

**Dr. Attila Aydemir**

**Assoc. Professor** Atılım University

Department of Energy Systems Engineering 06830 İncek, Gölbaşı, Ankara/TURKEY

attila.aydemir@atilim.edu.tr

Tel: +90 505 660 3433

PERSONAL

|  |  |
| --- | --- |
| **Date of Birth** | 1965 |
| **Place of Birth** | Kagizman-Kars |

EDUCATION

|  |  |
| --- | --- |
| **1999-2005** | Ankara University, Geophysical Engineering, PhD |
| **1989-1991** | Ankara University, Geophysical Engineering, M.S. |
| **1982-1987** | Ankara University, Geophysical Engineering, B.S. |

ACADEMIC POSITIONS

|  |  |
| --- | --- |
| **2018-Present** | Part-Time Instructor-Assoc. Professor, Department of Energy Systems Engineering, Atılım University, Turkey |
| **2021-Present** | Part-Time Instructor-Assoc. Professor, Department of Petroleum Engineering, METU-NCC |
| **2023-Present** | Part-Time Instructor-Assoc. Professor, Department of Economics OSTIM TEKNIK University |

HONORS&AWARDS

|  |  |
| --- | --- |
|  **2008** |  Top Reviewer, Tectonophysics Journal |

RESEARCH INTERESTS

|  |  |
| --- | --- |
| **1** | Petroleum Exploration |
| **2** | Geothermal Energy Exploration |
| **3** | Unconventional Oil & Gas Resources |
| **4** | Renewable Energy Resources |
| **5** | Seismic Exploration Methods & Techniques |
| **6** | Gravity & Magnetics  |

