

Curriculum Vitae

Dr. Çağlar SINAYUÇ

ADDRESS

- **Home:** Koru Mah. 2580. Sok.11/4, Cayyolu, Yenimahalle, Ankara/Turkey.
 - **Office:** Petrol ve Dogal Gaz Muhendisligi Bolumu, ODTU, Room Z-12, Eskisehir Yolu, Ankara/Turkey.
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PERSONAL INFORMATION

- **Date of Birth:** 30th of May, 1975
 - **Place of Birth:** Ankara, TURKEY
 - **Nationality:** Turkish
 - **Marital Status:** Married, 2 children.
 - **Gender:** Male
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EDUCATION HISTORY

- **PhD:** Middle East Technical University – Petroleum & Natural Gas Engineering Department
'Modelling of Enhanced Coalbed Methane Recovery in a Coalbed at Zonguldak Basin',
July 2007, Ankara, TURKEY. CGPA: 3.36/4.00
 - **MSc:** Middle East Technical University – Petroleum & Natural Gas Engineering Department
'Prediction of the Phase Behavior of a Gas-Condensate System:
Computer Modeling Study', September 2001, Ankara, TURKEY. CGPA:3.86/4.00.
 - **BSc:** Middle East Technical University – Petroleum & Natural Gas Engineering Department
June 1998, Ankara, TURKEY. CGPA: 3.29/4.00, First rank in the class.
 - **High School:** Ankara Anatolian High School - French Division
June 1993, Ankara, TURKEY.
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WORK EXPERIENCE

2011 – Now: Department of Petroleum and Natural Gas Engineering Department, Middle East Technical University, Ankara, TURKEY.

- Assistant Professor,
- Deputy Head of the Department

2011 – Now: Petroleum Research Center (PAL), Middle East Technical University, Ankara, TURKEY

- Deputy Head of the Research Center
- Statistics Coordinator of METU-PAL Inter-laboratory Fuel Comparison Scheme

2007 – 2011: Department of Earth Science and Engineering Department, Imperial College, London, UK

- Post Doctoral Research Associate
 - CO2ReMoVe Project (Modeling of CO₂ storage into aquifers)
 - GRASP Project (Well and Reservoir Injectivity Assessment)
 - Composite Energy Ltd (An Investigation into the Theory and Field Implementation of CO₂ and/or Flue Gas Injection in Coal Seams for Carbon Storage Using Horizontal Well Technology)

2001 – 2007: Petroleum Research Center (PAL), Middle East Technical University, Ankara, TURKEY

- LPG Laboratory Lab Coordinator (2001 - 2007), first LPG Lab in Turkey has been established,
- Quality Manager (2003 - 2007), Petroleum Research Center has been accredited according to ISO 17025 standard.

1998 – 2001: Petroleum & Natural Gas Engineering Department, Middle East Technical University, Ankara, TURKEY

- Research and Teaching Assistant, METU Petroleum and N.G. Eng. Dept.
- Lab Assistant, PETE 216, Reservoir Rock and Fluid Properties
- Course Assistant, PETE 441, Petroleum Reservoir Engineering II
- Course Assistant and Recitation Lecturer, PETE 461, Natural Gas Engineering

1996 Summer:

Trainee, Schlumberger Wireline and Testing, Shukheir, EGYPT, A report on "Mechanical Plug Back Tool" has been prepared and presented.

1995 Summer:

Trainee, TPAO, Adiyaman, TURKEY, Drilling of "Ozan Sungurlu 6" well has been observed.

SKILLS

Computer: Computer Modelling Group – Generalized Equation-of-State Model Compositional Reservoir Simulator (GEM) Module

Schlumberger – ECLIPSE Reservoir Simulator

Schlumberger – PETREL

Palisade @Risk Risk Analysis Tool

Basic, Fortran, C, C++, C#, Objective-C Programming

Apple XCode

Microsoft Visual Studio.net

Microsoft Office Applications (Word, Excel, PowerPoint, Access)

Macromedia Applications (Flash, Dreamweaver)

SQL

Language: Turkish (Native)

English (Fluent)

French (Good)

Russian (Poor)

PUBLISHED PAPERS

International Peer Reviewed Papers

Durucan, S., Shi, J., & **Sinayuc, C.** (2012). Assessment of carbon dioxide plume behaviour within the storage reservoir and the lower caprock around the KB-502 injection well at In Salah. *International Journal of Greenhouse Gas Control*.

Sinayuc, Ç., Gümrah, F. (2009). Modeling of ECBM Recovery from Amasra coalbed in Zonguldak Basin, Turkey. *International Journal of Coal Geology*, Vol. 77, pp. 162-174.

