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# TUFAN GÜNGÖREN

+90 533 494 6822

tufan@portakalteknoloji.com

tr.linkedin.com/in/tufangungoren/

tufan@cankaya.edu.tr

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## PROFILE

Have been involved in academic & industrial research projects for more than 24 years, including 16 years of teaching and research experience in universities and government research laboratories in Turkey and the United States.

Over the last 9 years, worked as a project manager, research engineer and consultant in industrial R&D projects in such diverse industries as software, machinery manufacturing, medical technologies and defence, either leading or coordinating projects, writing successful grant applications, preparing financial and technical reports, and working smoothly with funding agencies in both Turkey and the European Union.

Excellent written, verbal, and presentation skills in English. Strong background in science & engineering. Good computer skills. Flexible, quick to pick up new skills and eager to learn from others. Effective communicator with excellent problem-solving and organizational skills. Sound leadership and managerial skills. Committed to work.

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## EDUCATION

❖ **University of Illinois at Urbana-Champaign (UIUC)** **Urbana, Illinois, U.S.A.**  
➤ **Master of Science (M.Sc.)**, Materials Science & Engineering **14 May 2000**  
(*Electronic Materials Division*)

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❖ **Middle East Technical University (METU)** **Ankara, Turkey.**  
➤ **Master of Science (M.S.)**, Metallurgical Engineering **6 September 1995**  
➤ **Bachelor of Science (B.S.)**, Metallurgical Engineering **3 July 1992**

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❖ **Istanbul High School of Science (İAFL)** **Istanbul, Turkey.**  
➤ **High School Diploma** (İstanbul Atatürk Fen Lisesi) **May 1987**

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### ❖ Graduate-Level Coursework

#### ➤ Materials, Processes & Devices

##### METU

- MetE 501 Advanced Thermodynamics of Materials
- MetE 506 Kinetics of Processes in Materials
- MetE 513 Surface Properties of Materials

##### UIUC

- MatSE 360 Electronic Materials & Processing I
- MatSE 361 Electronic Materials & Processing II
- MatSE 400 Statistical Thermodynamics of Materials
- Phys 389 Introduction to Solid State Physics

#### ➤ Theory, Modeling & Simulation

##### METU

- MetE 502 Diffusion
- MetE 509 Quantum Physics of Materials I
- MetE 528 Computer Applications in Materials Science
- MetE 534 Phase Transformations in Metallic Systems
- MetE 775 Modeling of Materials Behavior

##### UIUC

- MatSE 302 Kinetic Processes in Materials
- MatSE 401 Kinetic Processes in Materials
- MatSE 490F Phase Transformations in Metals

#### ➤ Materials Characterization Techniques

##### METU

- MetE 507 Advanced Crystallography and Diffraction
- MetE 508 Advanced Optical Techniques
- MetE 535 Transmission Electron Microscopy
- Chem 542 X-Ray Analysis
- Chem 582 Selected Topics in Analytical Chemistry II

##### UIUC

- MatSE 392 Fundamentals of Laboratory Safety
- MatSE 480 Advanced X-Ray Diffraction
- MatSE 462 Electrical and Optical Characterization of Electronic Materials

#### ➤ Engineering Mathematics

##### METU

- MetE 503 Mathematical Methods in Materials Research I
- ES 501 Analytical Methods in Engineering I
- ES 502 Analytical Methods in Engineering II
- ME 501 Numerical Methods in Mechanical Engineering I

### ❖ Awards & Achievements

- **NSF Grant** toward the summer school “Escuela de Superficies” in Buenos Aires (July 1997)
- **NATO Science Fellowship** to initiate graduate studies in a NATO country (July 1996)
- **1995-1996 Parlar Foundation Thesis Award** (July 1996)
- **METU Presidential Honor List** (July 1992)

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## PROFESSIONAL EXPERIENCE

### ❖ Çankaya University

2015 – Present

Ankara, Turkey

#### ➤ Part-time Instructor, Materials Science & Engineering Department

- Taught Introduction to Thermodynamics (MSE203), Thermodynamics and Phase Equilibria (MSE204), Kinetics and Microstructural Evolution (MSE310), Engineering Materials (MSE226), Materials Science for Electronics Engineers (MSE235) to the undergraduate students of several departments (Materials Science & Engineering, Mechanical Engineering, Electronic and Communication Engineering and Mechatronics Engineering)

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### ❖ ÜN Teknik Machinery Manufacturing Engineering

