Researcher ID: 134538

### Biography

Melih Calamak's research is on risk and reliability assessment in water resources engineering, the safety of embankments, structural flood mitigation, uncertainty-based seepage analysis, and fluid transients in pipes. He is a member of the Canadian Dam Association, International Association for Hydro-Environmental Engineering and Research (IAHR), and International Water Resources Association (IWRA).

### Education Information

Doctorate, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, Turkey 2010 - 2014

Postgraduate, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, Turkey 2008 - 2010

Undergraduate, Gazi University, Mühendislik Fakültesi, İnşaat Mühendisliği, Turkey 2004 - 2008

### Dissertations

Doctorate, Uncertainty based analysis of seepage through earth-fill dams, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 2014

### Research Areas

Hydraulic Structures, Pipeline Hydraulics, Open Channel Flow, Hydromechanics

### Academic and Administrative Experience

Fakülte Kurulu Üyesi, Ted University, Faculty Of Engineering, 2017 - 2018

Soruşturma Komisyonu Üyesi, Ted University, Faculty Of Engineering, 2016 - 2018

Erasmus Program Department Coordinator, Ted University, Faculty Of Engineering, 2016 - 2018

## Courses

Open Channel Hydraulics, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021  
Water Resources Engineering, Undergraduate, 2021 - 2022  
Fluid Mechanics, Undergraduate, 2022 - 2023, 2021 - 2022  
Water Resources Engineering, Undergraduate, 2016 - 2017, 2015 - 2016  
Hydromechanics, Undergraduate, 2017 - 2018, 2016 - 2017, 2015 - 2016  
Civil Engineering Design, Undergraduate, 2017 - 2018, 2016 - 2017  
Fluid Mechanics, Undergraduate, 2016 - 2017, 2015 - 2016  
Numerical Methods in Engineering, Undergraduate, 2016 - 2017, 2015 - 2016  
Civil Engineering Design, Undergraduate, 2014 - 2015  
Material Science , Undergraduate, 2015 - 2016

## Advising Theses

ÇALAMAK M., A study on reservoir filling practices for small earthfill dams, Postgraduate, E.CAN(Student), 2022  
Çalamak M., Malekpour A., Probabilistic analysis of internal erosion in embankment dams using copula functions, Postgraduate, N.Sadeghian(Student), 2021  
Çalamak M., Yanmaz A. M., A study on performance evaluation of relief wells downstream of embankment dams, Postgraduate, D.GÖĞÜŞ(Student), 2021  
Çalamak M., Yanmaz A. M., Investigation of the effects of uncertainties of inflow hydrograph and dam breach geometry on outflow hydrograph, Postgraduate, N.PINAR(Student), 2021  
Çalamak M., Yanmaz A. M., A study on optimum layout of drainage gallery for concrete dams, Postgraduate, T.DAGHESTANI(Student), 2018  
Yanmaz A. M., Çalamak M., Effects of berm characteristics on earth-fill dam stability, Postgraduate, Y.KILIÇ(Student), 2017  
Yanmaz A. M., Çalamak M., Assessment of performance of drainage systems in earth-fill dams, Postgraduate, A.NUR(Student), 2017

## Jury Memberships

Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, June, 2022  
Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, February, 2022  
Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, November, 2021  
Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, August, 2021  
Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, July, 2021  
Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, June, 2021  
Doctorate, Doctorate, Orta Doğu Teknik Üniversitesi, June, 2018  
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Orta Doğu Teknik Üniversitesi, December, 2017  
Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, August, 2017  
Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, August, 2017  
Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, August, 2017  
Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, July, 2017  
Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, July, 2017  
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Orta Doğu Teknik Üniversitesi, June, 2017  
Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, June, 2017  
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Orta Doğu Teknik Üniversitesi,

June, 2017

Doctoral Examination, Doctoral Examination, Orta Doğu Teknik Üniversitesi, May, 2017

Doctoral Examination, Doctoral Examination, Orta Doğu Teknik Üniversitesi, May, 2017

Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, March, 2017

Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, January, 2017

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Orta Doğu Teknik Üniversitesi, December, 2016

Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, September, 2016

Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, September, 2016

Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, September, 2016

Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, September, 2016

Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, August, 2016

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Orta Doğu Teknik Üniversitesi, June, 2016

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Orta Doğu Teknik Üniversitesi, June, 2016

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Orta Doğu Teknik Üniversitesi, June, 2016

Doctoral Examination, Doctoral Examination, Orta Doğu Teknik Üniversitesi, May, 2016

Doctoral Examination, Doctoral Examination, Orta Doğu Teknik Üniversitesi, May, 2016

Doctoral Examination, Doctoral Examination, Orta Doğu Teknik Üniversitesi, May, 2016

Doctoral Examination, Doctoral Examination, Orta Doğu Teknik Üniversitesi, May, 2016

Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, April, 2016

Post Graduate, Post Graduate, Orta Doğu Teknik Üniversitesi, January, 2016

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Determination of Minimum Intermediary Hold Durations in Multistage First-Filling Schedule of Earth-Fill Dam Reservoirs**  
Kurter E. C., ÇALAMAK M., Melih Yanmaz A. M.  
International Journal of Geomechanics, vol.24, no.7, 2024 (SCI-Expanded)
- II. **Probabilistic internal erosion analysis in stratified and unstratified foundations of embankment dams using copulas**  
Sadeghian N., Malekpour Estalaki A., Calamak M.  
Natural Hazards, 2024 (SCI-Expanded)
- III. **Experimental Investigation of Flood Management by an Instantaneous Levee Breach**  
Al-Hafidh I. A. I., Calamak M., Larocque L. A., Chaudhry M. H., Imran J.  
JOURNAL OF HYDRAULIC ENGINEERING, vol.148, no.2, 2022 (SCI-Expanded)
- IV. **Multiobjective optimization of a tubular pump to improve the applicable operating head and hydraulic performance**  
Zhao W., Zhang J., Yu X., Zhou D., Calamak M.  
Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, vol.235, no.9, pp.1555-1566, 2021 (SCI-Expanded)
- V. **Numerical modelling of seepage through earthen dams with animal burrows: a case study**  
Calamak M., Larocque L. A., Chaudhry M. H.  
Journal of Hydraulic Research, vol.59, no.3, pp.488-499, 2021 (SCI-Expanded)
- VI. **Reliability-based evaluation of scouring around dual bridge piers**  
Yilmaz M., Calamak M., YANMAZ A. M.  
Gradjevinar, vol.71, no.9, pp.739-747, 2019 (SCI-Expanded)
- VII. **On the optimum layout of a drainage gallery in concrete gravity dams on isotropic foundation**

- Daghestani T., Çalamak M., YANMAZ A. M.  
Environmental and Engineering Geoscience, vol.25, no.4, pp.345-358, 2019 (SCI-Expanded)
- VIII. **Performance Evaluation of Internal Drains of Earthen Dams**  
Calamak M., Yilmaz A. N., Yanmaz A. M.  
Journal of Performance of Constructed Facilities, vol.32, no.6, 2018 (SCI-Expanded)
- IX. **Assessment of core-filter configuration performance of rock-fill dams under uncertainties**  
Calamak M., Yanmaz A. M.  
International Journal of Geomechanics, vol.18, no.4, 2018 (SCI-Expanded)
- X. **Probabilistic evaluation of the effects of uncertainty in transient seepage parameters**  
Calamak M., Melih Yanmaz A. M., Kentel E.  
Journal of Geotechnical and Geoenvironmental Engineering, vol.143, no.9, 2017 (SCI-Expanded)
- XI. **Uncertainty quantification of transient unsaturated seepage through embankment dams**  
Calamak M., Yanmaz A. M.  
International Journal of Geomechanics, vol.17, no.6, pp.1-11, 2017 (SCI-Expanded)
- XII. **Performance of a pumped discharge line with combined application of protection devices against water hammer**  
REZAEİ V., Calamak M., BOZKUŞ Z.  
KSCE Journal of Civil Engineering, vol.21, no.4, pp.1493-1500, 2017 (SCI-Expanded)
- XIII. **Estimation of flood induced overtopping reliability of dams on Tanyeri Dam case study Tanyeri Barajı örneğinde barajların taskin nedeniyle üstten asılma güvenilirliğinin belirlenmesi**  
Çalamak M.  
Journal of the Faculty of Engineering and Architecture of Gazi University, vol.32, no.3, pp.965-975, 2017 (SCI-Expanded)
- XIV. **Evaluation of scour risk at foundations of river bridges**  
YANMAZ A. M., ÇALAMAK M.  
Teknik Dergi/Technical Journal of Turkish Chamber of Civil Engineers, vol.27, pp.1997-2012, 2016 (SCI-Expanded)
- XV. **Evaluation of scour risk at foundations of river bridges Akarsu Köprü Temellerindeki Oyulma Riskinin Değerlendirilmesi**  
Yanmaz A. M., Çalamak M.  
Teknik Dergi/Technical Journal of Turkish Chamber of Civil Engineers, vol.27, no.3, pp.7533-7549, 2016 (SCI-Expanded)
- XVI. **Comparison of performance of two run-of-river plants during transient conditions**  
ÇALAMAK M., BOZKUŞ Z.  
Journal of Performance of Constructed Facilities, vol.27, no.5, pp.624-632, 2013 (SCI-Expanded)
- XVII. **Protective measures against waterhammer in run-of-river hydropower plants**  
ÇALAMAK M., BOZKUŞ Z.  
Teknik Dergi/Technical Journal of Turkish Chamber of Civil Engineers, vol.23, pp.1623-1636, 2012 (SCI-Expanded)
- XVIII. **Protective measures against waterhammer in run of river hydropower plants Nehir tipi hidroelektrik santrallerde su darbesine karşı alınabilecek önlemler**  
ÇALAMAK M., BOZKUŞ Z.  
Teknik Dergi/Technical Journal of Turkish Chamber of Civil Engineers, vol.23, no.4, pp.6187-6202, 2012 (SCI-Expanded)

