

## **Asst. Prof. Alpay ORAL**

### **Personal Information**

**Office Phone:** [+90 212 383 2966](tel:+902123832966)

**Email:** [aoral@yildiz.edu.tr](mailto:aoral@yildiz.edu.tr)

**Web:** <http://avesis.yildiz.edu.tr/aoral/>

### **International Researcher IDs**

ScholarID: [jmNy8RQAAAAJ](#)

ORCID: [0000-0002-7060-9327](#)

Publons / Web Of Science ResearcherID: [G-2875-2010](#)

ScopusID: [8514191500](#)

Yoksis Researcher ID: [34217](#)

### **Education Information**

Doctorate, Bogazici University, Institute Of Science, Makina Mühendisliği, Turkey 2003 - 2010

Postgraduate, Bogazici University, Institute Of Science, Makina Mühendisliği, Turkey 2001 - 2003

Undergraduate, Bogazici University, Faculty Of Engineering, Makina Mühendisliği, Turkey 1996 - 2001

### **Research Areas**

Mechanical Engineering, Mechanical, Solid Mechanics, Fracture Mechanics, Finite Element Methods, Engineering and Technology

### **Academic Titles / Tasks**

Assistant Professor, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechanical Engineering, 2012 - Continues

Research Assistant PhD, University of Illinois at Urbana-Champaign, Mühendislik Fakültesi, Makina Mühendisliği Bölümü, 2011 - 2012

Research Assistant, Bogazici University, Faculty Of Engineering, Makina Mühendisliği Bölümü, 2001 - 2011

### **Academic and Administrative Experience**

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

#### **I. Fatigue crack initiation in Hastelloy X - the role of boundaries**

Abuzaid W., Oral A., Sehitoglu H., Lambros J., Maier H. J.

FATIGUE & FRACTURE OF ENGINEERING MATERIALS & STRUCTURES, vol.36, pp.809-826, 2013 (SCI-Expanded)

#### **II. Determination of Gurson-Tvergaard-Needleman Model Parameters for Failure of a Polymeric Material**

Oral A., Anlas G., Lambros J.

INTERNATIONAL JOURNAL OF DAMAGE MECHANICS, vol.21, pp.3-25, 2012 (SCI-Expanded)

- III. **Crack initiation in functionally graded materials under mixed mode loading: Experiments and simulations**  
Oral A., Lambros J., Anlas G.  
JOURNAL OF APPLIED MECHANICS-TRANSACTIONS OF THE ASME, vol.75, 2008 (SCI-Expanded)
- IV. **Effects of radially varying moduli on stress distribution of nonhomogeneous anisotropic cylindrical bodies**  
Oral A., Anlas G.  
INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES, vol.42, pp.5568-5588, 2005 (SCI-Expanded)

### **Refereed Congress / Symposium Publications in Proceedings**

- I. **Orthotropic Response Characterization of Honeycomb Composites**  
Oral A.  
6th INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING ISTANBUL 2021, İstanbul, Turkey, 20 - 22 October 2021, pp.1-7
- II. **Shape Optimization of Wind Powered Vehicle Turbine System**  
Oral A., Tekin M. M.  
6th INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING ISTANBUL 2021, İstanbul, Turkey, 20 - 22 October 2021, pp.1-10
- III. **Multiaxial Fatigue Analysis of a Plastically Deformed Hook Using Critical Plane Theory**  
Oral A., Dursun M., Şengün E. N., Aşçıoğlu Temiztaş B.  
3rd INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING ISTANBUL 2017, İstanbul, Turkey, 19 - 21 December 2017, pp.381-389
- IV. **Numerical and Analytical Analysis of Point Contact**  
Aşçıoğlu Temiztaş B., Tekin N. C., Bayrak R., Oral A.  
3rd INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING ISTANBUL 2017, İstanbul, Turkey, 19 - 21 December 2017, pp.410-415
- V. **Towards a coupled loads-response-life prediction framework for hypersonic structures in combined extreme environments**  
Sobotka J. C., Oral A., Culler A. J.  
54th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference, Boston, MA, United States Of America, 8 - 11 April 2013
- VI. **Crack initiation angles in functionally graded materials under mixed mode loading**  
Oral A., Abanto-Bueno J. L., Lambros J., Anlas G.  
9th International Conference on Multiscale and Functionally Graded Materials, Hawaii, United States Of America, 15 - 18 October 2006, vol.973, pp.248-249
- VII. **Özellikleri fonksiyonel olarak değişen malzemelerde karışık mod yükleme altında çatlak başlama açıları ve gerilim şiddet çarpanları**  
Oral A., Çopur I. H., Anlas G.  
8. Uluslararası Kırılma Konferansı, İstanbul/TURKEY, İstanbul, Turkey, 07 November 2007, pp.10-19

### **Supported Projects**

Oral A., Şehitoğlu H., Project Supported by Public Organizations in Other Countries, Towards a Fatigue Initiation Theory for Multiaxial Thermo-mechanical Fatigue, 2010 - 2012

Oral A., Anlas G., Project Supported by Higher Education Institutions, Investigation of Behavior of Shape Memory Alloys in terms of Fracture Mechanics, 2009 - 2010

Oral A., Lambros J., Project Supported by Public Organizations in Other Countries, Three-Dimensional Effects in the Fracture of Functionally Graded Materials, 2003 - 2008

Oral A., Anlař G., EU Supported Other Project, DeFESS: Design for Environmental Skills of Suppliers in Automotive Industry, 2005 - 2007

## **Metrics**

Publication: 11

Citation (WoS): 83

Citation (Scopus): 104

H-Index (WoS): 4

H-Index (Scopus): 4

## **Scholarships**

2214 - YURT DIőI ARAőTIRMA BURS PROGRAMI, TUBITAK, 2008 - 2009