INTRODUCTION

In this articles collection results of research work are presented at the following conferences entitled Computer Systems in Medicine and Health that were created by the MEDUSA project (Automated Assessment of Joint Synovitis Activity from Medical Ultrasound and Power Doppler Examinations using Image Processing and Machine Learning Methods).

The articles describes research goals undertaken in the project. All research concentrates its interest on the problem of automatic estimation of finger joint inflammation activity state using the information present in ultrasonography imaging. The articles which were assumed to proceed were detailed in the main international conferences. The first one entitled Computer Systems in Medicine and Health – CSMH 2015, which was held in Forde, Norway between 1\textsuperscript{st} – 2\textsuperscript{nd} October 2015. The second one entitled Computer Systems and Medicine and Health – CSMH 2016, which was held in Szczyrk, Poland between 11\textsuperscript{th} – 12\textsuperscript{th} May 2016. The aim of the conferences was bring together researchers and practitioners from the engineering and health sciences to provide them with a platform to report on recent advances and developments in the computer systems used in medicine and health services, as well as actual and potential applications of new IT tools to medicine and health. The main topics within the scope of the conferences include the following:

- Software Development for Biomedical Image Processing and Analysis
- Computational Imaging and Visualization
- Computer Aided Diagnosis and Treatment
- Automated Diagnosis
- Biomedical Image Processing and Analysis: Enhancement and Visualization, Segmentation, Registration, Detection of Anatomical Features, Detection of Abnormal Conditions
- Machine Learning and Classification
- Data Mining Tools in Medicine and Bioinformatics

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