## Articles Published in Other Journals

- I. **On the Stability of Moderate Height Berm-Type Earthen Dams: The Hancagiz Dam Example**  
Calamak M., Kilic Y., YANMAZ A. M.  
GEOTECHNICAL AND GEOLOGICAL ENGINEERING, vol.38, no.4, pp.4169-4179, 2020 (ESCI)
- II. **Demiryolu dolgularının taşkın anındaki güvenliğinin değerlendirilmesi**  
ÇALAMAK M.

III. **Nehir Tipi Hidroelektrik Santraller ve Su Darbesi**

ÇALAMAK M.

Yapı Dünyası, vol.180, pp.11-17, 2011 (Non Peer-Reviewed Journal)

**Refereed Congress / Symposium Publications in Proceedings**

- I. **Experimental investigations of flood management by an engineered levee breach**  
Ibrahim I. A., Calamak M., LaRocque L., Imran J.  
2019 ASDSO Annual Dam Safety Conference, Florida, United States Of America, 8 - 12 September 2019, pp.751-759
- II. **A Review of the Anita Dam Incident: Internal Erosion Caused by a Buried Conduit and Lessons Learned**  
ÇALAMAK M., Yılmaz M.  
5th International Symposium on Dam Safety, İstanbul, Turkey, 27 - 31 October 2018, vol.2, pp.700-709
- III. **İnşaat Mühendisliği Lisans Eğitiminin Bir Parçası Olarak Araştırma ve Sosyal Sorumluluk**  
ÇALAMAK M., AKGÜNER C.  
4. İnşaat Mühendisliği Eğitimi Sempozyumu, İzmir, Turkey, 17 - 18 November 2017, pp.74-82
- IV. **Effects of Burrowing Animals on Seepage Behavior of Earthen Dams**  
ÇALAMAK M., Bilgin G., Demirkapu H., Kobal A.  
16th World Water Congress, International Water Resources Association (IWRA), Cancun, Mexico, 29 May - 03 June 2017, pp.1-11
- V. **Effect of Drainage Properties on Seepage Behavior of Earth-Fill Dams**  
ÇALAMAK M., Yılmaz A. N., YANMAZ A. M.  
12th International Congress on Advances in Civil Engineering (ACE 2016), İstanbul, Turkey, 21 - 23 September 2016, pp.1-8
- VI. **Seepage characteristics in embankments subject to variable water storages on both sides**  
ÇALAMAK M., YANMAZ A. M.  
4th European Congress of the International Association of Hydroenvironment engineering and Research, IAHR 2016, Liege, Belgium, 27 - 29 July 2016, pp.551-556
- VII. **Akarsu Köprülerinde Yıkılma Riskinin Azaltılması Üzerine Bir Çalışma**  
Selamoğlu M., ÇALAMAK M., YANMAZ A. M.  
4. Su Yapıları Sempozyumu, Antalya, Turkey, 19 - 21 November 2015, pp.185-194
- VIII. **Dolgu Barajlarda Filtre Tane Dağılımı Belirsizliğinin Sızmaya Olan Etkisi Üzerine Bir Çalışma**  
ÇALAMAK M., YANMAZ A. M.  
4. Ulusal Baraj Güvenliği Sempozyumu, Elazığ, Turkey, 9 - 11 October 2014, pp.127-137
- IX. **Probabilistic assessment of slope stability for earth-fill dams having random soil parameters**  
Calamak M., YANMAZ A. M.  
5th IAHR International Symposium on Hydraulic Structures: Hydraulic Structures and Society - Engineering Challenges and Extremes, ISHS 2014, Brisbane, Australia, 25 - 27 June 2014
- X. **Türkiye de Baraj Mühendisliği Gelişimi Üzerine Bir Değerlendirme**  
ÇALAMAK M., ARICI Y., YANMAZ A. M.  
3. Su Yapıları Sempozyumu, Ankara, Turkey, 7 - 08 December 2013, pp.73-83
- XI. **Numerical investigation of operation levels in a surge tank of a small hydropower plant**  
ÇALAMAK M., BOZKUŞ Z.  
10th International Congress on Advances in Civil Engineering (ACE 2010), Ankara, Turkey, 17 - 19 October 2012, pp.1-8
- XII. **Spatial Variability In Seepage Flow Through Earth-Fill Dams**  
Çalamak M., Yanmaz A. M., Kentel Erdoğan E.  
CDA 2013 Annual Conference , Montreal, Canada, 5 - 10 October 2013, pp.1-10
- XIII. **Seepage analysis of earth fill dams having random fields**

ÇALAMAK M., KENTEL E., YANMAZ A. M.