PUBLICATIONS

|  |  |
| --- | --- |
| 1 | Ates, A., Erbek-Kiran, E., **Aydemir, A.**, 2024. Investigation of the Newent Magnetic Anomaly as the northern extension of Tetbury Anomaly, Malvern Rift-Worcester Graben, UK (under review). |
| 2 | Kilic, B.O., Ulug, A., **Aydemir, A**., 2024. Seismic mapping in the Gulf of Candarli for the basin evolution, Aegean Sea, offshore Turkey (under review). |
| 3 | **Aydemir, A**., 2024. Usage of magnetic anomaly data for detection of a re-activated fault under the volcanic cover: Van Golu Fault, Eastern Anatolia-Turkey (under review).  |
| 4 | **Aydemir, A**., Bilim, F., 2024. Investigation and 3-D gravity modeling of Kars Basin, as a hidden extension of the Caspian Petroleum System in the NE-Anatolia, Turkey (under review). |
| 5 | Erbek-Kiran, E., **Aydemir, A.**, Ates, A., Dolmaz, M.N., 2024. A buried volcanic arc in the Eastern Mediterranean: Antalya Magnetic Anomaly representing the western link of the arc and its geophysical investigation with magnetic and seismic data (under review). |
| 6 | Alyaz, A.M., Bedle, H., **Aydemir, A**., 2023. Seismic attribute assisted analysis of the interpretational variations in the time and depth migrated data sets: an example from Taranaki Basin, New Zealand. ***Marine and Petroleum Geology***, 155: 106301. |
| 7 | Ozer, Z., Kamaci, Z., **Aydemir, A**., 2023. Innovative 3D Modeling of an old oil field for sustainable production: Case Study of Katin-Barbes Oil Field (KBOF), SE Anatolia- Turkey. ***Marine and Petroleum Geology***, 154: 106341. |
| 8 | Bilim, F., **Aydemir, A.**, 2022. Thermo-magnetic properties of the upper crust in Central Anatolian Crystalline Complex-CACC (Turkey) from spectral analysis of magnetic anomalies: A review. ***Arabian Journal of Geosciences*** 15: 191. |
| 9 | Coskun, S., Stewart, R.R., Baysal, E., **Aydemir, A.**, 2021. Optimum 2-D and 3-D seismic acquisition design via modeling and reverse-time migration: Pierce Junction salt dome, Texas. ***Surveys in Geophysics*** 42: 1171-1196. |
| 10 | Bilim, F., **Aydemir, A.**, Ates, A., 2021. Interpretation of aeromagnetic data for the geothermal properties in the northwestern part of Turkey. ***Journal of African Earth Sciences***,177: 104148. |
| 11 | Bilim, F., **Aydemir, A.**, Ates, A., 2021. Geothermal prospectivity of the Bigadic Basin and surrounding area, NW Anatolia-Turkey by the spectral analysis of magnetic data. ***Pure and Applied Geophysics***. 178: 3085-3107. |
| 12 | Bilim, F., **Aydemir, A.**, Ates, A. Dolmaz, M.N., Kosaroglu, S., Erbek, E., 2021. Crustal thickness in the Black Sea and surrounding region, estimated from the gravity data. ***Marine and Petroleum Geology***, 123: 104735. |
| 13 | Bilim, F., **Aydemir, A.**, 2021. Interpretation of aeromagnetic data of the Sivas Basin in the Central Eastern Turkey**.** ***Turkish******Journal of Earth Sciences***. 30: 81-92. |
| 14 | Cetin, F., Kutluk,H., **Aydemir, A.**, 2020. Geoengineering properties of the Ertugrul (Cayirkoy) district, Nilufer Province, Bursa-Turkey, by using geophysical methods and borehole data. ***Journal of Applied Geophysics***. 178: 104050. |
| 15 | **Aydemir, A.**, Bilim, F., Avci, B., Kosaroglu, S., 2020. Geophysical investigation for the geothermal potential under the largest volcanic cover in Anatolia: Kars Plateau, NE Turkey. ***Pure and Applied Geophysics***. 177: 919-939. |
| 16 | Bilim, F., **Aydemir, A.**, Kosaroglu, S., Bektas, O., 2018. Effects of the Karacadag Volcanic Complex on the thermal structure and geothermal potential of southeast Anatolia. ***Bulletin of Volcanology***, 80: 52. |
| 17 | **Aydemir, A.**, Bilim, F., Cifci, G., Okay, S., 2018. Modeling of the Foca-Uzunada magnetic anomaly and thermal structure in the Gulf of Izmir, western Turkey. ***Journal of Asian Earth Sciences***, 156, 288-301. |
| 18 | Bilim, F., Kosaroglu, S., **Aydemir, A**., Buyuksarac, A., 2017. Thermal investigation in the Cappadocia Region, central Anatolia-Turkey, analyzing the Curie Point Depth, Geothermal Gradient and Heat Flow maps from the aeromagnetic data. ***Pure and Applied Geophysics***, 147, 4445-4458. |
| 19 | Coskun, S., Dondurur, D., Cifci, G., **Aydemir, A.**, Gungor, T., Drahor,M. 2017.Investigation on the tectonic significance of Izmir, Uzunada Fault Zones and other tectonic elements in the Gulf of Izmir, Western Turkey, using high resolution seismic data. ***Marine and Petroleum Geology***, 83, 73-83. |
| 20 | Bilim, F., **Aydemir, A**., Ates, A. 2017. Tectonics and thermal structure in the Gulf of Iskenderun (Southern Turkey) from the aeromagnetic, borehole and seismic data. **Geothermics.** 70, 206-221. |
| 21 | Kosaroglu, S., Buyuksarac, A., **Aydemir, A**. 2016. Modeling of shallow structures in the Cappadocia region using gravity and aeromagnetic anomalies. ***Journal of Asian Earth Sciences.*** 124, 214-226. |
| 22 | Bilim, F., **Aydemir, A**., Ates, A. 2016. Crustal thickness variations in the Eastern Mediterranean and southern Aegean Region. ***Marine and Petroleum Geology,*** 77, 190-197. |
| 23 | Coskun, S., Dondurur, D., Cifci, G., **Aydemir, A.**, Drahor,M. 2016.Natural and anthropogenic submarine morphologies revealed by high resolution acoustic data in the Gulf of Izmir, Western Turkey. ***Marine and Petroleum Geology***, 71, 211-224. |
