

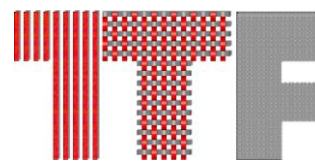


<http://www.unizg.hr>



SCIENCE RESEARCH CENTER

<http://www.ts-rc.eu>



<http://www.ttf.unizg.hr>

Award of Textile Science Research Centre (TSRC) for 2018

Award in the category I is assigned to the *PhD student Rajna Malinar, BSc* for the **most successful scientific work in the field of textiles:**

TEXTILE PARTICLE GENERATION – TEST METHOD FOR NONWOVENS MODIFIED FOR USE ON WOVEN MATERIALS

Summary: *Considering that textile dust can cause many problems in specific environments, there is a need for low particle release textiles. Usually this means using disposable textiles, but in effort to reduce amount of waste that such products generate, aim of our research was to investigate possibilities of using multiple use fabrics as an alternative. For purposes of this study, standard method for testing particle release from nonwovens had to be adapted in order to acquire reliable data on testing woven fabrics. Statistical analysis showed considerably more precise results after prolongation of testing time from 5 minutes (standardised) to 30 min (modified). Examination of particle release from cotton fabric after multiple washing and drying cycles showed increase in smaller particles count (<1 μm) but also decrease of larger particles (>5 μm) after 10 cycles.*

Keywords: *textile dust, particle generation, medical textiles*



Rajna Malinar graduated from the University of Zagreb at the Faculty of Textile Technology in 2015. She enrolled in doctoral study Textile Science and Technology in 2017/18. Her research topic is based on examination of the textile dust generation and modification of cellulose materials. Since 2018 she has been employed on the Faculty of Textile Technology as a PhD on the installation research project "*Hospital Protective Textiles*" funded by Croatian Science Foundation.

She published 3 scientific conference papers with international peer-review and 2 scientific conference papers with national peer-review.