10th International Congress on Advances in Civil Engineering (ACE 2010), Ankara, Turkey, 17 - 19 October 2012, pp.1-9

**XIV. Numerical Investigation of Operation Levels in a Surge Tank of a Small Hydropower Plant**

ÇALAMAK M., BOZKUŞ Z.

the 10th International Congress on Advances in Civil Engineering, Ankara, Turkey, 17 - 19 October 2012

**XV. Seepage Analysis Through Earth-Fill Dams Having Random Fields**

Çalamak M., Yanmaz A. M., Kentel Erdoğan E.

Tenth International Congress on Advances in Civil Engineering, Ankara, Turkey, 17 - 19 October 2012, pp.21-30

**XVI. Nehir Tipi Hidroelektrik Santrallerde SCADA Sistemi Otomasyon ve Uzaktan Erişim**

ÇALAMAK M.

2. Su Yapıları Sempozyumu, Diyarbakır, Turkey, 16 - 18 September 2011, pp.97-103

## Supported Projects

Çalamak M., Project Supported by Higher Education Institutions, Investigation of Burrowing Animal Impacts on Seepage thorough Earth-fill Dams, 2017 - 2017

## Scientific Refereeing

JOURNAL OF HYDROLOGY, SCI Journal, July 2022

14th International Conference on Hydrosience & Engineering, Conference Paper (Full Text), May 2022

TEKNIK DERGI, SCI Journal, May 2022

TEKNIK DERGI, SCI Journal, February 2022

TEKNIK DERGI, SCI Journal, March 2021

JOURNAL OF GEOTECHNICAL ENGINEERING-ASCE, SCI Journal, February 2021

JOURNAL OF HYDRAULIC ENGINEERING-ASCE, SCI Journal, January 2021

BULLETIN OF ENGINEERING GEOLOGY AND THE ENVIRONMENT, SCI Journal, January 2021

geotechnical and geological Engineering , Journal Indexed in ESCI, October 2020

JOURNAL OF PIPELINE SYSTEMS ENGINEERING AND PRACTICE, SCI Journal, June 2020

JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, SCI Journal, June 2020

ENGINEERING APPLICATIONS OF COMPUTATIONAL FLUID MECHANICS, SCI Journal, May 2020

JOURNAL OF HYDRAULIC ENGINEERING-ASCE, SCI Journal, January 2020

WATER, SCI Journal, November 2019

JOURNAL OF PERFORMANCE OF CONSTRUCTED FACILITIES, SCI Journal, November 2019

COMPUTERS AND GEOTECHNICS, SCI Journal, November 2019

JOURNAL OF PERFORMANCE OF CONSTRUCTED FACILITIES, SCI Journal, August 2019

JOURNAL OF PERFORMANCE OF CONSTRUCTED FACILITIES, SCI Journal, August 2019

APPLIED SCIENCES-BASEL, SCI Journal, June 2019

TEKNIK DERGI, SCI Journal, May 2019

GEOSCIENCES JOURNAL, SCI Journal, May 2019

APPLIED SCIENCES-BASEL, SCI Journal, January 2019

INTERNATIONAL JOURNAL OF GEOMECHANICS, SCI Journal, December 2018

ACTA GEOTECHNICA, SCI Journal, September 2018

GEOSCIENCES JOURNAL, SCI Journal, August 2018

JOURNAL OF PERFORMANCE OF CONSTRUCTED FACILITIES, SCI Journal, August 2018

INTERNATIONAL JOURNAL OF GEOMECHANICS, SCI Journal, June 2018

Computers And Geotechnics, SCI Journal, May 2018

INTERNATIONAL JOURNAL OF GEOMECHANICS, SCI Journal, March 2018

ACTA GEOTECHNICA SLOVENICA, SCI Journal, December 2017

TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, SCI Journal, June 2015

## **Tasks In Event Organizations**

Çalamak M., Elçi Ş., Bombar G., Köken M., Kökpınar M. A., Kırca V. Ş. Ö., Eriş E., Özbahçeci B., Tayfur G., 14th International Conference on Hydrosience & Engineering,, Scientific Congress, İzmir, Turkey, Mayıs 2022

## **Metrics**

Publication: 37

Citation (WoS): 76

Citation (Scopus): 114

H-Index (WoS): 5

H-Index (Scopus): 7