

## **Assoc. Prof. ÇAĞLAR SINAYUÇ**

### **Personal Information**

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### **International Researcher IDs**

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Publons / Web Of Science ResearcherID: AAT-9782-2020

ScopusID: 7801371052

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### **Education Information**

Doctorate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Petrol Mühendisliği (Dr), Turkey 2001 - 2007

Postgraduate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Petrol Ve Doğalgaz Mühendisliği (YI) (Tezli), Turkey 1998 - 2001

Undergraduate, Middle East Technical University, Faculty of Engineering, Department of Petroleum and Natural Gas Engineering, Turkey 1993 - 1998

### **Foreign Languages**

English, C1 Advanced

### **Dissertations**

Doctorate, Modeling of enhanced coalbed methane recovery from Amasra coalbed in Zonguldak coal basin, Middle East Technical University, Graduate School of Natural and Applied Sciences, Petrol Mühendisliği (Dr), 2007

Postgraduate, Prediction of the phase behavior of a gas-condensate system: Computer modeling study, Middle East Technical University, Graduate School of Natural and Applied Sciences, Petrol Ve Doğalgaz Mühendisliği (YI) (Tezli), 2001

### **Research Areas**

Petroleum And Natural Gas Engineering, Reservoir, Reservoir Engineering and Recovery Methods, Gas Hydrates, Jeothermal Reservoir Engineering, Underground Storage, Alternate Fuels and Energy Resources, Petroleum Products (gasoline, diesel, fuel oil, solvents, etc.), 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, 2011 - 2017

Researcher, Imperial College of Science, Technology and Medicine, Earth Science and Engineering, 2007 - 2011  
Expert, Middle East Technical University, Faculty of Engineering, Department of Petroleum and Natural Gas Engineering, 2005 - 2007  
Research Assistant, Middle East Technical University, Faculty of Engineering, Department of Petroleum and Natural Gas Engineering, 1998 - 2005

## Academic and Administrative Experience

Head of Department, Middle East Technical University, Faculty of Engineering, Department of Petroleum and Natural Gas Engineering, 2018 - Continues  
Head of Department, Middle East Technical University, Graduate School of Natural and Applied Sciences, Petrol ve Doğal Gaz Mühendisliği, 2018 - Continues  
Middle East Technical University, Faculty of Engineering, Department of Petroleum and Natural Gas Engineering, 2011 - Continues  
Deputy Head of Department, Middle East Technical University, Faculty of Engineering, Department of Petroleum and Natural Gas Engineering, 2011 - 2018  
Deputy Director of Research Institute, Middle East Technical University, Faculty of Engineering, Department of Petroleum and Natural Gas Engineering, 2011 - 2018  
Fakülte Yönetim Kurulu Üyesi, Middle East Technical University, Faculty of Engineering, Department of Petroleum and Natural Gas Engineering, 2012 - 2015

## Advising Theses

SINAYUÇ Ç., Utilisation of an existing natural gas storage field for hydrogen storage: Northern Marmara depleted gas field simulation study, Postgraduate, H.GÜRSEL(Student), 2022  
SINAYUÇ Ç., Implementation of noise filtering algorithm for automated pressure transient analysis, Postgraduate, D.COŞAR(Student), 2022  
SINAYUÇ Ç., Carbon dioxide sequestration and enhanced oil recovery co-optimization, Postgraduate, N.AKHUNDOV(Student), 2021  
SINAYUÇ Ç., Dispersion modelling of jet propellant 8 spill in the aerospace industry, Postgraduate, O.Çelik(Student), 2020  
SINAYUÇ Ç., Assessment of the effects of carbon dioxide injection on the reservoir formation, caprock and wellbore integrity, Postgraduate, A.Ali(Student), 2019  
SINAYUÇ Ç., Use of equivalent single porosity medium and automated lumped fluid composition simulation in naturally fractured gas condensate reservoirs, Doctorate, M.Cihan(Student), 2018  
SINAYUÇ Ç., Use of equivalent single porosity medium and automated lumped fluid composition in naturally fractured gas condensate reservoir simulations, Doctorate, M.CİHAN(Student), 2018  
SINAYUÇ Ç., Analysis of the Black Sea gas hydrates, Doctorate, Ş.MEREY(Student), 2017  
SINAYUÇ Ç., Assessing uncertainties and managing risks in shale gas projects, Doctorate, M.FATİH(Student), 2017  
SINAYUÇ Ç., Candidate selection process for polymer gel application by using artificial neural networks, Doctorate, O.ÖRS(Student), 2017  
SINAYUÇ Ç., Characterization of plus fractions for low gas-oil ratio black oil samples in Turkey, Postgraduate, A.TÜRKMENOĞLU(Student), 2016  
SINAYUÇ Ç., Use of Voronoi gridding in well test design, Postgraduate, F.RAHİMOV(Student), 2015  
SINAYUÇ Ç., Optimization of locations of Voronoi grid points in reservoir simulation, Postgraduate, U.RZA(Student), 2015  
SINAYUÇ Ç., Assessment of production strategies of a gas condensate field using a black oil simulator: a case study, Postgraduate, B.PARLAKTUNA(Student), 2015  
SINAYUÇ Ç., An experimental study of enhanced oil recovery application in limestone medium using NaOH solutions, Postgraduate, C.AY(Student), 2014  
SINAYUÇ Ç., Effects of CO<sub>2</sub> saturation on the recovery of the heavy oil using steam injection EOR technique, Postgraduate,