| 24 | Bilim, F., Akay, T., **Aydemir, A**., Kosaroglu, S. 2016. Curie Point Depth, Heat Flow and Radiogenic Heat production deduced from the spectral analysis of the aeromagnetic data for geothermal investigation on the Menderes Massif and the Aegean Region, western Turkey. **Geothermics**, 60, 44-57. |
| 25 | **Aydemir, A**., Tigli, C.S., Ates, A. 2015. Integrated geophysical investigation of the Galatian Basin around Seben Region, Bolu, Turkey. ***Journal of Petroleum Science and Engineering***, 129, 243-253. |
| 26 | Erik, N.Y., **Aydemir, A**., Buyuksarac, A. 2015. Investigation of the Organic Matter Properties and Hydrocarbon Potential of the Sivas Basin, Central Eastern Anatolia, Turkey, using Rock-Eval data and Organic Petrography. ***Journal of Petroleum Science and Engineering***, 127, 148-168. |
| 27 | Bilim, F., **Aydemir, A.**, Ates, A. 2015. Determination of block rotations and the Curie Point  Depths of magnetic sources along the NW‐SE trending Suluklu‐Cihanbeyli‐Goloren and Sereflikochisar‐Aksaray Fault Zones, Central Anatolia, Turkey. ***Geodinamica Acta***, 27, 202-212 |
| 28 | Ates, A., Ekinci, Y.L., Buyuksarac, A., **Aydemir, A.,** Demirci, A. 2015. Statistical analysis of geomagnetic variations during the partial solar eclipse on 2011 January 4 in Turkey. ***Research in Astronomy and Astrophysics,*** 15, 742-752. |
| 29 | **Aydemir, A.**, Ates, A., Bilim, F., Buyuksarac, A., Bektas, O. 2014. Evaluation of gravity and aeromagnetic anomalies for the deep structure and possibility of hydrocarbon potential of the region surrounding Lake Van, Eastern Anatolia – Turkey. ***Surveys in Geophysics***, 35, 431-448. |
| 30 | Aslan, Y., Buyuksarac, A., Erik, N.Y., **Aydemir, A.**, Ates, A. 2013. Geophysical investigation and hydrocarbon potential of Cankiri-Corum Basin, Turkey. ***Journal of Petroleum Science and Engineering***, 110, 94-108. |
| 31 | Tigli, C.S., Ates, A., **Aydemir, A**. 2012. Geophysical investigations on the gravity and aeromagnetic anomalies of the region between Sapanca and Duzce, along the North Anatolian Fault, Turkey. ***Physics of the Earth and Planetary Interiors***, 212-213, 19-31. |
| 32 | Bektas, O., Ates, A., **Aydemir, A.** 2012. A New Automatic Method for Estimation of Magnetization and Density (Contrast) by using 3D Magnetic and Gravity Anomalies. ***Physics of the Earth and Planetary Interiors***, 204-205, 22-36. |
| 33 | Ates, A., Bilim, F., Buyuksarac, A., **Aydemir, A.,** Bektas, O., Aslan, Y. 2012. Crustal structure of Turkey from aeromagnetic, gravity and deep seismic reflection data. ***Surveys in Geophysics***, 33, 869-885. |
| 34 | Demir, D., Bilim, F., **Aydemir, A.,** Ates, A. 2012. Modelling of Thrace Basin, NW Turkey using gravity and magnetic anomalies with control of seismic and borehole data. ***Journal of Petroleum Science and Engineering***, 86-87, 44-53. |
| 35 | **Aydemir, A.** 2011. Comparison of Mississippian Barnett Shale, Northern-Central Texas and Silurian Dadas Formation in the SE Turkey. ***Journal of Petroleum Science and Engineering***, 80, 81-93. |
| 36 | **Aydemir, A.** 2011. An integrated geophysical investigation of Haymana Basin and hydrocarbon prospective Kirkkavak Formation in Central Anatolia, Turkey. ***Petroleum Geoscience***, 17, 91-100.  |
| 37 | Mihci, M., Buyuksarac, A., **Aydemir, A.**, Celebi, N. 2010. Indoor and outdoor Radon concentration measurements in Sivas, Turkey, in comparison with geological setting. ***Journal of Environmental Radioactivity***, 101, 952-957. |
| 38 | **Aydemir, A.** 2009. Tectonic Investigation of Central Anatolia, Turkey, using Geophysical Data. ***Journal of Applied Geophysics***, 68, 321-334. |
| 39 | Aydemir, A. 2009. Comparison of absorbing boundary conditions in migration: A correlation of reflection coefficients and determination of the optimum grid interval. *Journal of Applied Geophysics*, 67: 143-149. |
| 40 | Onal, K. M., Buyuksarac, A., **Aydemir, A.** and Ates, A. 2008. Investigation of the deep structure of the Sivas Basin with geophysical methods, Innereast Anatolia, Turkey. ***Tectonophysics***, 460: 186-197.  |
| 41 | **Aydemir, A.** and Ates, A. 2008. Determination of Hydrocarbon Prospective Areas in the Tuzgolu (Saltlake) Basin, Central Anatolia, by using Geophysical Data. ***Journal of the Petroleum Science and Engineering***, 62: 36-44. |
| 42 | **Aydemir, A.** 2008. Hydrocarbon Potential of the Tuzgolu (Salt Lake) Basin, Central Anatolia, Turkey: A Comparison of Geophysical Investigation Results with the Geochemical Data. ***Journal of the Petroleum Science and Engineering***, 61: 33-47. |
| 43 | **Aydemir, A.** and Ates, A. 2007. Reply to Comments of Omer Elitok on “Interpretation of the Suluklu-Cihanbeyli-Goloren Magnetic Anomaly, Central Anatolia, Turkey: An integration of geophysical data”. ***Physics of the Earth and Planetary Interiors***, 164: 115-117.  |
| 44 | **Aydemir, A.** and Ateş, A. 2006. Interpretation of the Suluklu-Cihanbeyli-Goloren Magnetic Anomaly, Central Anatolia, Turkey: An integration of geophysical data. ***Physics of the Earth and Planetary Interiors***, 159: 167-182.  |
| 45 | **Aydemir, A.** and Ateş, A. 2006. Structural interpretation of the Tuzgolu and Haymana Basins, Central Anatolia, Turkey, using seismic, gravity and aeromagnetic data. ***Earth, Planets and Space***, 58: 951-961. |

