

Fazlı Fatih Melemez

MSc Student
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military status: performed

Education

2011-2013	MSc	Materials Science and Engineering	Sabanci University
	MSc Expected : January,2013		
	3.77/4.00		
2004-2009	BSc	Metallurgical & Materials Engineering	Sakarya University
	3.24/4.00		

Research Experience

Master of Science Projects

- Composite lamination theory, structural modelling and analysis - SAMCEF Field for Composite
- Design, manufacturing and functionalizing of Electrospray Assisted-RTM method
- Hands on experience on hand-lay up, vacuum bagging, vacuum infusion, RTM, H-VARTM, Pre-preg Composite Manufacturing
- Electrospinning(mainly carbon nanotubes graphene) / electrospinning of polymers
- Incorporation of carbon nanotubes or nanophases into composite structures
- Performing static and fatigue tests – Zwick-Roell UTM, MTS Fatigue, DSC, DLS,SEM characterization and testing tools.
- Structural Health Monitoring of Fiber Reinforced Composites with ENLIGHT MOI & Labview Signal Express
- Strain gage, load cell and optical based sensing and characterization applications - NI DAq, Labview
- Modelling of curie temperature change of Heisenberg magnet by Monte-Carlo simulation

Bachelor Projects

- Manufacturing and investigation of Ti-Al and Ni-Al based metallic - intermetallic laminated composites
- Manufacturing of renewable energy powered electric vehicles - solar and hydrogen powered cars
- Mechanical assembly of ultra efficient in-wheel permanent magnet electric motor (CSIRO)
- Sakarya University Hydrogene Car - SAHİMO Project
- Sakarya University Solar Car - SAGUAR Project
- Sakarya University Solar Boat- SATEK Project

Computational Skills

MATLAB	Signal processing, Monte-carlo sim.	Fluent	Tubular porous media
SolidWorks	2D & 3D Design and Assembly	MS Project	
ANSYS	Static and Transient Structural	MS Office Tools	
SAMCEF	Composite :Static Linear	Photoshop CS/Corel Draw	

Publications

Journals

C.J.Keulen, **F.F.Melemmez**, T.Boz, P.Chelliah, H. S.Turkmen,M.Yildiz,A.Suleman , “Prediction of fatigue response of composite structures by monitoring the strain energy release rate with embedded fiber Bragg gratings”, *International Journal of Fatigue*, in review, 2012.

Fazli Fatih Melemmez, Talha Boz, Pandian Chelliah, Gokhan Bektas, Mehmet Yildiz, Cem Ozturk and Yusuf Menceloglu “Study of Local and Transient Buckling in Glass fiber Reinforced Composite Using Fiber Bragg Grating”, *Key Engineering Materials*, accepted,2012

P. Chelliah, C. Keulen, G. Bektas, T. Boz, A. Deniz, **F.Fatih Melemmez**, C. Ozturk, A. Suleman, and M. Yildiz, “Temperature independent strain measurement of fiber Bragg grating using spectral subtraction”,*Sensors and Actuators A*, in review, 2012

Fazli Fatih Melemmez, Gokhan Bektas, Mehmet Yildiz, Yusuf Ziya Menceloglu. “Manufacturing of Nanophase Integrated RTM Manufactured Composite Structures” (manuscript in preparation).

Conferences

Fazli Fatih Melemmez, Gokhan Bektas, Mehmet Yildiz, Yusuf Ziya Menceloglu. “The Integration of Carbon Nanotubes into Resin Transfer Molded Composites by Electrospraying”, 4th *International Conference on Solid State Science and Technology*, December 18-20,2012, Malacca,Malaysia.

Fazli Fatih Melemmez, Talha Boz, Pandian Chelliah, Gokhan Bektas, Mehmet Yildiz, Cem Ozturk and Yusuf Menceloglu “Study of Local and Transient Buckling in Glass fiber Reinforced Composite Using Fiber Bragg Grating”, *The International Conference on Materials and Applications for Sensors and Transducers*, May 24-28, 2012, Budapest, Hungary.

Talha Boz, Pandian Chelliah, Gokhan Bektas, **Fazli Fatih Melemmez**, Mehmet Yildiz, Cem Ozturk, “Damage detection in composite plates using fiber Bragg gratings”, *15th European Conference on Composite Materials ECCM 15*, June 24-28, 2012 Venice, Italy.

Fazli Fatih Melemmez, Talha Boz, Pandian Chelliah, Mehmet Yildiz. “Fatigue monitoring of glass fiber reinforced composite using fiber Bragg grating”, *14th International Conference on Advances in Materials and Processing Technologies*, 13-16th July 2011, Istanbul, Turkey.

Awards

2012	1st Prize, Best Presentation Award, MATSE, Sabanci University,Turkey
2012	2nd Prize, National YTU IEEE Project Contest , YTU - Istanbul, Turkey
2010	2nd Prize, TUBITAK Formula G, Solar car project, İzmir-Turkey
2009	1st of Turkey, 3rd of Europe, International Shell Eco Marathon, Hydrogen Car Project, Germany
2008	1st of Turkey,3rd of Europe, International Shell Eco Marathon, Hydrogen Car Project, France
2008	Best Design Award, TUBITAK Formula G, Solar car project, İzmir-Turkey
2007	3rd Prize,TUBITAK Formula G, Solar car Project Ankara,Turkey

Honours & Scholarships

2011-2013	Sabanci University Graduate Scholarship,
2011-2013	TUBITAK Scholarship,
2005-2009	Engineering Faculty Honour Student, Sakarya University
2008-2009	Sakarya University Rectorate, Acknowledgement Certificates
2009	Sakarya University Alumni Association, Special Student Scholarship
2008	Sakarya Governorship, Honour Certificate
2008	ROTARY International, Individual Acknowledgement Certificate
2001-2004	Ministry of Education Scholarship

Internships

August,2009	OTOKAR Automotive and Defense Industry Assembly line of light armoured tactical vehicles (Kobra-Akrep) and land rover armoured personal carriers
July,2008	TUBITAK Marmara Research Center Manufacturing of advanced ceramics and composite armors within the context of national defence industry tank modernization project

Seminars

Jan, 2013	NASTRAN / MARC / SimXpert (MSC) Structural modelling and finite element analysis
June,2011	Strain Gage Application and Usage Training EXEN Engineering Strain gage theory and implementation
July,2011	Wind Turbine Design (SAMCEF 4WT) Within the context of MILRES National Wind Turbine Project, Geometrical Design of Wind Turbines, Component Assembly
July,2011	SAMCEF Composite Composite design in SAMCEF Composite Module Linear Structural Analysis of Composites,
March-May,2007	ANSYS 3D modelling, static structural and transient structural analysis

Teaching Experience - Sabanci University

Composite Materials (x2)
Nature of Science
MATLAB - Solid Works - SAMCEF FEA

Language

English	Advanced
Spanish	Basic

References

Assoc. Prof. Mehmet YILDIZ Tel: (90)216 483900/9517	Sabanci Universitesi (Thesis Advisor) meyildiz@sabanciuniv.edu
Prof. Dr. Yusuf Menciloglu Tel: (90)216 4839501	Sabanci University yusufm@sabanciuniv.edu

*Personal phone numbers are available, given upon request.