Andrei Zanfir

Location: Bucharest, Romania
Research Assistant

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Research and Work Experience

- **Institute of Mathematics of the Romanian Academy** — Bucharest, Romania
  Research Assistant/PhD Student — *2010 - 2018*
  - Computer Vision and Machine Learning
    * My principal research interests are 3D human pose estimation from monocular images, establishing image correspondences and inferring optical flow. Currently I am working on building a real-time machine learning solution that is able to detect, segment and faithfully extract complete human body models from a single image.
  - Responsibilities
    * Proposing solutions and ideas to main computer vision problems, and presenting them at top computer vision conferences
    * Building algorithms and implementing solutions from scratch, as well as interfacing multiple existing computer vision libraries (e.g. Caffe, TensorFlow, OpenCV, NumPy)
    * Reviewing papers for all major computer vision and machine learning conferences (e.g. CVPR, ICCV, ECCV, NIPS)
  - Acquired aptitudes
    * Working in a high-performance environment, and sharing ideas with co-researchers
    * Critical thinking
    * The ability to stay up-to-date with newest trends and ideas

Education

- **Bucharest "POLITEHNICA" University** — Bucharest, Romania
  MSc — *2010 - 2012*
  - Principal subjects covered: Computer graphics, multimedia and virtual reality
  - Advanced image processing systems
  - Advanced computer graphics
  - Programming techniques for high performance computing
  - Computational geometry
- **Bucharest "POLITEHNICA" University** — Bucharest, Romania
  BSc — *2006 - 2010*
  - Principal subjects covered: Computer science
  - Design of hardware, software and communication systems
  - Algorithms and information processing
  - Computing systems architecture and program engineering

Publications

- M. Leordeanu, A. Zanfir, C. Sminchisescu: "Semi-supervised Learning and Optimization for Hypergraph Matching", In *International Conference on Computer Vision (ICCV) 2011, Barcelona*
- M. Leordeanu, A. Zanfir, C. Sminchisescu: "Locally Affine Sparse-to-Dense Matching for Motion and Occlusion Estimation", In *ICCV 2013, Sydney*
- A. Zanfir, C. Sminchisescu: "Large displacement 3D scene flow with occlusion reasoning", In *ICCV 2015, Santiago de Chile*
- A. Zanfir, C. Sminchisescu: "Deep Learning of Graph Matching", In *CVPR 2018, Salt Lake City*
- M. Zanfir, A.-I. Popa, A. Zanfir, C. Sminchisescu: "Human Appearance Transfer", In *CVPR 2018, Salt Lake City*
- A. Zanfir, E. Marinoiu, C. Sminchisescu: "Monocular 3D Pose and Shape Estimation of Multiple People in Natural Scenes - The Importance of Multiple Scene Constraints", In *CVPR 2018, Salt Lake City*
- A. Zanfir, E. Marinoiu, M. Zanfir, A.-I. Popa, C. Sminchisescu: "Deep Network for the Integrated 3D Sensing of Multiple People in Natural Images", In *Conference on Neural Information Processing Systems (NIPS) 2018, Montreal, Canada*

Tools

- Proficient in C/C++, Matlab, Cuda, Python
- Experienced in using computer vision/machine learning libraries such as: NumPy, SciPy, OpenCV, Caffe, MatConvNet, cuBLAS

Miscellany

- Foreign languages: Romanian (native), English (advanced), French (basic)
- Awards: Best paper award - Honorable mention at CVPR 2018, 2nd place at the 2011 Intel Acceler8 competition, for the parallelization and optimization of a given algorithm; 1st place for the development of a chess software in an Artificial Intelligence competition, 2010 "Back to School"

12.10.2018

LISTĂ DE PUBLICAȚII ANDREI ZANFIR

- M. Leordeanu, A. Zanfir, C. Sminchisescu: "Semi-supervised Learning and Optimization for Hypergraph Matching", In *International Conference on Computer Vision (ICCV) 2011, Barcelona*
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