



Machine Vision for Automatic Quality Control of Uni-directional Tape Production

Somesh Devagekar

Hochschule Bonn-Rhein-Sieg, Grantham-Allee 20, 53757 Sankt Augustin, GERMANY

Abstract:

The quality of uni-directional tape in production process is affected by environmental conditions like temperature and production speed. Machine vision algorithms on the scanned images are deployed in this context to detect and classify tape damages during the manufacturing procedure. We perform a comparative study among famous feature descriptors for fault candidate generation, then propose own features for fault detection using various machine learning techniques. The empirical results demonstrate the high performance of the proposed system and show preference of random forest and canny edges for classifier and feature generator respectively.

Biography:

My name is Somesh Devagekar and I have completed my bachelors at the age of 21 years from BVB College of Engineering and Technology. Currently I am pursuing my graduation studies from University of Bonn-Rhein-Sieg, Bonn GERMANY . I am currently working as a research associate at Fraunhofer Institute for Algorithms and Scientific Computing Bonn, GERMANY.

Publication of speakers:

1. Somesh Devagekar, Surgical Pearl: Mechanical harvesting of perilesional normally pigmented tissue to



merge donor and recipient sites for transplantation in vitiligo, Journal of the American Academy of Dermatology, Available online 21 August 2020

2. Somesh Devagekar, Incorporation of graphite into iron decorated polypyrrole for dielectric and EMI shielding applications, Synthetic Metals, Volume 267, September 2020, 116450
3. Somesh Devagekar, Anti-proliferative potential of triphenyl substituted pyrimidines against MDA-MB-231, HCT-116 and HT-29 cancer cell lines, Bio-organic & Medicinal Chemistry Letters, Volume 30, Issue 20, 15 October 2020, 127468
4. Somesh Devagekar, Axillary incubator for cell-based therapies in vitiligo, Journal of the American Academy of Dermatology, Available online 25 March 2020

[International Conference on Humanoid Robotics, Artificial Intelligence and Automation | May 21, 2020 | London, UK](#)

Citation: Somesh Devagekar; Machine Vision for Automatic Quality Control of Uni-directional Tape Production; Humanoid 2020; May 21, 2020; London, UK