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Dept. of Aerospace Engineering

Expertise areas:

- Computational Mechanics of Solids,
- Multiscale Modeling of Materials,
- Modeling of Nanocomposites,
- Micromechanics and Homogenization

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Recent Projects:

Polimer Nanokompozit Malzemelerin Mekanik Davranışının Modellenmesi için Bileşik Sonlu Eleman-Sınır Elemanı Yönteminin Geliştirilmesi (Development of a Coupled Finite Element-Boundary Element Method for Modeling of Mechanical Behavior of Polymer Nanocomposites), (2019-2022), Funding Agency: TÜBİTAK

Karbon Nanotüp İle Güçlendirilmiş Polimer Kompozitlerin Çok Ölçekli Modellenmesi (Multiscale Modeling of Carbon Nanotube Reinforced Polymer Composites), (2015-2018) Funding Agency: TÜBİTAK

Flanş İleri Analiz Arayüzü ve Tasarım Programı Oluşturulması (Development of Advanced Flange Design and Analysis Interface), (2014-2017) Funding Agency: Ministry of Industry and Technology

Ultra Yüksek Moleküler Ağırlıklı Polietilenin Çok Ölçekli Modellenmesi (Multiscale Modeling of Ultra High Molecular Weight Polyethylene), (2012-2014) Funding Agency: TÜBİTAK

Recent Publications:

Gülaşık, H., Göktepe, S., Gürses, E. (2018) "A Modulus Gradient Model for an Axially Loaded Inhomogeneous Elastic Rod", *Meccanica*, vol. 53, 2573-2584.

Topaç, Ö. T. , Gözlüklü, B., Gürses, E., Çöker, D. (2017) "Experimental and Computational Study of Damage Process in CFRP Composite Beams under Low-Velocity Impact", *Composites Part A: Applied Science and Manufacturing*, 92, 167-182.

Gürses, E., Tunçöz, İ. O., Yang, Y., Arslan, P., Kalkan, U., Tıraş, H., Şahin, M., Özgen, S., Yaman, Y. (2017) "Structural and Aerodynamic Analyses of a Hybrid Trailing Edge Control Surface of a Fully Morphing Wing," *Journal of Intelligent Material Systems and Structures*, 28, 979-991.

Yaman, Y., Tunçöz, İ. O., Yang, Y., Arslan, P., Kalkan, U., Tıraş, H., Gürses, E., Şahin, M., Özgen, S. (2015) "Decamber Morphing Concepts by Using a Hybrid Trailing Edge Control Surface," *Aerospace*, 2, 482-504.

Oktaç, H. E., Gürses, E. (2015) "Modeling of Spherulite Microstructures in Semicrystalline Polymers," *Mechanics of Materials*, 90, 83-101.