Ankara, Turkey

#### ➤ Project Manager

2013 – Present

- Wrote successful grant applications resulting in about US\$ 346,000 of awards from KOSGEB, US\$ 428,000 of awards from Ankara Development Agency and further awards from Ministry of Science, Industry and Technology.
- Prepared and submitted proposals, technical/financial reports and communicated with officials/referees of TÜBİTAK, KOSGEB, Ankara Development Agency, Ministry of Economy and Ministry of Science, Industry and Technology.
- Managed projects to ensure work is assigned and completed ahead of the schedule and within budget.
- Contributed to R&D and business development activities, and provided occasional assistance in production, quality assurance and quality control, procurement and general administrative activities.

#### ➤ R&D Engineer

2012 – 2013

(12½ months)

- Wrote a successful grant application resulting in about US\$ 100,000 of awards from KOSGEB.
- Prepared and submitted technical and financial reports to KOSGEB.
- Contacted and regularly communicated with KOSGEB officials and appointed referees.
- Contributed to research and business development activities of the company.

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### ❖ Oruba Medical Technologies (METUTECH)

Ankara, Turkey (ODTÜ Teknokent)

2013 – 2013

(7½ months)

#### ➤ R&D Engineer / Business Model Analyst

- Worked in the design, manufacturing and testing of a high-fidelity medical simulation manikin (a life-like human model with anatomical structures) in a TÜBİTAK-supported R&D project.
- Contributed to the company's business model using a business model canvas so the company has a clear focus for customer segmentation, value propositions, channels to market, revenue streams, cost structure, key partners and other crucial areas of business.
- Prepared a financial analysis spreadsheet that simulates the financial workings of the business and calculates revenues, expenses, EBITDA, free cash flow and IRR.
- Guided the company through the process of becoming ready to raise venture capital, analyzing its finance, accounting, product development and manufacturing functions.
- Contributed to the company's success at the TeknoJumpp Accelerator Program 2013 by which Oruba was selected amongst the most successful 8 tech startups that will join the program's US Camp in Chicago and Silicon Valley.

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### ❖ Portakal Teknoloji (METUTECH)

Ankara, Turkey (ODTÜ Teknokent)

#### ➤ Managing Partner

2007 – Present

- Monitored budget and expenditure to ensure that financial goals are reached.
- Communicated with company attorney, accountant (SMMM), CPA (YMM), banks and government officials. Interacted with clients and participated in project scoping and customizing functional requirements.
- Managed outsourced freelancers and contractors to deliver software products to client satisfaction.

- Prepared and submitted technical and financial reports to KOSGEB and European Union, and management reports to METU Technopolis.
- Conducted business analysis and needs assessment for clients.
- Worked towards gaining ISO 13078 and ISO 13082 certificates.

➤ **EU Project Officer**

**2006 – 2007**

- Worked in the European Union's FP6 and FP7 collaborative R&D project proposal submission process, receiving ~0.5 million Euro funding from a total EU contribution of 12 million Euro.
- In collaboration with 22 partners including HP, IBM, AMD, SUSE and Infineon Technologies, prepared technical and financial reports required for the Open Trusted Computing (OpenTC) project.
- Open TC project was focused on the development of trusted and secure computing systems based on open source software. The project targeted traditional computer platforms as well as embedded systems such as mobile phones.

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❖ **2MK Software, Informatics, Medical Industry & Commerce**  
(METUTECH-OSTİM)

**2007 – 2009**  
**(18 months)**

Ankara, Turkey (ODTÜ-OSTİM Teknokent)

➤ **Project Manager**

- Wrote two successful grant applications resulting in over US\$ 170,000 of awards from TÜBİTAK and over US\$ 238,000 of long-term interest-free loan from TTGV.
- Managed a TÜBİTAK-supported R&D project for designing, building and testing of a robotic real-time X-ray radiographic non-destructive inspection system with a C-arm and ensured work is assigned and completed ahead of the schedule and within budget, and government grant is received in full and without delay.
- Contacted and regularly communicated with TÜBİTAK/TTGV officials and referees.
- Prepared and submitted technical reports and financial reports to TÜBİTAK, and management reports to METU Technopolis.
- Provided on-the-spot engineering assistance as required to complete the project.

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❖ **Middle East Technical University (METU)**

**2001 – 2006**

Ankara, Turkey.

➤ **Research Assistant**, Metallurgical & Materials Engineering Department.