G.Farid(Student), 2014

SINAYUÇ Ç., Effects of CO<sub>2</sub> saturation on the recovery of the heavy oil using steam injection EOR technique,

Postgraduate, F.GULUZADE(Student), 2014

SINAYUÇ Ç., Pressure- and rate- transient analysis of the simulated single and multi-fractured horizontal wells drilled in shale gas reservoirs, Postgraduate, T.JAFARLI(Student), 2013

SINAYUÇ Ç., Production performance analysis of coal bed methane, shale gas, and tight gas reservoirs with different well trajectories and completion techniques, Postgraduate, M.Cihan(Student), 2013

SINAYUÇ Ç., Production performance of coal bed methane, shale gas and tight gas reservoirs with different well trajectories and completion techniques, Postgraduate, M.CİHAN(Student), 2013

SINAYUÇ Ç., Experimental analysis of adsorption capacities and behaviors of shale samples, Postgraduate, Ş.MEREY(Student), 2013

SINAYUÇ Ç., Development of expert system for artificial lift selection, Postgraduate, E.Aliyev(Student), 2013

SINAYUÇ Ç., An Experimental investigation of the shale inhibition properties of a quaternary amine compound, Postgraduate, O.Örs(Student), 2012

SINAYUÇ Ç., Investigation of the interaction of CO<sub>2</sub> and CH<sub>4</sub> hydrate for the determination of feasibility of CO<sub>2</sub> storage in the Black Sea sediments, Postgraduate, O.ÖRS(Student), 2012

SINAYUÇ Ç., CO<sub>2</sub>-ECBM OPTIMISATION STRATEGIES AND CO<sub>2</sub> STORAGE CAPACITY ASSESSMENT OF A EUROPEAN COALFIELD, Postgraduate, W.Nah(Student), 2010

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

### I. Modeling of ECBM recovery from Amasra coalbed in Zonguldak Basin, Turkey

Sinayuc C., Gumrah F.

INTERNATIONAL JOURNAL OF COAL GEOLOGY, vol.77, pp.162-174, 2009 (SCI-Expanded)

### II. Wellbore Modeling for Predicting the Flowing Behavior of Gas Condensate during Production

Adagulu D., Gumrah F., SINAYUÇ Ç.

ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.31, no.9, pp.783-795, 2009 (SCI-Expanded)

## Refereed Congress / Symposium Publications in Proceedings

### I. Rheological and PVT Behavior of Synthetic Based Drilling Fluids Under Temperature-Pressure Conditions of the Riser in Deepwater Drilling

Yanik S., Gucuyener I., SINAYUÇ Ç., Akel O.

2024 International Petroleum Technology Conference, IPTC 2024, Dhahran, Saudi Arabia, 12 February 2024

### II. Minimization Of The Noise In The Calculated Pressure Derivative Data For The Interpretation Of Transient Tests

Coşar D., Sinayuç Ç.

İPETGAS 2023, Ankara, Turkey, 27 - 29 September 2023, pp.699-701

### III. 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

### IV. CO<sub>2</sub>-EOR business opportunities in Romania and Turkey

Bos C., Vandeweyer V., Dudu A., Sinayuç Ç., Nermoen A.

15th International Conference on Greenhouse Gas Control Technologies, GHGT-15, Abu Dhabi, United Arab Emirates, 15 - 18 March 2021, pp.1-10

### V. Modelling of ECBM recovery from Amasra Coalbed in Zonguldak Basin, Turkey

Sinayuc Ç., Gumrah F.

