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International Researcher IDs

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Education Information

Post Doctorate, Harvard University, School of Engineering and Applied Science, Wyss Institute, United States Of America 2015 - 2017

Doctorate, The University of Manchester, School of Materials, Textile Technology, United Kingdom 2009 - 2014

Postgraduate, The University of Bolton, United Kingdom 2008 - 2009

Undergraduate, Marmara University, Faculty of Technical Education, Textile Education, Turkey 2002 - 2006

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Development of Piezoelectric PVDF Sensor Integrated Textile Yarn, The University Of Manchester, 2014

Postgraduate, Fabrication and Performance of Ionic Polymer-Metal Composites (IPMC) for Medical Textiles, The University Of Bolton, 2009

Academic Titles / Tasks

Assistant Professor, Marmara University, Faculty of Technology, Textile Engineering, 2020 - Continues

Research Assistant, Marmara University, Faculty of Technology, Textile Engineering, 2014 - 2020

Courses

Introduction to Textile Engineering, Undergraduate, 2021 - 2022

Mühendisler için İstatistik, Undergraduate, 2020 - 2021

Dokusuz tekstil yüzeyleri, Undergraduate, 2020 - 2021

Advising Theses

- Gazi V., Tunçay Atalay A., Design and Control Of Textile Based Soft Robotic Systems For Therapeutic Applications, Doctorate, M.FATİH(Student), Continues
- Koçak E. D., Tunçay Atalay A., Termoterapi Uygulamaları İçin Isıtma Fonksiyonlu Tekstil Yüzeyinin Geliştirilmesi, Postgraduate, Z.BELEK(Student), 2021
- Koçak E. D., Tunçay Atalay A., Development of Textile Based Soft Actuator For the Treatment of Muscle Diseases At Hand , Postgraduate, E.DEDE(Student), 2021

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Design of the monolithic planar isotropic auxetic piezo-resistive sensor glove to detect human hand motion**
Taherkhani B., Nasri R., TUNÇAY ATALAY A., Malmir Chegini M., Atalay Ö.
Journal of Materials Science, vol.59, no.2, pp.686-697, 2024 (SCI-Expanded)
- II. **Effect of Segment Types on Characterization of Soft Sensing Textile Actuators for Soft Wearable Robots**
Yilmaz A. F., Khalilibayli F., Özlem K., Elmoughni H. M. E. A., Kalaoğlu F., Tunçay Atalay A., İnce G., Atalay Ö.
BIOMIMETICS, vol.7, no.4, 2022 (SCI-Expanded)
- III. **Machine-Knitted Seamless Pneumatic Actuators for Soft Robotics: Design, Fabrication, and Characterization**
Elmoughni H. M. E. A., Yilmaz A. F., Özlem K., Khalilibayli F., Cappello L., Atalay A., İnce G., Atalay Ö.
ACTUATORS, vol.10, no.5, 2021 (SCI-Expanded)
- IV. **Smart Thermally Actuating Textiles**
Sanchez V., Payne C. J., Preston D. J., Alvarez J. T., Weaver J. C., Atalay A., Boyvat M., Vogt D. M., Wood R. J., Whitesides G. M., et al.
ADVANCED MATERIALS TECHNOLOGIES, vol.5, no.8, 2020 (SCI-Expanded)
- V. **A Highly Sensitive Capacitive-Based Soft Pressure Sensor Based on a Conductive Fabric and a Microporous Dielectric Layer**
Atalay Ö., TUNÇAY ATALAY A., Gafford J., Walsh C.
ADVANCED MATERIALS TECHNOLOGIES, vol.3, no.1, 2018 (SCI-Expanded)
- VI. **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)
- VII. **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)
- VIII. **A Highly Stretchable Capacitive-Based Strain Sensor Based on Metal Deposition and Laser Rastering**
ATALAY Ö., ATALAY A., Gafford J., Wang H., Wood R., walsh c.
ADVANCED MATERIALS TECHNOLOGIES, vol.2, no.9, 2017 (SCI-Expanded)
- IX. **Batch Fabrication of Customizable Silicone-Textile Composite Capacitive Strain Sensors for Human Motion Tracking**
ATALAY A., Sanchez V., ATALAY Ö., Vogt D. M., Haufe F., Wood R. J., walsh c.
ADVANCED MATERIALS TECHNOLOGIES, vol.2, no.9, 2017 (SCI-Expanded)
- X. **INVESTIGATION OF THE MECHANICAL TESTING CONDITIONS ON SENSING PROPERTIES OF TEXTILE-BASED STRAIN SENSOR**
ATALAY Ö., ATALAY A., Husain M. D.
Tekstil Ve Konfeksiyon, vol.27, pp.3-9, 2017 (SCI-Expanded)
- XI. **MEKANİK TEST KOŞULLARININ TEKSTİL BAZLI UZAMA SENSÖRLERİNİN ALGILAMA ÖZELLİKLERİNE ETKİSİNİN İNCELENMESİ ÜZERİNE BİR ARAŞTIRMA**

- ATALAY Ö., ATALAY A., HUSAINMuhammad D.
TEKSTİL VE KONFEKSİYON, vol.27, pp.3-9, 2017 (SCI-Expanded)
- XII. Comparative study of the weft-knitted strain sensors
Atalay O., Tuncay A., Husain M. D., Kennon W. R.
JOURNAL OF INDUSTRIAL TEXTILES, vol.46, no.5, pp.1212-1240, 2017 (SCI-Expanded)
- XIII. INVESTIGATION OF THE MECHANICAL TESTING CONDITIONS ON SENSING PROPERTIES OF TEXTILE-BASED STRAIN SENSOR
Atalay O., Atalay A., Husain M. D.
TEKSTİL VE KONFEKSİYON, vol.27, no.1, pp.3-9, 2017 (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 (Scopus)
- II. 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)