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❖ **Argonne National Laboratory (ANL)**

**1999 – 2000**

Argonne, Illinois, United States.

➤ **Graduate Research Assistant (UIUC)**, Advanced Photon Source (APS).

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❖ **University of Illinois at Urbana-Champaign (UIUC)**

**1997 – 1999**

Urbana, Illinois, United States.

➤ **Graduate Research Assistant**, Materials Science & Engineering Department.

➤ **NATO Science Fellow**, Materials Science & Engineering Department.

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❖ **UCTEA Chamber of Metallurgical Engineers**

**1996 – 1997**

Ankara, Turkey.

➤ **Editorial Board Member**, "Metalurji" Dergisi (ISSN 1300-4824).

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❖ **Middle East Technical University (METU)**

**1992 – 1997**

Ankara, Turkey.

➤ **Research Assistant**, Metallurgical Engineering Department.

➤ **Investigator**, Ceramic and Composite Materials Research Unit (TÜBİTAK-SEKOM.)

➤ **Investigator**, "The Production and Characterization of Superconducting Ceramic Oxides."

➤ **Investigator**, European Commission's COST Action 514 on "Ferroelectric Thin Films."

➤ **Assistant to Director**, International Workshop on Ceramic Science and Technology.

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## HIGHLIGHTS OF SKILLS

### ❖ Project Management Skills

- Experience in management of industrial R&D projects and working with government funding agencies.
- Experience in writing project grant applications for TÜBİTAK, TTTGV, KOSGEB, Ankara Development Agency and European Union funded research projects in academia & industry.
- Knowledge of project management tools and techniques to initiate, plan, execute, monitor, control and close projects.
- Practice in using Microsoft Project Professional software.

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### ❖ Research & Innovation Skills

- Ability to generate research topics, design research studies, write research proposals and conduct research efficiently.
- Ability to interact professionally with others involved in research and to present oral and written research reports.
- Experience with the use of information technology in research.

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### ❖ Practical Laboratory Skills

- Hands on experience with scientific & engineering equipment and research methods.
- Good skills in devising, performing, and evaluating scientific experiments, use and maintenance of laboratory equipment, and technical communications.
- Extensive practice in designing and building experimental setup.

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### ❖ Materials Synthesis and Processing Techniques

- Experience with high vacuum systems and thin film deposition techniques.
- Some practice with sol-gel techniques to produce materials in high surface area forms such as thin films, coatings, mono-dispersed powders, nanoparticles and fibers.
- Hands-on practice with melting and casting procedures and mechanical attrition for producing novel alloys.
- Practice with thermal and mechanical processing of materials: heat treatment and rolling.
- Knowledge of machining processes, sheet metal forming processes and powder metallurgy.

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### ❖ Characterization Techniques

- Hands-on practice in data acquisition & control, particularly computer interfacing & programming, IEEE-488 devices and motion control, and low-level electrical measurements, particularly 4-point probe resistivity measurements of superconducting thin-films.
- Knowledge of materials testing techniques, including tensile test, creep test, compression test, bending test, Charpy impact test, macro and micro hardness tests.
- Practice with electroanalytical methods (potentiometric, coulometric and voltammetric measurements) using Solartron 1480 multi channel potentiostat, and intergranular corrosion test (IGC) according to TS 3157 (ASTM A 262 practice E).
- Experience with several materials characterization techniques, including metallographic specimen preparation techniques and quantitative metallographic methods, optical microscopy (OM), scanning electron microscopy (SEM), energy dispersive spectroscopy (EDS), electron backscatter diffraction (EBSD), transmission electron microscopy (TEM), x-ray diffraction (XRD) analysis, differential scanning calorimetry (DSC)/ differential thermal analysis (DTA), vibrating sample magnetometry (VSM).
- Working knowledge of synchrotron radiation, techniques and applications.
- Work experience in two synchrotron radiation facilities: The Advanced Photon Source (APS) of the Argonne National Laboratory (ANL) near Chicago and the National Synchrotron Light Source (NSLS) of the Brookhaven National Laboratory (BNL) in New York. ANL and BNL are national laboratories of the U.S. Department of Energy (DOE).
- Working knowledge of NDT (nondestructive testing) methods: ultrasonic, magnetic penetrant, penetrant and Eddy current.
- Training course on radiographic inspection (Level 1, EN 473 ASNT-SNT-TC1A)