Canadian International Petroleum Conference 2008, CIPC 2008, Calgary, Canada, 17 - 19 June 2008

- VI. **Effect of Voronoi Tesellation in Reservoir Flow Modelling**  
BAYRAM ERTÜRK T., SINAYUÇ Ç.  
20th International Petroleum Congress and Exhibition of Turkey, Ankara, Turkey, 27 - 29 May 2015, vol.1, pp.371
- VII. **Use of Voronoi Gridding in the Design of Well Tests**  
RAHIMOV F., SINAYUÇ Ç.  
20th International Petroleum Congress and Exhibition of Turkey, Ankara, Turkey, 27 - 29 May 2015, vol.1, pp.372
- VIII. **Optimization of Locations of Voronoi Grid Points in Reservoir Simulation**  
RZA GULIYEV U., SINAYUÇ Ç.  
20th International Petroleum Congress and Exhibition of Turkey, Ankara, Turkey, 27 - 29 May 2015, vol.1, pp.373
- IX. **Simulation of Gas Production from Hydrate Reservoirs by Using HydrateResSim Numerical Simulator**  
MERİY Ş., SINAYUÇ Ç.  
20th International Petroleum and Natural Gas Congress and Exhibition of Turkey, Ankara, Turkey, 27 - 29 May 2015, vol.1, pp.33
- X. **Gas and Gas Hydrate Potential Offshore Amasra Bartın and Zonguldak and Possible Agent for Multiple BSR Occurrence**  
KÜÇÜK H. M., DONDURUR D., ÖZEL Ö., SINAYUÇ Ç., MERİY Ş., PARLAKTUNA M., ÇİFÇİ G., TEAM S.  
European Geosciences Union General Assembly, Viyana, Austria, 12 - 17 April 2015, vol.17
- XI. **Production performance analysis of unconventional gas reservoirs with different well trajectories and completion techniques**  
Ertürk M. C., SINAYUÇ Ç.  
SPE Middle East Unconventional Resources Conference and Exhibition 2015 - The Journey of Unconventional Resources: From Exploration to Successful Development, Muscat, Oman, 26 - 28 January 2015, pp.325-335
- XII. **Kömür Yatağı Gazı Nedir Tehlike mi yoksa Enerji Kaynağı mı**  
SINAYUÇ Ç.  
Recep Tayyip Erdoğan Üniversitesi Alışılalmedik Enerji Kaynakları Paneli, Rize, Turkey, 15 December 2014
- XIII. **What is Coalbed Methane Hazard or an Energy Source**  
SINAYUÇ Ç.  
SPE Turkey Section Unconventional Resource Symposium, Ankara, Turkey, 4 - 06 December 2014
- XIV. **How the consensus program standard deviation affected the success of fuel laboratory proficiency test participants**  
Sinayuç Ç., Bülbül S., Üçkardeş H., Düzel B., Sağlam D. N., Yucayurt G., Soysal E., Adalan H., Okandan E.  
8th EURACHEM Workshop- Proficiency Testing in Analytical Chemistry, Microbiology and Laboratory Medicine, Berlin, Germany, 6 - 09 October 2014
- XV. **Turkey s Potential as Future Energy Hub**  
SINAYUÇ Ç.  
Kick-Off Workshop: Turkey's Role in Global Energy, Ankara, Turkey, 19 - 20 June 2014
- XVI. **Promising Options of CO2 Geologic Storage**  
SINAYUÇ Ç.  
Istanbul Carbon Summit: Carbon Management, Technologies & Trade, İstanbul, Turkey, 3 - 05 April 2014
- XVII. **Amasra Zonguldak Açıklarının Gaz Hidrat Potansiyeli ve Çoklu BSR Yansımalarının Olası Oluşum Nedenleri**  
KÜÇÜK H. M., DONDURUR D., ÖZEL Ö., PARLAKTUNA M., SINAYUÇ Ç., MERİY Ş., DARILMAZ E., ÇİFÇİ G.  
20th International Geophysical Congress and Exhibition of Turkey, Antalya, Turkey, 25 - 27 November 2013
- XVIII. **Unconventional Shale Gas Resources are Going to Provide New CO2 Storage Mediums an Experimental Study**  
MERİY Ş., SINAYUÇ Ç.  
6th CGS Europe Knowledge Sharing Workshop, Bratislava, Slovakia, 16 - 17 September 2013
- XIX. **Methane Hydrate Stability Regions in Deep Sea Sediments can be an Alternative for the Safe Storage of CO2**  
SINAYUÇ Ç., ÖRS O.  
6th CGS Europe Knowledge Sharing Workshop, Bratislava, Slovakia, 16 - 17 September 2013

