

## Assoc.Prof. Dr.İzzet Ufuk ÇAĞDAŞ

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### **Contact information:**

Tel. : +90 242 310 63 14 (İnternal: 6314)

Fax : +90 242 310 63 06

e-mail: izzetufuk@akdeniz.edu.tr izzetufuk@gmail.com

### **Education:**

BSc: Gazi Univ.Civil Engng.Dept., Ankara, Turkey, 1999

MSc: Gazi Univ.Civil Engng.Dept.Structural Mechanics Division, Ankara, Turkey, 2001

PhD: UKZN, School of Mechanical Engineering, Durban, South Africa 2007

Associate Prof. February 2013 (Civil Engng./Structural Mechanics)

### **Interests:**

Finite Element Method, Structural Stability, Optimal Design, Composite Structures

### **Positions:**

Associate Professor, Akdeniz Univ.Civil Engng.Dept., Structures Division 2016-

Assistant Professor, Akdeniz Univ.Civil Engng.Dept., Structures Division 2008 - 2016

Research Assistant, UKZN, School of Mech. Engng., Composites Lab. 2004 – 2007

Research Assistant, Gazi Univ.Civil Engng.Dept., Structures Division 1999 – 2004.

### **Bursaries/Research Grants Received:**

NRF (National Research Foundation of South Africa) - PhD (2004-2007)

UKZN, School of Mechanical Engineering – PhD (2004-2007)

NRF – 2 months research grant (April-May 2007)

NRF ve UKZN– 1 month research grant (Ağustos 2009)

NRF ve UKZN – 1 month research grant (Ağustos 2010)

### **Research :**

#### **A. Papers (SCI):**

**A.1.** Sarp Adali, Ibrahim S. Sadek, John C. Bruch, Jr., James M. Sloss, **Izzet U. Cagdas**, 'Deflection control of laminated frames under deterministic and uncertain loads using induced strain actuators', Composite Structures, Vol. 76 (1-2), pp. 2-13, 2006.

**A.2.** Sarp Adali and **Izzet U. Cagdas**, 'Iterative algorithms for optimal design of columns subject to a stress constraint', Journal of the Franklin Institute, Vol. 344, Issue. 5, pp. 711-724, 2007.

**A.3.** Sarp Adali, Ibrahim S. Sadek, John C. Bruch, Jr., James M. Sloss, **Izzet U. Cagdas**, 'Optimal sizing of piezo-actuators for minimum-deflection design of frames under uncertain loads', Journal of the Franklin Institute, Vol. 344, Issue. 5, pp. 698-710, 2007.

**A.4.** **Izzet U. Cagdas** and Sarp Adali, 'Optimization of clamped columns under distributed axial load and stress constraints', Engineering Optimization, Vol. 39, Issue. 4, pp. 453-469, 2007.

- A.5.** Sarp Adali and **Izzet U. Cagdas**, ‘Optimal design of simply supported columns subject to distributed axial load and stress constraint’, *Optimal Control Applications & Methods*, Vol.30, Issue:5, pp.505-520, 2009.
- A.6.** **Izzet U Cagdas**, ‘Assessment of the accuracy of homogenization in finite element analysis of grid plates under transverse loads’, *Engineering Computations*, Vol.27, Issue:6, pp.676-693, 2010.
- A.7.** **Izzet U. Cagdas**, Sarp Adali, ‘Buckling of cross-ply cylinders under hydrostatic pressure considering pressure stiffness’, *Ocean Engineering*, Vol.38(4), pp. 559-569, 2011.
- A.8.** **Izzet U. Cagdas**, ‘Stability analysis of cross-ply laminated composite shells of revolution using a curved axisymmetric shell finite element’, *Thin-Walled Structures*, Vol. 49, pp.732-742, 2011.
- A.9.** **Izzet U. Cagdas**, S Adali, ‘Effect of in-plane boundary restraints on optimal design of skew laminates under buckling loads’, *Composite Structures*, Vol.93(8), pp.2060-2069, 2011.
- A.10.** **Izzet U. Cagdas** and S. Adali, ‘Design of a variable curvature composite panel under uniaxial compression’, *Engineering Computations*, Vol. 29(1), 2012.
- A.11.** **Cagdas, Izzet U.**, and Sarp Adali. ‘Buckling of cross-ply laminates subject to linearly varying compressive loads and in-plane boundary restraints’, *Journal of Thermoplastic Composite Materials*, Vol. 26(2), pp. 193-215, 2013.
- A.12.** **Izzet U. Cagdas** and Sarp Adali, ‘Optimal shapes of clamped-simply supported columns under distributed axial load and stress constraint’, *Engineering Optimization*, Vol. 45(2), pp. 123-139, 2013.
- A.13.** **Cagdas, I.** and Adali, ‘Effect of Fiber Orientation on Buckling and First-Ply Failures of Cylindrical Shear-Deformable Laminates’, *J. Eng. Mech.- ASCE*, Vol. 139, Special Issue: Stability of Composite Structures, 967–978, 2013.
- A.14.** **Cagdas, IU**, ‘Optimal design of variable stiffness laminated composite truncated cones under hydrostatic pressure’, *Composite Structures*, accepted for publication, 2016.

