

## **Asst. Prof. İSMAİL DURGUT**

### **Personal Information**

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### **International Researcher IDs**

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Publons / Web Of Science ResearcherID: Q-5867-2019

ScopusID: 6602446231

Yoksis Researcher ID: 185909

### **Education Information**

Doctorate, Middle East Technical University, Faculty of Engineering, Department of Petroleum and Natural Gas Engineering, Turkey 1994 - 1998

Postgraduate, Middle East Technical University, Faculty of Engineering, Department of Petroleum and Natural Gas Engineering, Turkey 1990 - 1993

Undergraduate, Middle East Technical University, Faculty of Engineering, Department of Petroleum and Natural Gas Engineering, Turkey 1984 - 1990

### **Dissertations**

Doctorate, A STUDY ON OPTIMAL CONTROL AND ON-LINE OBSERVATION OF GAS PIPELINES, Middle East Technical University, Faculty of Engineering, Department of Petroleum and Natural Gas Engineering, 1998

Postgraduate, NON ISOTHERMAL STEADY STATE FLOW OF NATURAL GAS IN TRANSMISSION AND DISTRIBUTION SYSTEMS, Middle East Technical University, Faculty of Engineering, Department of Petroleum and Natural Gas Engineering, 1993

### **Research Areas**

Reservoir Engineering and Recovery Methods, Gas Hydrates, Jeothermal Reservoir Engineering, Pipelining, Underground Storage, Ecology and Pollution, Gas Production from Gas Hydrate Reserves

### **Academic Titles / Tasks**

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Petroleum and Natural Gas Engineering, 2018 - Continues

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Petroleum and Natural Gas Engineering, 2013 - 2018

## Academic and Administrative Experience

Head of Department, Middle East Technical University, Faculty Of Engineering, Department Of Petroleum And Natural Gas Engineering, 2022 - Continues

## Advising Theses

- DURGUT İ., Comparison of host government petroleum contracts and applicability for turkey deepwater offshore licences, Postgraduate, F.VURAL(Student), 2021
- DURGUT İ., Oil spill surface fate model through random walk method with drifted particles in voronoi diagram, Postgraduate, M.ERDOĞAN(Student), 2021
- DURGUT İ., Modeling and simulation of the fluid flow in artificially fractured and gel treated core plugs, Postgraduate, O.ALP(Student), 2021
- DURGUT İ., Design and evaluation of wellbore strengthening materials for fractured reservoirs, Postgraduate, U.Gargılı(Student), 2019
- DURGUT İ., Development of a screening model for polymer flooding in multi-layer reservoirs, Postgraduate, N.ZAREPAKZAD(Student), 2018
- DURGUT İ., Random walk particle modelling of polymer injection using MATLAB reservoir simulation toolbox, Postgraduate, G.MAMAK(Student), 2017
- DURGUT İ., Behavior of pollutants percolation in homogeneous porous media, Postgraduate, S.SEPEHRI(Student), 2016
- DURGUT İ., Particle tracking modeling of marine sediment pollution, Postgraduate, R.TUĞÇE(Student), 2015

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

- I. **Modelling reinjection of two-phase non-condensable gases and water in geothermal wells**  
Leontidis V., Niknam P. H., Durgut İ., Talluri L., Manfrida G., Fiaschi D., Akin S., Gainville M.  
APPLIED THERMAL ENGINEERING, vol.223, pp.1-20, 2023 (SCI-Expanded)
- II. **A comparative analysis and rapid performance prediction of polymer flooding process by coupling reservoir simulation with neural networks**  
Zarepakzad N., Artun E., DURGUT İ.  
International Journal of Oil, Gas and Coal Technology, vol.27, no.3, pp.227-246, 2021 (SCI-Expanded)
- III. **Extending Voronoi-diagram based modeling of oil slick spreading to surface tension-viscous spreading regime**  
DURGUT İ., ERDOĞAN M., Reed M.  
MARINE POLLUTION BULLETIN, vol.160, 2020 (SCI-Expanded)
- IV. **Random walk particle-tracking method for modeling changes of sediment characteristics in marine sediments after drilling discharges**  
ÖZDEMİR R. T., DURGUT İ., Reed M.  
MARINE POLLUTION BULLETIN, vol.145, pp.224-238, 2019 (SCI-Expanded)
- V. **Modeling spreading of oil slicks based on random walk methods and Voronoi diagrams**  
DURGUT İ., Reed M.  
MARINE POLLUTION BULLETIN, vol.118, pp.93-100, 2017 (SCI-Expanded)
- VI. **State estimation of transient flow in gas pipelines by a Kalman filter-based estimator**  
DURGUT İ., LEBLEBİCİOĞLU M. K.  
JOURNAL OF NATURAL GAS SCIENCE AND ENGINEERING, vol.35, pp.189-196, 2016 (SCI-Expanded)
- VII. **Dynamic modeling of environmental risk associated with drilling discharges to marine sediments**  
Durgut I., Rye H., Reed M., Smit M. G. D., Ditlevsen M. K.  
MARINE POLLUTION BULLETIN, vol.99, pp.240-249, 2015 (SCI-Expanded)
- VIII. **Mathematical Modeling of the Soaking Period in a Microbial Enhanced Oil Recovery Application**