- XX. **Carbon Capture and Storage Technology**  
SINAYUÇ Ç.  
Developments in the Geological Storage of CO<sub>2</sub> in the World and Turkey Workshop, Ankara, Turkey, 29 May 2013
- XXI. **Production Performance Analysis of Coal Bed Methane Shale Gas and Tight Gas Reservoirs with Different Well Trajectories and Completion Techniques**  
ERTÜRK M. C., SINAYUÇ Ç.  
19th International Petroleum Congress and Exhibition of Turkey, Ankara, Turkey, 15 - 17 May 2013
- XXII. **Investigation of the Interaction of CO<sub>2</sub> and CH<sub>4</sub> Hydrate for the Determination of Feasibility of CO<sub>2</sub> Storage in the Black Sea Sediments**  
ÖRS O., SINAYUÇ Ç.  
19th International Petroleum Congress and Exhibition of Turkey, Ankara, Turkey, 15 - 17 May 2013
- XXIII. **Experimental Analysis of Adsorption Capacities and Behaviors of Shale Samples**  
MEREY Ş., SINAYUÇ Ç.  
19th International Petroleum Congress and Exhibition of Turkey, Ankara, Turkey, 15 - 17 May 2013
- XXIV. **Snohvit CO<sub>2</sub> storage project: Assessment of CO<sub>2</sub> injection performance through history matching of the injection well pressure over a 32-months period**  
Shi J., Imrie C., Sinayuc Ç., Durucan S., Korre A., Eiken O.  
11th International Conference on Greenhouse Gas Control Technologies, GHGT 2012, Kyoto, Japan, 18 - 22 November 2012, vol.37, pp.3267-3274
- XXV. **Numerical modeling of counter-current spontaneous imbibition during underbalanced drilling**  
Naseri M., SINAYUÇ Ç.  
North Africa Technical Conference and Exhibition 2012: Managing Hydrocarbon Resources in a Changing Environment, NATC 2012, Cairo, Egypt, 20 - 22 February 2012, vol.2, pp.1303-1312
- XXVI. **Deep Saline Formations The Largest Potential Volumes for Geological Storage of CO<sub>2</sub>**  
SINAYUÇ Ç.  
CO<sub>2</sub> Capture and Storage Regional Awareness-Raising Workshop, Ankara, Turkey, 14 June 2012
- XXVII. **CO<sub>2</sub> Storage in Deep Coal Seams**  
SINAYUÇ Ç.  
Underground Storage of Emission Sourced CO<sub>2</sub> Workshop, Ankara, Turkey, 16 December 2011
- XXVIII. **Impact of Pressure and Non Isothermal Effects on Well Injectivity in CO<sub>2</sub> Geological Storage**  
BACCI G., SINAYUÇ Ç., KORRE A., DURUCAN S.  
Minerals Research in UK Universities Conference, Londrina, Brazil, 15 - 16 December 2009
- XXIX. **Modeling of Enhanced Coalbed Methane Recovery from Amasra Coalbed in Zonguldak Basin**  
SINAYUÇ Ç., GÜMRAH F.  
Petroleum Society's 59th Annual Technical Meeting, Calgary, Canada, 17 - 19 June 2008
- XXX. **Coal Bed Methane Potential in Zonguldak Basin Turkey**  
OKANDAN E., GÜMRAH F., TOPKAYA I., SINAYUÇ Ç., GÜRPINAR S.  
Asia Pacific Coalbed Methane Symposium, Brisbane, Australia, 22 - 24 September 2008
- XXXI. **Modeling of Enhanced Coalbed Methane Recovery in a Coalbed at Zonguldak Basin**  
SINAYUÇ Ç., GÜMRAH F.  
16th International Petroleum Congress and Exhibition of Turkey, Ankara, Turkey, 29 - 31 May 2007
- XXXII. **Predicting the critical properties of heptanes-plus in gas condensates: Genetic algorithms as an optimization tool**  
SINAYUÇ Ç., Gumrah F.  
5th Canadian International Petroleum Conference 2004, CIPC 2004, Calgary, United States Of America, 8 - 10 June 2004
- XXXIII. **Otogaz da Kalite**  
OKANDAN E., SINAYUÇ Ç.  
LPG ve CNG Uygulamaları Sempozyumu, Ankara, Turkey, 14 December 2002
- XXXIV. **Gaz Kondensat Faz Davranışlarının Tahmin Edilmesi**  
SINAYUÇ Ç., GÜMRAH F.

13th International Petroleum Congress and Exhibition of Turkey, Ankara, Turkey, 4 - 06 June 2001

XXXV. **Bir Yeraltı Gaz Deposu Rezervuarından Gaz Üretiminin Optimizasyonu**

SINAYUÇ Ç., KÜÇÜKEKŞİ M. S., GÜMRAH F.

Türkiye 8. Enerji Kongresi, Ankara, Turkey, 8 - 12 May 2000

## **Metrics**

Publication: 59

Citation (WoS): 363

Citation (Scopus): 308

H-Index (WoS): 10

H-Index (Scopus): 11