Adagülü, D., Gümrah, F., **Sinayuc, Ç.** (2009). Wellbore Modeling for Predicting the Flowing Behavior of Gas Condensate during Production. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, Vol. 31, No. 9, pp. 783-795.

Sinayuc, Ç., Gümrah, F. (2004). Model for Gas-Condensate Phase Equilibria for Estimating C7+ Critical Properties Using Genetic Algorithm. *Transport in Porous Media*, Vol. 55, pp. 201-214.

Sinayuc, Ç., Küçükekçi M.S., Gümrah, F. (2000). Optimization of Energy Production from an Underground Gas Storage Reservoir. *Energy Sources*, Vol. 22, No. 5, pp. 465-477.

Conference Proceedings

Sinayuc, Ç., Örs, O. Methane Hydrate Stability Regions in Deep Sea Sediments can be an Alternative for the Safe Storage of CO₂, 6th CGS Europe Knowledge Sharing Workshop, September 16-17, 2013, Bratislava, Slovakia.

- Merey, Ş., **Sınayuç, Ç.** Unconventional Shale Gas Resources are Going to Provide New CO₂ Storage Mediums: an Experimental Study”, 6th CGS Europe Knowledge Sharing Workshop, September 16-17, 2013, Bratislava, Slovakia.
- Örs, O., **Sınayuç, Ç.** (2013). Investigation of the Interaction of CO₂ and CH₄ Hydrate for the Determination of Feasibility of CO₂ Storage in the Black Sea Sediments. *19th International Petroleum Congress and Exhibition of Turkey*, May 15-17, Ankara, Turkey.
- Ertürk, M. C., **Sınayuç, Ç.** (2013). Production Performance Analysis of Coal Bed Methane, Shale Gas, and Tight Gas Reservoirs with Different Well Trajectories and Completion Techniques. *19th International Petroleum Congress and Exhibition of Turkey*, May 15-17, Ankara, Turkey.
- Merey, Ş., **Sınayuç, Ç.** (2013). Experimental Analysis of Adsorption Capacities and Behaviors of Shale Samples. *19th International Petroleum Congress and Exhibition of Turkey*, May 15-17, Ankara, Turkey.
- Naseri, M., & **Sınayuç, C.** (2012). Numerical Modeling of Counter-Current Spontaneous Imbibition during Underbalanced Drilling. Presented at the SPE North Africa Technical Conference and Exhibition, 20-22 February, Cairo, Egypt.
- Sınayuç, C.**, Shi, J.-Q., Imrie, C. E., Syed, S. A., Korre, A., & Durucan, S. (2011). Implementation of horizontal well CBM/ECBM technology and the assessment of effective CO₂ storage capacity in a Scottish coalfield. *Energy Procedia*, 4, 2150–2156.
- Smith, J., Durucan, S., Korre, A., Shi, J.-Q., & **Sınayuç, C.** (2011). Assessment of fracture connectivity and potential for CO₂ migration through the reservoir and lower caprock at the In Salah storage site. *Energy Procedia*, 4, 5299–5305.
- Durucan, S., Shi, J., & **Sınayuç, C.** (2011). In Salah CO₂ storage JIP: Carbon dioxide plume extension around KB-502 well–New insights into reservoir behaviour at the In Salah storage site. *Energy Procedia*.
- Giacomo, B., **Sınayuç, Ç.**, Korre, A., Durucan, S. (2009). Impact of Pressure and Non-Isothermal Effects on Well Injectivity in CO₂ Geological Storage. Minerals Research in UK Universities Conference, 15-16 December, London, UK.
- Sınayuç, Ç.**, Gümrah, F. (2008). Modeling of Enhanced Coalbed Methane Recovery from Amasra Coalbed in Zonguldak Basin, Turkey. *Petroleum Society's 59th Annual Technical Meeting*, 17-19 June, Calgary, Alberta, Canada.
- Sınayuç, Ç.**, Gümrah, F. (2007). Modeling of Enhanced Coalbed Methane Recovery in a Coalbed at Zonguldak Basin. *16th International Petroleum Congress and Exhibition of Turkey*, May 29-31, Ankara, Turkey.
- Sınayuç, Ç.**, Gümrah, F. (2004). Predicting the Critical Properties of Heptanes-Plus in Gas-Condensates: Genetic Algorithms as an Optimization Tool. *5th Canadian International Petroleum Conference*, 6-8 October, Calgary, Alberta, Canada.
- Okandan, E., **Sınayuç, Ç.** (2002). Otogaz'da Kalite. *LPG ve CNG Uygulamaları Sempozyumu*, 14 Aralık, Ankara, Türkiye.
- Sınayuç, Ç.**, Gümrah, F. (2001). Gaz Kondensat Faz Davranışlarının Tahmin Edilmesi.