PROJECTS

|  |  |
| --- | --- |
| 1 | Ankara University- Scientific Research Project Support Office – (**BAP**) Project No. 20010705050. *Deep Investigation of the Central Anatolia by using Geophysical Data and Methods (2000-2004)* |
| 2 | Turkish Council of Scientific and Technological Research (**TUBITAK-1002**) – Project No. 106Y301. *Deep Investigation of the Sivas Basin by using Geophysical Data and Methods (2007-2009).* |
| 3 | Turkish Council of Scientific and Technological Research (**TUBITAK-1001**) – Project No. 107Y288. *Investigation into the deep structure and tectonics of Turkey using gravity-magnetic data and interpretation with the usage of seismic-seismological data (2008-2011).* |
| 4 | Cumhuriyet University- Scientific Research Project Support Office – (**BAP**) Project No. M-372. *Hydrocarbon Potential Investigation of the Sivas Basin with Integration of Organic Geochemical Analyses and Geophysical Methods (2010).* |
| 5 | Turkish Council of Scientific and Technological Research (**TUBITAK-1002**) – Project No. 116Y369. *Determination of thermal structure and potential geothermal exploration areas of the Kars Plateau by using magnetic anomaly data (2017).* |

CONFERENCE PRESENTATIONS (ORAL PRESENTATIONS)