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### ❖ Computer Skills

- Knowledge of and familiarity with MS-DOS, Windows and UNIX/Linux operating systems.
- Programming experience with BASIC, FORTRAN 77, Fortran 90/95 and C/C++.
- Experience with Microsoft Office (Word, Excel and Powerpoint) and Microsoft Project.
- Practice in using scientific/engineering software, including MATHCAD, MATLAB, SigmaPlot, OriginPro, CLEMEX (image analysis software), MAUD (Materials Analysis Using Diffraction), BEARTEX (Berkeley Texture Package), LAMMPS (Large-scale Atomic/Molecular Massively Parallel Simulator), MedeA (materials design software package), VMD (Visual Molecular Dynamics).
- Training courses on CAD/CAM/CAE tools: AutoCAD, Solidworks, MasterCAM, and MSC.MARC/Mentat.

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### ❖ Language Skills

- Turkish : Native (mother tongue)
- English : Advanced (KPDS: 98/100) (lived 4 years in the United States from 1997 to 2001)
- German : Beginner (Ankara University – TÖMER Course Level: Basic 1&2, Apr-May 2001)

❖ **Other Skills**

- Scuba diving (PADI Open Water Diver: ISO 24801-2: Diver Level 2 – Autonomous Diver Standard)
- Driving license (Class B)

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## PROFESSIONAL TRAINING

- ❖ **Kurumsal ve Ar-Ge Proje Destekleri (Kalkınma Ajansı ve KOSGEB) Proje Dosyaları İçin Önemli İpuçları**, 11 Şubat 2013, Ankara. (Instructor: M. Serdar Durgun, MIPM, EYDEM Entegre Yönetim Danışmanlık Eğitim Merkezi)
- ❖ **Etkileşimli Seminer: Örnek Bir TTO Kurma ve İşletme Konusunda Bilmeniz Gereken Herşey**, 24 Ocak 2013, Ankara. (Konuşmacılar: Charles Monck ve Taj Mattu, Foresight Science & Technology)
- ❖ **Üniversite Sanayi İşbirliği Başarılı Uygulamalar Çalıştayı**, USIMP Üniversite Sanayi İşbirliği Platformu ve ODTÜ Teknokent, 9-10 Ocak 2013, Ankara.
- ❖ **IQ2IP Eğitim Programı**, INOVENT Innovative Ventures (Instructor: Ömer Hızıroğlu, CLP)
  - **Fikri Mülkiyet Hakları Temelleri**, 4 Ocak 2013, Ankara. (Bilkent Cyberpark)
  - **Teknoloji Transferi ve Lisans Anlaşmaları**, 4 Ocak 2013, Ankara. (Bilkent Cyberpark)
- ❖ **Teknoloji Projelerinin Başarısı için Strateji-Proje-Sistem-Ürün-İletişim Yönetimi Projesi**, (Instructor: M. Serdar Durgun, MIPM, EYDEM Entegre Yönetim Danışmanlık Eğitim Merkezi) (Ankara Kalkınma Ajansı)
  - **Proje Başarısızlıkları 15 Sebep (1nci Kısım)**, 26 Aralık 2012, Ankara. (ANKUTEK)
  - **Proje Başarısızlıkları 15 Sebep (1nci Kısım)**, 25 Aralık 2012, Ankara. (Gazi Teknopark)
  - **Entegre Proje Yönetimi**, 20 Aralık 2012, Ankara. (ODTÜ Teknokent)
- ❖ **Bilişim Sektörü için İşbirlikleri, Hibe ve Teşvikler**, NoviCor Technology Partners ve Sistem Danışmanlık, 4 Aralık 2012, Ankara.
- ❖ **Girişimcilik Sempozyumu**, 13 Kasım 2012, Ankara. (ODTÜ KOSGEB)
- ❖ **Nasıl İhracatçı Olunur Eğitimi**, 14-17 ve 21-24 Şubat, 2012, Ankara. (Ankara Kalkınma Ajansı) (Instructors: Asım Çalış ve Fedai Uzun)
- ❖ **ISO 9001:2008 Kalite Yönetim Sistemi Temel Eğitimi, ISO 14001:2004 Çevre Yönetim Sistemi Temel Eğitimi, ISO 18001 İş Sağlığı ve Güvenliği Yönetim Sistemi Temel Eğitimi**, 8 January 2011, Ankara. (TR-SERT International Certification)
- ❖ **Workshop on Rietveld Analysis and Textures**, Metallurgical & Materials Engineering Department, Middle East Technical University, 6-17 July 2009, Ankara. (Instructor: Prof. Dr. Rudy Wenk, Earth and Planetary Science Department, University of California, Berkeley, California, United States)
- ❖ **ODTÜ Teknokent Yenilik Süreci Yönetimi ve Ar-Ge Yardımları Başvurusu Hazırlama Çalıştayı**, 24-26 February 2009, ODTÜ Teknokent, Ankara. (Instructors: Müfit Akyos and Sema Kendir)
- ❖ **ODTÜ Teknokent San-Tez Atölye Çalışması**, 16 July 2008, Ankara.
- ❖ **Radyografik Muayene 1. Seviye Pratik Kursu (RT1.0)**, 2-4 June 2008, Ankara. (ODTÜ Tahribatsız Muayene Merkezi)
- ❖ **Radyografik Muayene 1. Seviye Kursu (RT1)**, 26-31 May 2008, Ankara. (ODTÜ Tahribatsız Muayene Merkezi)
- ❖ **MASTERCAM Eğitimi**, 23 May – 7 June 2008, Ankara. (OSTİM Eğitim Koordinasyon)
- ❖ **AUTOCAD Eğitimi**, 11 April – 17 May 2008, Ankara. (OSTİM Eğitim Koordinasyon)
- ❖ **Marka, Patent ve Tasarım Eğitimi**, 6 April 2008, Ankara. (ODTÜ-GGT ve Türk Patent Enstitüsü)
- ❖ **Sanayide Ar-Ge Eğitimi**, 20 February 2008, Ankara. (OSTİM Eğitim Koordinasyon)
- ❖ **ODTÜ Teknokent Patent Eğitimi - 2**, Fikri Haklara ilişkin Uyuşmazlıklarda Alternatif Çözüm Yolları. Ar-Ge, Buluşlar, Patent, Rekabet Gücü ve Uygulama Örnekleri, 26 December 2007, Ankara. (IRC-Anatolia Innovation Relay Centre and Ankara Patent Bürosu)
- ❖ **FEM Modelling Orientation Seminar**, Metallurgical & Materials Engineering Department, Middle East Technical University, 25-29 June 2007, Ankara.
- ❖ **Environment, Safety & Health Training**, ES&H Division, Argonne National Laboratory, April-June 1999, Argonne, Illinois, United States.
- ❖ **Short Course on Rietveld Analysis**, 20-21 October, 1998, Urbana, Illinois, United States (Instructor: Dr. Julius Schneider, Institute of Crystallography and Applied Mineralogy, University of Munich, Germany.)
- ❖ **Workshop on Modification, Characterization and Modeling of Surfaces (Escuela de Superficies)**, 14-25 July 1997, Buenos Aires, Argentina.
- ❖ **German-Turkish Summer School in Materials Characterization and Environmental Analysis**, 31 August - 11 September, 1992, Ankara. (A collaboration between METU and Technische Hochschule Darmstadt)

