

# Abdullah BERKAN ERDOĞMUŞ, PhD

Mechanical Engineer.

07.07.1975



## 1. CARRIER PROFILE

- **Experience:** Electronic Cooling, Joule-Thomson Cryogenic Cooling, Applications of Computational Fluid Dynamics and Heat Transfer, Geothermal District Heating Systems, HVAC System Design.
- **Interested Fields:** Applications of Cryogenic Cooling Applications, Experimental Fluid Dynamics, Exergy, Radiation Heat Transfer
- **Qualifications:** Applying project management tools, solution-focused teamwork adaptability, leadership ability, rapid communication skills, willingness to follow the scientific publications, making presentations in front of people, to conduct laboratory studies, paying attention to individual development and training, easy to adapt to changing conditions.

## 2. EDUCATION

- **PhD**, Izmir Institute of Technology, Mechanical Engineering, Izmir, 2011, GPA: 3,65
- **Master**, Izmir Institute of Technology, Mechanical Engineering, Izmir, 2003, GPA: 3,5
- **Undergraduate**, Dokuz Eylul University, Mechanical Engineering, Izmir, 1999, GPA: 70.05

## 3. EXPERIENCE

### - ASELSAN INC

**Microelectronics, Guidance and Electro-Optics (MGEO) Division, Mechanical Design Department**

Position/Period:

- Design Leader - 01.08.2015 - Present
- Senior Expert Engineer - 01.06.2011– 31.07.2015,
- Expert Engineer - 02.10.2007– 01.06.2011

Job Description:

Thermal Design of Electronic Devices

Research Fields: Natural convection problems, laser cooling, cooling of systems including electronic cards, Joule-Thomson cryogenic cooling systems

### - IZMIR INSTITUTE OF TECHNOLOGY

**Department of Mechanical Engineering**

Position/Period: Research Assistant / 22.12.2000 – 01.10.2007.

Responsibilities: To support the work conducted in Geothermal energy research center, to assist undergraduate courses of thermodynamics and numerical analysis, to support the work of the laboratory, and the preparation of the annual division of the curriculum

### - YATES LTD

Position/Period: Project Engineer / 15.09.1999 – 01.06.2000.

Job Description: Design of HVAC systems for multi-storey buildings and shopping centers, construction work to follow.

Completed Projects: Building heating and cooling project in Izmir Provincial Health Directorate, Arkas Holding - Sasalı container field studies, Building of heating systems of various villas in Izmir, Ventilation of a restaurant in Izmir.

#### **4. INTERNSHIP/SHORT-TIME DUTY**

##### **Geothermal Energy Industry and Trade Limited Company, Balçova, Izmir.**

- Position/ Period: Researcher / 01.07.2001 - 01.08.2001
- Job Description: To support research activities related to the company within

##### **BMC, Bornova, Izmir.**

- Position/Period: Trainee / August 1998 - September 1998.
- Internship Description: Serial follow-up and factory organization of production processes

##### **Akdöküm, Bornova, Izmir.**

- Position/Period: Trainee / August 1997 - September 1997.
- Internship Description: Parka processing activities to support work in different machines (milling machines, drills, lathes, CNC machines), casting and welding technologies, quality control processes.

##### **Mithatpasa Vocational High School, Konak, Izmir.**

- Position/ Period: Trainee / July 1996 - August 1996.
- Internship Description: Modeling, leveling, casting and metal work.

#### **5. LANGUAGE**

- English: Advanced level (preparatory education at the University of Marmara, 1993)
- German: Elementary level (Izmir Goethe Institute, 2001-2003)

#### **6. COMPUTER KNOWLEDGE**

- **Programming Languages:** Basic, Matlab, C + +, MathCAD.
- **Other:** ANSYS 14 (Workbench, Design Modeller, Mesher, Fluent Solver, CFD Post), Fluent 6.3.26, Icepak 4.4.8, ProEngineer, Auto Cad, Solidworks, Microsoft Project, Microsoft Office (Word, Excel, Power Point)

#### **7. PUBLICATIONS**

##### **Articles Published in International Journals**

- Erdogmus, B., Ozerdem, B., Ilken, Z., An experimentally validated mathematical model of panel radiators for heat capacity test standard EN 442 (Submitted to Applied Energy, 2012)
- Erdogmus, B. , Toksoy, M. , Ozerdem, B. , Aksoy, N., Economic assessment of geothermal district heating systems: A case study of Balçova-Narlıdere, Turkey, Energy and Buildings, Volume 38, Issue 9, Page 1053-1059.

##### **International Conference / Congress Proceedings:**

- Erdogmus, A. B., Sahin M., Colakoglu A., Erenturk, B., The Improvement of Cooling Performance of a Flash Pumped Laser Using: Nd:Yag, The ASME 2010 10th Biennial Conference on Engineering Systems Design and Analysis (ESDA 2010), 12-14 July 2010, Yeditepe University, Istanbul/Turkey (Oral Presentation)
- Erdogmus, A. B., Ozerdem, B., Ilken, Z., The Determination of Heat Dissipation Capability of a Panel Radiator By Using Computational and Experimental Methods. Clima 2010, 09-12 May 2010, Antalya/Turkey (Poster Presentation)