- Durgut İ., Behlülçil A. K., Mehmetođlu M. T.  
Energy Sources, vol.25, no.9, pp.871-877, 2003 (SCI-Expanded)
- IX. **The use of genetic algorithms for determining the transport parameters of core experiments**  
Gumrah F., Durgut İ., Oz B., Yeten B.  
IN SITU, vol.24, no.1, pp.21-56, 2000 (SCI-Expanded)
- X. **Kalman-filter-based observer design around optimal control policy for gas pipelines**  
Durgut İ., Leblebicioglu K.  
INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN FLUIDS, vol.24, no.2, pp.233-245, 1997 (SCI-Expanded)
- XI. **Optimal control of gas pipelines via infinite-dimensional analysis**  
Durgut İ., Leblebicioglu K.  
INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN FLUIDS, vol.22, no.9, pp.867-879, 1996 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Effect of Dispersion Coefficient on Polymer Injection Studied with Random Walk Particle Tracking Method**  
Durgut I., Mamak G.  
Niđe Ömer Halisdemir Üniversitesi Mühendislik Bilimleri Dergisi, vol.10, no.1, pp.432-438, 2021 (Peer-Reviewed Journal)
- II. **Investigating Use of Pressure Pulses to Assess Near Wellbore Reservoir Parameters**  
Durgut İ.  
Selçuk Üniversitesi Mühendislik, Bilim ve Teknoloji Dergisi, vol.7, no.1, pp.331-345, 2019 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Analysis of Spreading of Oil Spill on the Sea Surface During Gravity-Viscous and Surface Tension-Viscous Regimes**  
Durgut I., Erdođan M.  
1st International Petroleum and Natural Gas Congress and Exhibition of Türkiye, Ankara, Turkey, 27 - 29 September 2023, pp.625-628
- II. **Numerical Modeling of Waterflooding Experiments in Artificially Fractured and Gel Treated Core Plugs by Embedded Discrete Fracture Model of a Reservoir Simulation Toolbox**  
KAYA O. A., DURGUT İ., Canbolat S.  
2022 SPE International Conference and Exhibition on Formation Damage Control, FD 2022, Louisiana, United States Of America, 23 - 24 February 2022, vol.2022-February
- III. **DESIGN AND EVALUATION OF WELLBORE STRENGTHENING MATERIALS FOR FRACTURED RESERVOIRS**  
Gargılı U., Gücüyener İ. H., DURGUT İ., Dođan H. A., Ay A.  
ASME 2022 41st International Conference on Ocean, Offshore and Arctic Engineering, OMAE 2022, Hamburg, Germany, 5 - 10 June 2022, vol.10
- IV. **Investigating the Effects of Earthquakes on Tuzla Geothermal Field**  
Parlaktuna B., Sinayuç Ç., Durgut İ.  
World Geothermal Congress, Reykjavik, Iceland, 30 March - 27 October 2021, pp.1-10
- V. **Design and Development of Data-Driven Screening Tools for Enhanced Oil Recovery Processes**  
Yalgın G., Zarepakzad N., ARTUN F. E., DURGUT İ., KÖK M. V.  
SPE Western Regional Meeting, 22 - 26 April 2018
- VI. **A numerical method for the gas production process in gas hydrate reservoirs**  
Durgut İ., Parlaktuna M.  
2nd International Conference on Natural Gas Hydrates (NGH 96), Toulouse, France, 2 - 06 June 1996, pp.549-556

## **Metrics**

Publication: 19

Citation (WoS): 64

Citation (Scopus): 75

H-Index (WoS): 4

H-Index (Scopus): 5