Books & Book Chapters

- I. Textile Based Sensing System for Lower Limb Motion Monitoring
ÖZLEM K., ATALAY Ö., TUNÇAY ATALAY A., İNCE G.
in: Converging Clinical and Engineering Research on Neurorehabilitation III, Lorenzo Masia, Silvestro Micera, Metin Akay, José L. Pons, Editor, Springer, Cham, pp.395-399, 2019

Refereed Congress / Symposium Publications in Proceedings

- I. Gait Phase Recognition using Textile-based Sensor
Pazar A., Khalilbayli F., Özlem K., Yılmaz F., TUNÇAY ATALAY A., Atalay Ö., İnce G.
7th International Conference on Computer Science and Engineering, UBMK 2022, Diyarbakır, Turkey, 14 - 16 September 2022, pp.338-343
- II. Giyilebilir İyileştirici Sistemler İçin Yenilikçi Eyleyiciler ve Algılayıcılar
BELER Z., Küçükşahin H. N., Camgöz A. N., Sinmaz E. İ., ÇELEBİ M. F., TUNÇAY ATALAY A.
TEKNOFEST 2021 Biyoteknoloji İnovasyon Yarışması, İstanbul, Turkey, 21 - 26 September 2021, vol.1, pp.1
- III. ECG Monitoring System Using Textile Electrodes
Paket E., ÖZLEM K., Elmoughni H., TUNÇAY ATALAY A., ATALAY Ö., İNCE G.
2020 28th Signal Processing and Communications Applications Conference (SIU), Gaziantep, Turkey, 05 October 2020
- IV. Real-Time Human Activity Recognition Using Textile-Based Sensors
AYVAZ U., Elmoughni H., TUNÇAY ATALAY A., ATALAY Ö., İNCE G.
EAI International Conference on Body Area Networks, 15 December 2020
- V. Step Length Estimation Using Sensor Fusion
Sevinç H., AYVAZ U., ÖZLEM K., Elmoughni H., TUNÇAY ATALAY A., ATALAY Ö., İNCE G.
2020 IEEE International Conference on Flexible and Printable Sensors and Systems (FLEPS), Manchester, United Kingdom, 16 August 2020
- VI. Karpal Tunel Sendromu İçin Tekstil Tabanlı Yumuşak Robotik Eldiven
BELER Z., DEDE E., ÇELEBİ M. F., TUNÇAY ATALAY A.

- TEKNOFEST 2020 Biyoteknoloji İnovasyon Yarışması, Gaziantep, Turkey, 22 - 27 September 2020
- VII. **Comparative Assessment of Knee Motion Monitoring Technologies**
KUYUCU C. F., AYVAZ U., ÖZLEM K., ATALAY A., ATALAY Ö., İNCE G.
2019 4th International Conference on Computer Science and Engineering (UBMK), Samsun, Turkey, 11 - 15 September 2019
- VIII. **Textile Based Sensing System for LowerLimb Motion Monitoring**
Ozlem K., ATALAY Ö., ATALAY A., Ince G.
The 2018 International Conference on Neurorehabilitation, 16 - 20 October 2018
- IX. **Force Control of Textile-Based Soft Wearable Robots forMechanotherapy**
Payne C. J., Hevia E. G., Phipps N., ATALAY A., ATALAY Ö., Seo B. R., Mooney D. J., walsh c.
IEEE International Conference on Robotics and Automation (ICRA), Brisbane, Australia, 21 - 25 May 2018
- X. **Textile-Based Wearable Pedometer**
ATALAY A., ATALAY Ö., Alp K., Ince G.
8th International Textile Conference, 14 - 16 April 2018
- XI. **Textile Based Sensing System for Lower Limb Motion Monitoring**
ÖZLEM K., ATALAY Ö., ATALAY A., İNCE G.
Proceedings of International Conference on Neurorehabilitation, 1 - 05 January 2018
- XII. **Force Control of Textile-Based Soft Wearable Robots for Mechanotherapy**
Payne C. J., Hevia E. G., Phipps N., Atalay A., Atalay O., Seo B. R., Mooney D. J., Walsh C. J.
IEEE International Conference on Robotics and Automation (ICRA), Brisbane, Australia, 21 - 25 May 2018,
pp.5459-5465
- XIII. **Performance analysis of Textile based Temperature Sensor**
Hussain M. D., ATALAY Ö., Naqvi S., ATALAY A., Kennon R.
AATCC ITC, Wilmington, United States Of America, 28 - 30 March 2017

Supported Projects

Tunçay Atalay A., Atalay Ö., Ince G., TÜBİTAK International Bilateral Joint Cooperation Program Project, Fabric based soft actuators for wearable applications, 2019 - 2021
Tunçay Atalay A., H2020 Project, Robotextherapy, 2019 - 2021

Patent

Tunçay Atalay A., ACTUATORS FOR SOFT ROBOTIC APPLICATIONS, Patent, CHAPTER F Mechanical engineering; Lighting; Heating; Weaponry; Destroyed Materials, The Invention Recourse Number: PCT/TR2022/050384 , Standard Registration, 2022
Tunçay Atalay A., TEKSTİL TABANLI GENİŞ ALANLI BASINÇ ALGILAMA DİZİLERİ, Patent, CHAPTER A Human Needs, The Invention Recourse Number: 2022/004079 , Standard Registration, 2022

Metrics

Publication: 30
Citation (WoS): 570
Citation (Scopus): 610
H-Index (WoS): 7
H-Index (Scopus): 7