Assoc. Prof. Özgür Atalay

Personal Information

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International Researcher IDs
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Education Information

Post Doctorate, Harvard University, Seas, United States Of America 2015 - 2017
Doctorate, The University of Manchester, United Kingdom 2010 - 2014
Postgraduate, The University of Manchester, United Kingdom 2008 - 2009
Undergraduate, Ege University, Faculty Of Engineering, Tekstil Mühendisliği Bölümü, Turkey 2002 - 2006

Foreign Languages

English, C1 Advanced

Research Areas

Technical Sciences, Textile Engineering and Technology

Academic Titles / Tasks

Associate Professor, Istanbul Technical University, 2019 - Continues
Research Assistant PhD, Istanbul Technical University, Tekstil Teknolojileri Ve Tasarımı Fakültesi, Tekstil Mühendisliği Bölümü, 2014 - Continues
Other, Harvard University, Seas, Bıodesıgn Lab, 2015 - 2017

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Real-time Stride Length Estimation using Textile-Based Capacitive Soft Strain Sensors**
Ayvaz U., Özlem K., Yılmaz A., Tunçay Atalay A., Atalay Ö., İnce G.
IEEE Transactions on Instrumentation and Measurement, vol.73, pp.1-11, 2024 (SCI-Expanded)

II. **Design of the monolithic planar isotropic auxetic piezo-resistive sensor glove to detect human hand motion**
Taherkhani B., Nasri R., Tuncay Atalay A., Malmir Chegini M., Atalay Ö.
Journal of Materials Science, vol.59, no.2, pp.686-697, 2024 (SCI-Expanded)

III. **Isotropic auxetic structure with fixed Poisson's ratio for piezo-resistive strain sensor to detect human body motion**

Taherkhani B., Rahmani S., Atalay Ö.
Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, vol.237, no.10, pp.2177-2189, 2023 (SCI-Expanded)

IV. **Development and characterization of conductive textile (polyester fabric) for wearable electronics by using electroless metallization**
Hassan Z., Atalay Ö., Kalaoğlu F., Ozat F. A., ÖZDEMİR Ö., Kesimci M. O.
Journal of the Textile Institute, 2023 (SCI-Expanded)

V. **Effect of Segment Types on Characterization of Soft Sensing Textile Actuators for Soft Wearable Robots**
Yılmaz A., Khalilbayli F., Özlem K., Elmoughnı H. M. E. A., Kalaoğlu F., TUNÇAY ATALAY A., İnce G., Atalay Ö.
Biomimetics, vol.7, no.4, 2022 (SCI-Expanded)

VI. **Thermoelectric Clothing for Body Heat Harvesting and Personal Cooling: Design and Fabrication of a Textile-Integrated Flexible and Vertical Device**
Elmoughnı H. M. E. A., Atalay Ö., Özlem K., Menon A. K.
ENERGY TECHNOLOGY, vol.10, no.10, 2022 (SCI-Expanded)

VII. **Conductive cotton fabric using laser pre-treatment and electroless plating**
Hassan Z., Atalay Ö., Kalaoğlu F.
JOURNAL OF THE TEXTILE INSTITUTE, vol.113, no.5, pp.737-747, 2022 (SCI-Expanded)

VIII. **Machine-Knitted Seamless Pneumatic Actuators for Soft Robotics: Design, Fabrication, and Characterization**
Elmoughnı H. M. E. A., Yilmaz A. F., Özlem K., Khalilbayli F., Cappello L., Atalay A. T., İnce G., Atalay Ö.
ACTUATORS, vol.10, no.5, 2021 (SCI-Expanded)

IX. **Development and characterization of conductive textile (cotton) for wearable electronics and soft robotic applications**
Hassan Z., Kalaoğlu F., Atalay Ö.
TEXTILE RESEARCH JOURNAL, vol.90, pp.1792-1804, 2020 (SCI-Expanded)

X. **Development of textile-based transmission lines using conductive yarns and ultrasonic welding technology for e-textile applications**
Atalay Ö., Kalaoğlu F., Kurşun Bahadır S.
JOURNAL OF ENGINEERED FIBERS AND FABRICS, vol.14, 2019 (SCI-Expanded)

XI. **Textile-Based, Interdigital, Capacitive, Soft-Strain Sensor for Wearable Applications**
Atalay Ö.
MATERIALS, vol.11, no.5, 2018 (SCI-Expanded)

XII. **A Highly Sensitive Capacitive-Based Soft Pressure Sensor Based on a Conductive Fabric and a Microporous Dielectric Layer**
Atalay Ö., Atalay A., Gafford J., Walsh C.
ADVANCED MATERIALS TECHNOLOGIES, vol.3, no.1, 2018 (SCI-Expanded)

