

The Unreasonable Effectiveness of Physics in the Field of Computer Vision

Prof. Dr. Bjoern Andres

Institute of Artificial Intelligence, Faculty of Computer Science, TU Dresden

Computer vision is the branch of computer science devoted to the analysis and understanding of images by computer algorithms. Typical problems studied in this field and visited also in this talk are image segmentation, object recognition and multiple object tracking. Rooted in engineering, an emphasis of computer vision research is on the empirical study of practical algorithms. Trained as a physicist, I, the speaker, have always been interested also in principles and models foundational to image analysis. In this talk, I will speak about the most practically useful findings from my incomplete and partially erratic search for such concepts. The talk is meant also as an invitation for physics students to join this search in the young and active area of computer vision where much is yet to be discovered.