Atanas Boev – Curriculum Vitae

Bulgarian citizen, born in 1976, PhD from Finland, living in Munich.
PhD image processing (with distinction) in 2012, MSc RF chip design in 2002
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About me

XR and imaging expert. Lightfield, optics, sensors, image processing, learned video compression, wearable displays, subjective tests - patents and papers on each of those.

Recently, I worked on AI video compression and tonemapping. Before that I have spent a few years building AR/VR prototypes, and building new HCI concepts. I can guide the process from requirements, through invention, to working prototype and patent, and then support adapting the concept according to the requirements from the Product Line.

Results: ~23 patent applications, ~10 prototypes, book chapter,~50 publications (including Transactions of IEEE and ECCV). Part of the team that won JPEG-AI CfP.

Languages: English (full proficiency), Bulgarian (Native), Russian (intermediate), basic Finnish and German.

Experience

2020-2024 **Huawei Research Center**, Munich, Germany - Principal researcher

- HDR imaging and color science (cooperation project, two papers submitted)
- AI Video compression (11+ patent applications, JPEG-AI CFP)
- Following SC 29/WG 1 (JPEG), AG5 (MPEG visual quality), Khronos PBR
- Project management for cooperation projects (3 patent applications, delivery to product)

2014-2020 **Huawei Research Center**, Munich, Germany - Senior researcher

- Team lead AR/VR HMD prototyping (10+ patent applications)
- Multispectral imaging/smart camera
- ADAC/Smart car (2 patents)
- PhD students supervision (two journal and a few conference papers, one in ECCV)

2012 - 2014 **Research Centre for Immersive Technologies**, Tampere University of Technology, Finland - Post-doctoral researcher

- 3D visualization and perceptual optimization (a few journal papers and a book chapter)
- Organizing and teaching a course on Virtual Reality (3 cu)
- EC-funded collaboration projects (Mobile3DTV, Qialinet, 3DTV NoE, ProLight ETN)
- MSc and PhD student thesis supervision (~5 students)

2013 **Holografika KFT**, Budapest, Hungary - Marie Curie Research Exchange
- Algorithm for optical calibration of a 4D light field display

Education

2019, Course on Tensorflow and Machine Learning

2018, Course on Optical Design with Zemax Optics Studio, Huawei Research Center, Munich

2016, Course on Agile project management with Jira, Huawei Research Center, Munich, Germany

2014, SPIE course on High Dynamic Range Imaging, Sensors and Applications

2013, COST training school on Plenoptics, Sundsval, Sweden

2012, Doctor of Science in Technology, with distinction, "Perceptually Optimized Visualization on Autostereoscopic 3D displays", Tampere University of Technology, Finland

2012, Training School on 3D Media, UX and Computational Architectures, Tampere University of Technology, Finland

2009, SPIE 2009 Course on 3D displays and applications

2002, Master of Science, "Comparative analysis on RF-ASIC design for a low noise amplifier", TUT-Tampere/TU-Varna, Bulgaria

Awards

2022 First place JPEG-AI CFP (team)

2019, 2016 Huawei Future Star award

2012, Best Poster Award, COST training School on 3D media, UX and Computational Architectures

2011, Best Student Paper Award, Multimedia on Mobile Devices, EI2011, San Francisco, CA

2010, Nokia Scholarship Award

2009, Best Demo Award, Tampere Innovation Days