XIII. **Piezofilm yarn sensor-integrated knitted fabric for healthcare applications**
Atalay A., Atalay O., Husain M. D., Fernando A., Potluri P.
JOURNAL OF INDUSTRIAL TEXTILES, vol.47, no.4, pp.505-521, 2017 (SCI-Expanded)

XIV. **A Highly Stretchable Capacitive-Based Strain Sensor Based on Metal Deposition and Laser Rastering**
Atalay O., Atalay A., Gafford J., Wang H., Wood R., Walsh C.
ADVANCED MATERIALS TECHNOLOGIES, vol.2, no.9, 2017 (SCI-Expanded)

XV. **Batch Fabrication of Customizable Silicone-Textile Composite Capacitive Strain Sensors for Human Motion Tracking**
Atalay A., Sanchez V., Atalay O., Vogt D. M., Haufe F., Wood R. J., Walsh C. J.
ADVANCED MATERIALS TECHNOLOGIES, vol.2, no.9, 2017 (SCI-Expanded)

XVI. **DEVELOPMENT OF TEST RIG SYSTEM FOR CALIBRATION OF TEMPERATURE SENSING FABRIC**
Husain M. D., Atalay O., Atalay A., Kennon R.
AUTEX RESEARCH JOURNAL, vol.17, no.3, pp.219-228, 2017 (SCI-Expanded)

XVII. **Measuring Human Body Temperature through Temperature Sensing Fabric**

Husain M. D., Naqvi S., Atalay Ö., Hamdani S. T. A., Kennon R.
AATCC JOURNAL OF RESEARCH, vol.3, no.4, pp.1-12, 2016 (SCI-Expanded)

XVIII. **An Analysis on the Moisture and Thermal Protective Performance of Firefighter Clothing Based on Different Layer Combinations and Effect of Washing on Heat Protection and Vapour Transfer Performance**
Atalay Ö., BAHADIR S. K., Kalaoğlu F.
ADVANCES IN MATERIALS SCIENCE AND ENGINEERING, 2015 (SCI-Expanded)

XIX. **Weft-Knitted Strain Sensor for Monitoring Respiratory Rate and Its Electro-Mechanical Modeling**
Atalay O., Kennon W. R., Demirok E.
IEEE SENSORS JOURNAL, vol.15, no.1, pp.110-122, 2015 (SCI-Expanded)

XX. **Knitted Strain Sensors: Impact of Design Parameters on Sensing Properties**
Atalay O., Kennon W. R.
SENSORS, vol.14, no.3, pp.4712-4730, 2014 (SCI-Expanded)

XXI. **Textile-Based Weft Knitted Strain Sensors: Effect of Fabric Parameters on Sensor Properties**
Atalay O., Kennon W. R., HUSAIN M. D.
SENSORS, vol.13, no.8, pp.11114-11127, 2013 (SCI-Expanded)

Articles Published in Other Journals

I. **Textile-based pressure sensor arrays: A novel scalable manufacturing technique**
Gumus C., Özlem K., Khalilbayli F., Erzurumluoglu O. F., İnce G., Atalay Ö., TUNÇAY ATALAY A.
MICRO AND NANO ENGINEERING, vol.15, 2022 (ESCI)

II. **Investigation the surface modification of polyamide fabrics using low-pressure plasma technique**
hassan z., ATALAY Ö., KALAOĞLU F.
IOP Conf.series:Materials Science engineering, vol.460, no.12051, 2018 (Peer-Reviewed Journal)

III. **Giyilebilir Elektronik Sistemler için Tekstil Bazlı Rezistif Basınç Algılayıcı Yapıların Geliştirilmesi**
ATALAY Ö.
Tekstil ve Mühendis, vol.25, no.110, pp.140-145, 2018 (Scopus)

IV. **Uncertainty Analysis of the Temperature-Resistance Relationship of Temperature Sensing Fabric**
Husain M. D., Atalay Ö., Atalay A., Kennon R.
FIBERS, vol.4, no.4, 2016 (ESCI)

V. **Effect of Strain and Humidity on the Performance of Temperature Sensing Fabric**
Husain M. D., ATALAY Ö., Kennon W. R.
International Journal of Textile Science, 2013 (Peer-Reviewed Journal)

Supported Projects

Atalay Ö., Özlem K., İnce G., Project Supported by Higher Education Institutions, Tekstil bazlı vücut hareket yakalama sisteminin geliştirilmesi, 2018 - 2019

Activities in Scientific Journals

AATCC journal of research, Assistant Editor/Section Editor, 2016 - Continues

Memberships / Tasks in Scientific Organizations

the American Association of Textile Chemists and Colorists, Member, 2016 - Continues

Metrics

Publication: 53
Citation (WoS): 801
Citation (Scopus): 1228
H-Index (WoS): 10
H-Index (Scopus): 13

Scholarships

2219 Yurt Dışı Doktora Sonrası Araştırma Burs Programı, TUBITAK, 2015 - Continues
YLYS, Ministry of Education, 2008 - Continues