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## PUBLICATIONS

- ❖ M.A. Ozenbas and T. Gungoren, "PVD growth and characterization of YBCO thin films on polycrystalline alumina substrates: phase separation," *Physica C* 341-348, 2363 (2000).
- ❖ M.A. Ozenbas and T. Gungoren, "Characterization of c-axis oriented Y-Ba-Cu-O thin films prepared by PVD on LaAlO<sub>3</sub> (100) and SrTiO<sub>3</sub> (100) substrates," *Physica C* 341-348, 2365 (2000).
- ❖ T. Gungoren and M. Ozenbas, "An Unusual Morphology in the Y-Ba-Cu-O Thin Films on MgO (100) Prepared by Resistive Evaporation," *Proceedings of the Junior-Euromat'96*, Lausanne, Switzerland, Aug 26-30, 1996.
- ❖ T. Gungoren, "Characterization of Superconducting Y-Ba-Cu-O Thin Films Prepared by Resistive Evaporation", M.S. Thesis, Middle East Technical University, Ankara, 1995.
- ❖ T. Gungoren, M. Ozenbas and C. Tan, "Preparation and characterization of superconducting YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7-x</sub> pellets," *Turkish Journal of Medical Sciences*, Supplement, 141 (1995).

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## PROFESSIONAL MEMBERSHIPS

- ❖ UCTEA Chamber of Metallurgical Engineers
- ❖ Institute of Electrical and Electronics Engineers (IEEE)
- ❖ Materials Research Society (MRS)
- ❖ Institute of Materials (IOM)