- Erdogmus, A. B., Mobedi, M., Ozerdem, B., Energy Loss from Outdoor Located Air Handling Unit and Connection Duct, The 20th International Conference on Efficiency, Cost, Optimization, Simulation and Environmental Impact of Energy Systems (ECOS 2007), 25-28 June 2007, Padova, Italy. (Oral Presentation)
- Erdogmus, A. B., Ozerdem, B., The 19th International Conference on Net Cash Flow Forecasting by using Time Series Methods in Geothermal District Heating Systems: Balcova – Narlidere Case, Efficiency, Cost, Optimization, Simulation and Environmental Impact of Energy Systems (ECOS 2006), 12-14 July 2006, Aghia Pelagia, Crete, Greece. (Oral Presentation)
- Erdogmus, A. B., Ozerdem, B., Pricing Models in Geothermal District Heating Systems: Balcova – Narlidere Case, World Geothermal Congress 2005, Antalya, Turkey: 24-29 April 2005. (Oral Presentation)
- Erdogmus, A. B., Gunaydin, M., Ozerdem, B., Application of Project Management Techniques In Heating, Ventilating, And Air-Conditioning Projects, 35th International HVAC Congress, 01- 03 December 2004, Belgrade /Serbia. (Oral Presentation)

#### **National Conference / Congress Proceedings:**

- Erdoğan B., Sahin M., Tatar S., The determination of effect of forced convection on cooling performance of laser range finders and target marking system by experimental and Numerical methods (in Turkish), SAVTEK 2012, Ankara, 20-22 Haziran 2012. (Oral Presentation)
- Ocak M., Erdoğan B., Colakoğlu A., Platform Instrumentation on Flight Tests (in Turkish), 1. Aviyonik Sistem Enstrumantasyon Sempozyumu (ASES 2010), 28-30 Nisan 2010, Hava Harp Okulu, Istanbul/ Turkey (Oral Presentation)
- Erdogmus, B., Toksoy, M., Ozerdem, B., Gulsen, E., Cost Analysis in Geothermal District Heating Systems (in Turkish), Geothermal District Heating Systems Fundamentals and Design Seminar Book, 6th National Sanitary Engineering Congress, organized by MMO, Izmir, Turkey (08 – 11 October 2003). Izmir: 2003. 449 - 482. (Oral Presentation)

#### **Articles in National Refereed Journals:**

- Mergen H., Erdoğan Mergen B., Erdoğan B., Geothermal Energy and Balneotherapy Applications, Journal of Physical Medicine and Rehabilitation Sciences, 2006, Volume 9, Number 3, Page(s) 108–113

#### **Thesis**

- Simulation of the Heater Test Room Defined by EN 442 Standard and Virtual Testing of Different Type of Heaters, PhD Thesis, Izmir Institute of Technology, February 2011.
- Economical Assessment of Geothermal District Heating Systems: Balcova – Narlidere Case, Master Thesis, Izmir Institute of Technology, September 2003
- Liquefaction of air and Liquid Oxygen Production / Storage in Air Separation Plant, Undergraduate Thesis, Dokuz Eylul University, June 1999

#### **Reports**

- Bergama Geothermal District Heating System Feasibility Report, November 2003 (with M.Toksoy, E. Gulsen and C.Sener).

### **8. CERTIFIED TRAINING**

- MS Project, September 2012, MMO, Ankara
- Introduction to Measurement Techniques, 11-15 October 2010, Von Karman Institute, Brussels, Belgium

- Introduction to Computational Fluid Dynamics, 11-15 January 2010, Von Karman Institute, Brussels, Belgium.
- Ensign Education, 19-20 February 2009, Bias, Teknokent/Ankara.
- Geometric Dimensioning and Tolerance, Mechanical Tolerance Training for 6 Sigma, 01-05 December 2008, MechSigma Consulting, Inc., Becoming ASELSAN, Ankara / TURKEY.
- Introduction to Icepak, 13-14 February 2008, Anova Ltd. Co., Becoming ASELSAN, Ankara /TURKEY.
- Introduction to Fluent, 7 to 9 November 2007, Anova Ltd. Co., Middle East Technical University Department of Aeronautics / Ankara.
- Corrosion, November 12-14, 2007, Corrosion Association, Becoming ASELSAN, Ankara /TURKEY.
- Domestic Natural Gas Installation Engineer Certificate of Competency, 10-14 November 2006, MMO, Izmir.
- Exergy and its Applications, 26-27 July 2004, EBILTEM, Ege University / Izmir.
- Geothermal Energy Direct Heating Systems, Fundamentals and Design, 8 to 11 October2003, MMO, Izmir.
- Time Management, 22-24 May 2001, Izmir Institute of Technology.
- European Summer School on Geothermal Energy Applications, April 26 to May 5, 2001, University of Oradea, Romania.
- Auto-Cad R-14, 21.03.1999-20.06.1999, MMO, Izmir.

## 9. OTHER INFORMATION

- **Military Service:** Second Lieutenant, 5th Main Jet Base Command, was completed in December 2005.
- **Driver's License:** Active driver, Class B Driver's License, 1994.
- **Memberships:** Chamber of Mechanical Engineers
- **Volunteer Works:** MMO Izmir Branch Delegate Members. (2006 - 2008), Izmir Branch of the Energy Efficiency Committee Reporter Member MMO. (2006 - 2008), IZTECH MMO Shop Steward. (2004 - 2007), Izmir Branch of the Geothermal Energy Commission, the Reporter Member MMO. (2004 -2006)
- **Interested Other Issues:** NLP techniques, individual development, economy
- **Leisure Labors:** Multi-piece puzzle, folk-dances, cinema, theater, water sports
- **Contact Information:**  
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