13th International Petroleum Congress and Exhibition of Turkey,
June 04-06, Ankara, Türkiye.

Sınayuç, Ç., Küçükekşi M.S., Gümrah, F. (2000). Bir Yeraltı Gaz Deposu Rezervuarından Gaz Üretiminin Optimizasyonu. *Türkiye 8. Enerji Kongresi*, May 08-12, Ankara, Türkiye.

SEMINARS AND COURSES GIVEN

- **PETE 343:** Reservoir Engineering 1, METU
 - **PETE 461:** Natural Gas Engineering, METU
 - **PETE 444:** Mathematical Modelling of Hydrocarbon Reservoirs, METU
 - **PETE 440:** Well Test Analysis, METU
 - **CO2ReMoVe Summer School on “CO₂ Geological Storage Reservoir Characterisation, Monitoring, Performance Assessment”:** Imperial College, London, UK, 11-16 July 2010.
 - CO₂ Storage Performance Modelling Hands On Tutorial
 - **GRASP Summer School on “Reservoir Characterisation for CO₂ Storage”:** Imperial College, London, UK, 6-10 July 2009.
 - Reservoir Modelling
 - CO₂ Storage Performance Modelling
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THESES SUPERVISED

- **Jafarlı, Tural:** Pressure- and Rate- Transient Analysis of the Simulated Single and Multi-Fractured Horizontal Wells Drilled In Shale Gas Reservoirs, Petroleum and Natural Gas Engineering Department, Middle East Technical University, Ankara, September 2013.
- **Merey, Şükrü:** Experimental Analysis of Adsorption Capacities and Behaviors of Shale Samples, Petroleum and Natural Gas Engineering Department, Middle East Technical University, Ankara, August 2013.
- **Ertürk, Mehmet Cihan:** Production Performance Analysis of Coal Bed Methane, Shale Gas, and Tight Gas Reservoirs with Different Well Trajectories and Completion Techniques, Petroleum and Natural Gas Engineering Department, Middle East Technical University, Ankara, February 2013.
- **Aliyev, Elshan:** Development of Expert System for Artificial Lift Selection, Petroleum and Natural Gas Engineering Department, Middle East Technical University, Ankara, February 2013 (co-supervised with Mr. Can Sungu Bakiler).
- **Örs, Oytun:** Investigation of the Interaction of CO₂ and CH₄ Hydrate for the Determination of Feasibility of CO₂ Storage in the Black Sea Sediments, Petroleum and Natural Gas Engineering Department, Middle East Technical University, Ankara, September 2012.

- **Nah, Wenbin:** CO₂-ECBM Optimisation Strategies and CO₂ Storage Capacity Assessment of an European Coalfield, Department of Earth Science and Engineering, Imperial College London, September 2010 (co-supervised with Prof. Sevket Durucan).
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PRESENTATIONS

- **6th CGS Europe Knowledge Sharing Workshop**, September 16-17, 2013, Bratislava, Slovakia.
 - Methane Hydrate Stability Regions in Deep Sea Sediments can be an Alternative for the Safe Storage of CO₂
- **Developments in the Geological Storage of CO₂ in the World and Turkey Workshop**, Culture and Convention Center, METU, Turkey, 29 May 2013.
 - Carbon Capture and Storage Technology
- **19th International Petroleum Congress and Exhibition of Turkey**, May 15-17, Ankara, Turkey.
 - Investigation of the Interaction of CO₂ and CH₄ Hydrate for the Determination of Feasibility of CO₂ Storage in the Black Sea Sediments
- **CO₂ Capture and Storage Regional Awareness-Raising Workshop**, Ankara, Turkey, 14 June 2012.
 - Deep Saline Formations: The Largest Potential Volumes for Geological Storage of CO₂
- **Underground Storage of Emission Sourced CO₂ Workshop**, Petroleum Research Center, METU, Ankara, Turkey, 16 December 2011.
 - CO₂ Storage in Deep Coal Seams
- **Minerals Research in UK Universities Conference**, London, UK, 15-16 December 2009.
 - Impact of Pressure and Non-Isothermal Effects on Well Injectivity in CO₂ Geological Storage
- **16th International Petroleum Congress and Exhibition of Turkey**, Ankara, Turkey, 29-31 May 2007.
 - Modeling of Enhanced Coalbed Methane Recovery in a Coalbed at Zonguldak Basin.
- **5th Canadian International Petroleum Conference**, Calgary, Alberta, Canada, 6-8 October 2004.
 - Predicting the Critical Properties of Heptanes-Plus in Gas-Condensates: Genetic Algorithms as an Optimization Tool.
- **LPG and CNG Applications Symposium**, Ankara, Turkey, 14 December 2002.
 - Quality of Auto gas
- **13th International Petroleum Congress and Exhibition of Turkey**, Ankara, Turkey, 4-6 June 2001.
 - Prediction of Phase Behavior of Gas Condensates