## **B. Conferences Attended:**

- B.1.** S. Adali and **I.U. Cagdas**, ‘Iterative algorithms for optimal design of columns subject to a stress constraint’, *ICMSAO*, Sharjah, UAE, February 2005.
- B.2.** Sarp Adali and **Izzet U. Cagdas**, ‘Optimal design of elastically clamped columns subject to distributed axial load’, 6th World Congress on Structural and Multidisciplinary Optimization, Rio de Janeiro, Brazil, 30 May-3 June 2005.
- B.3.** Sarp Adali, Ibrahim S. Sadek, John C. Bruch, Jr., James M. Sloss, **Izzet U. Cagdas**, ‘Shape control of laminated frames under uncertain thermal and mechanical loads using piezoelectric actuators’, *ICCM15*, Durban, SA, 2005.
- B.4.** S. Adali and **I. U. Cagdas**, ‘Optimization of columns under non-uniform axial loads’, Fifth South African Conference on Computational and Applied Mechanics, SACAM06, Cape Town, SA, 16-18 January 2006.
- B.5.** Sarp Adali, **Izzet U. Cagdas**, ‘Effect of in-plane boundary conditions on optimal composite rectangular plates under non-uniform buckling loads’, *ICCST6*, Durban, SA, 2007.
- B.6.** G. Duvaut, F. Lene, S. Adali and **I.U. Cagdas**, Non-local elastic modelling of statics and dynamics of nano-sized beams in an elastic medium under distributed loads, *ICCST6*, Durban, SA, 2007.
- B.7.** S. Adali, G. Duvaut, F. Lene and **I.U. Cagdas**, ‘Buckling and vibration of nanotube tip of an atomic force microscope using a non-local beam model’, *ICMOSPS’07*, Durban, SA, 2007.

**B.8.** S. Adali, **Cagdas IU**, ‘Finite element solution for curved composite panels under a compressive load’, AfriCOMP 2009, 1st African Conference on Computational Mechanics – An International Conference, 7-11 January, 2009, Sun City, South Africa.

**B.9.** **IU Cagdas**, S Adali, ‘Optimization of cylindrically curved composite panels under compressive loads’, ICCM17, Edinburg, UK, 2009.

**B.10.** **IU Cagdas**, ‘Optimal design of a cylindrical composite panel under external pressure, 9th International Congress on Advances in Civil Engineering, Karadeniz Technical University, Trabzon, Turkey, 27-30 September 2010.

**B.11.** **IU Cagdas**, Sarp Adali, ‘Semi-analytical finite element vibration analysis of cross-ply cylinders, ISTECC-2010 International Science & Technology Conference, Turkish Republic of Northern Cyprus, 27-29 October 2010.

**B.12.** Sarp Adali, **Izzet U. Cagdas**, ‘Failure analysis of curved composite panels based on first-ply and buckling failures’, 11th International Conference on the Mechanical Behavior of Materials (ICM11), Como Lake, Italy, 5-9 June 2011.

### **C. Other Papers**

**C.1.** S.Aykaç, **İ.U. Çağdaş**, ‘Solution of torsion problems using the finite point collocation method’, Dokuz Eylul University Science and Engng. Journal (In Turkish), Vol. 6, no. 1, pp. 91-98, January 2004.

**C.2.** **I.U. Cagdas** and S. Adali, ‘Failure analysis of curved composite panels based on first-ply and buckling failures’, Procedia Engineering, Vol. 10, pp. 1591-1596, 2011.

### **D. Courses Taught**

Structural Analysis I & II, Numerical analysis, Introduction to the Finite Element Method, Programming in Engineering, Statics, Dynamics, Strength of Materials, Reinforced Concrete I, II, and III, Steel Structures, Structural Analysis of Composites I, Structural Stability, Advanced Structural Mechanics.

*Last Modified: November 2016*