|  |  |
| --- | --- |
| **1** | Ates, A., Kiran E.E., **Aydemir, A.** 2023. Deep Geological Structure of the Malvern Rift South England from Aeromagnetic, Gravity and Deep Seismic Reflection Data. 2nd International Conference on Contemporary Academic Research ICCAR-2023 on November 4-5, 2023, Konya, Turkey |
| **2** | Yuksek, M.K., Deliktas, A., **Aydemir, A.** 2023. An integrated approach to carbonate reservoir characterization: a case study from SE of Turkey. 21st Int. Petroleum and Natural Gas Congress and Exhibition of Turkey, September 27-29, 2023, Ankara, Turkey. |
| **3** | **Aydemir, A.**, Bilim, F., Buyuksarac, A., Avci, B. 2017. Determination of geothermal potential of the Kars Plateau by using magnetic anomaly data-Preliminary results. 4th International Regional Development Conference, September 21-23, 2017, Munzur University, Tunceli, Turkey. |
| **4** | Erik, N.Y., **Aydemir, A**., Buyuksarac, A. 2015. Investigation of the Organic Matter Properties and Hydrocarbon Potential of the Sivas Basin, Central Eastern Anatolia, Turkey. 20th Int. Petroleum and Natural Gas Congress and Exhibition of Turkey, May 27-29, 2015, Ankara, Turkey. |
| **5** | Cifci, G., Dondurur, D., Coskun, S., Okay, S., Gurcay, S., Gungor, T., **Aydemir, A.**, Drahor, M., Izmir and Uzunada Active Faults in the Izmir Bay. 20th Int. Geophysical Congress and Exhibition of Turkey, November 25-27, 2013, Antalya Turkey. |
| **6** | **Aydemir, A.**,Potential unconventional formations in different basins of Turkey. 4th World Shale Oil and Gas Summit & Exhibition, November 4-8, 2013, Houston-Texas, USA (**Invited paper**). |
| **7** | Kizilkoca, R., **Aydemir, A.,** Gencer, A., Ercan, A., Ugur, M.S., Gumus, M.H., Unconventional Potential of the Interior Basins of Turkey; Central Anatolia. IPETGAS 2013, May 15-17th, 2013, Ankara, Turkey. |
| **8** | **Aydemir, A.** Prospectivity of shale gas reserves in SE Turkey. 6th Unconventional Gas Conference, March 6-7, 2013, London, UK (**Invited paper**). |
| **9** | **Aydemir, A.** Potential unconventional formations in different basins of Turkey. International Shale Gas and Oil Conference of Turkey (ISGC-2013). February, 20-21, 2013, Ankara, Turkey. |
| **10** | **Aydemir, A.** Silurian Shales in SE Anatolia: A perspective to future unconventional exploration and production in the MENA Region. 11th Turkish International Oil & Gas Conference (TUROGE-2012), 21-22 March, 2012, Ankara, Turkey (**Invited paper**). |
| **11** | **Aydemir, A.** A world-class source rock, Dadas Formation: Turkish equivalent of Silurian hot shales in the Middle East and North Africa (MENA). Unconventional Gas Forum 2012, 13-14 March 2012, Barcelona, Spain (**Invited paper**). |
| **12** | Aslan, Y., Buyuksarac, A., Erik, N. Y., **Aydemir, A.,** Ates, A. Geophysical investigations in Cankiri-Corum Basin, Turkey. 6th Congress of the Balkan Geophysical Society, October 3rd-6th, 2011, Budapest, Hungary. |
| **13** | Demir, D., Bilim, F., **Aydemir, A.,** Ates, A. Iintegration of geological and geophysical data in Thrace Basin, Turkey and modelling of gravity anomalies. 6th Congress of the Balkan Geophysical Society, October 3rd-6th, 2011, Budapest, Hungary. |
| **14** | Guzel, A., Corbacioglu, H., Bozdogan, N., Iztan, Y. H., **Aydemir, A.,** Beser, P. “Unconventional Reservoir” olarak Dadaş Formasyonu’nun stratigrafisi, sedimantolojisi ve Jeokimyası. IPETGAS 2011, May 11-13th, 2011, Ankara, Turkey.88-89. |
| **15** | **Aydemir, A.** Potential unconventional formations in different basins in Turkey. 10th Turkish International Oil & Gas Conference (TUROGE-2011), 16-17 March, 2011, Ankara, Turkey (**Invited paper**). |
| **16** | **Aydemir, A.** New exploration activities, opportunities and potential for unconventional gas in Turkey. European Unconventional Gas Summit-2011, 31 Jan.-2 Feb., 2011, Paris, France (**Invited paper**). |
| **17** | **Aydemir, A.** Potential Shale Gas resources in Turkey: Evaluating geological prospects, geochemical properties, surface Access & infrastructure. Global Shale Gas Summit-2010, July 19-20, Warsaw, Poland (**Invited paper**). |
| **18** | Ates, A., Sendur, C., Komanovali, G., **Aydemir, A.** Crustal Structure of Eastern Marmara from 2D and 3D Gravity and Magnetic Models. Int. Symposium on Historical Earthquakes and Conservation of Monuments and Sites in the Eastern Mediterranean Region, 10-12 Sept. 2009, Istanbul, Türkiye. Abstract Book. 186-193. |
| **19** | Buyuksarac, A., Taymaz, T., Ates, A., Bilim, F., **Aydemir, A.,** Bektas, O., Yolsal, S., Cubuk, Y. 2009. Gravity anomalies and crustal structure of Turkey. Int. Symposium on Historical Earthquakes and Conservation of Monuments and Sites in the Eastern Mediterranean Region, 10-12 Sept. 2009, Istanbul, Türkiye. Abstract Book. 107-112. |
| **20** | Ates, A., Taymaz, T., Bilim, F., Buyuksarac, A., **Aydemir, A.,** Yolsal, S., Cubuk, Y., Bektas, O. 2009. Tectonic interpretation of aeromagnetic anomalies of Turkey. IAGA 11th Scientific Assembly, 23-30 August 2009, Sopron, Hungary, Abstract Book, 119. |
| **21** | Ates, A., Sendur, C., Komanovali, G., **Aydemir, A.** 2009. Investigation of deep crustal structure in the eastern Marmara Region, using gravity and magnetic anomalies. 62. Geological Congress of Turkey, 13-17 April 2009, Ankara, Turkey, Abstract Book, 776-777. |
| **22** | Corbacioglu, H., **Aydemir, A.,** Bozdogan, N., Guzel, A. 2009. Geochemical evaluation of hydrocarbon production from shale source rocks and a quantitative approach (Dadas Formation, South East Anatolia). 62. Geological Congress of Turkey, 13-17 April 2009, Ankara, Turkey, Abstract Book, 560-561. |

CITATIONS

|  |  |
| --- | --- |
| Sum of times cited without self-citations (Scopus): | 468 |
| H-index (Scopus): | 13 |