- **Turkey 8. Energy Congress**, Ankara, Turkey, 8-12 May 2000.
 - Optimization of Gas Production from an Underground Gas Storage Reservoir.
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SEMINARS AND COURSES ATTENDED

- **6th CGS Europe Knowledge Sharing Workshop**: Other promising options for CO₂ storage, Bratislava, Slovakia, 16-17 September 2013.
- **8th CO₂GeoNet Open Forum and CGS Europe workshop**: San Servolo Island - Venice (Italy), 9-11 April 2013.
- **7th CO₂GeoNet Open Forum and CGS Europe workshop**: San Servolo Island - Venice (Italy), 17-19 April 2012.
- **Energy Storage Conference**: Dusseldorf, Germany, March 2011.
- **CO₂ Capture Technologies by EDF-AL**: Cordemais Coal-Oil Fired Power Plant, Nantes, France, 6-8 April 2010.
- **BRGM-CO₂GeoNet Training Course on “Modelling Chemical Reactivity During CO₂ Geological Storage”**: Orleans, France, 1-5 March 2010.
- **End Note Workshop**: Imperial College, London, UK, 2 February 2010.
- **GRASP General Assembly and Research Conference**: Hotel UTO KULM, Zurich, Switzerland, 29-30 October 2009.
- **International Conference on CO₂ Sequestration Processes**: Reykjavik, Iceland, 5-12 September 2009.
- **AUTHOR WORKSHOP on “How to publish a World Class Paper”**: Imperial College, London, UK, 3 April 2009.
- **Writing Up Your Research for Publication**: Imperial College, London, UK, 17 March 2009.
- **GRASP: The Fall School on “Reactive Transport Process in CO₂ Reservoirs”**: Anglet, France, 26-30 October 2008.
- **Negotiating and Influencing Skills for Research Staff**: Imperial College, London, UK, 8 October 2008.
- **3rd Gas Analysis Symposium & Exhibition**: Amsterdam, The Netherlands, 6-8 October 2004
- **5th Canadian International Petroleum Conference**: Calgary, Canada, 8-10 June 2004
- **NATO CCMS Meeting “Environmental Security of Transportation of Hazardous Substances in Black Sea and Caspian Regions”**: PAL, Ankara, 04-06 November 2001
- **13. International Petroleum Congress and Exhibition**: Hilton Hotel, Ankara, 04-06 June 2001
- **Aygaz LPG Seminars**: Middle East Technical University, Petroleum and Natural Gas Engineering Department, Ankara, 2001

- **ERD-99 International Symposium on Extended Reach Drilling:** Middle East Technical University Convention Center, Ankara, May 1999
 - **12th International Petroleum Congress and Exhibition of Turkey:** Middle East Technical University Convention Center, Ankara, 12-15 October 1998
 - **Drilling Simulation:** Turkish Petroleum Company, Ankara, December 1997, 1 day
 - **Natural Gas Reservoirs in Black Sea:** Middle East Technical University, Ankara, October 1997, 1 day
 - **Black Sea'97:** Sheraton Hotel, Ankara, October 1997, 3 days
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PROJECTS COORDINATED AND PARTICIPATED

- **Developing Hydrate Production Technologies (METU),** 2013 – in progress (Coordinator).
 - **Pan-European coordination action on CO₂ Geological Storage (CGS-Europe),** European Community's Seventh Framework Programme, 2011 – 2013 (METU Coordinator)
 - **Greenhouse-gas Removal Apprenticeship & Student Program (GRASP),** European Community's Sixth Framework Programme through the Marie Curie Research Training Network, 2007 - 2011.
 - **CO₂ Research Monitoring Verification (CO₂ReMoVe),** European Community's Sixth Framework Programme, 2007 - 2011.
 - **Carbon dioxide Capture and Storage,** TUBITAK, 2007.
 - **Natural Gas Demand Modelling & Projection for Turkish Market, BOTAS Company,** 2002-2004, done by PAL, METU, Ankara.
 - **NATO CCMS Short Term AD-HOC Project: Environmental Security of Hazardous Substances involved in Oil & Gas Transportation in Black Sea & Caspian Regions,** 2001, done by PAL, METU, Ankara.
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HOBBIES

- Tennis, Table Tennis, Swimming, Billiards
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MEMBERSHIPS

- Chamber of Turkish Petroleum Engineers
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