

 kostampl@gmail.com Berlin, Germany linkedin.com/in/kostampl/ Konstantinos Amplianitis www.kostasamplianitis.com www.volograms.com

## EXPERTISE

### Entrepreneurial Activity

Raising Startup Venture Capital  
Proposals for EU Research Grants  
Operations Management  
Development of University spin-offs  
Filing of Patents & Trademarks in EU, UK, USA

### Research Activity

VR/AR  
Volumetric Video  
3D Reconstructions  
Human Segmentation

## EDUCATION

### PhD (Dr. rer. nat.) Computer Science

Research focus: Computer Vision & Machine Learning  
Humboldt University of Berlin | 12/2012 – 03/2017

### MSc Geodesy & Geoinformation Science

Disciplined orientation: Computer Vision  
Technical University of Berlin | 10/2009 – 03/2012

### BSc Geomatics & Geoinformatics Engr.

Disciplined orientation: Photogrammetry  
Athens University of Applied Sciences | Greece  
09/2005 – 09/2009


### M.A. Classical Piano Performance (Soloist)

Nefeli Conservatory | Athens • Greece | 06/2008

### B.A. Music Theory & Composition

Nefeli Conservatory | Athens • Greece | 06/2006

## LANGUAGES

 Greek | Native English | Fluent German | Intermediate

## SPORTS • INTERESTS • HOBBIES

 Swimming / 10K Road Runner / Ping Pong Classical Piano Performance / Jazz Piano World Traveller Building Jigsaw Puzzles

## SUMMARY

5 years' international entrepreneurial experience in a university spin-off deep-tech company, VOLOGRAMS for Augmented / Virtual Reality (AR / VR) applications, propelled to global commercialization, coupled with 7+ years' applied R&D and innovation in Computer Vision & Machine Learning. Experience in successfully raising €3m Startup Venture Capital, acquiring €600K in EU research grants, managing operations & encountering global commercialization challenges. Published numerous Scientific research papers in top-tier international conferences & journals. Public speaker, Scientific Paper Reviewer and occasional opinion writer in related fields.

## PROFESSIONAL EXPERIENCE

### Professor in Computer Vision

IU INTERNATIONAL UNIVERSITY OF APPLIED SCIENCES | Berlin – Germany  
**10/2022 – present**

*IU is the largest higher education institution in Germany and one of the fastest growing EdTech companies globally.*

### Co-founder, COO & BoD Member

VOLOGRAMS Ltd | Dublin – Ireland  
**01/2018 – present**

*A Virtual & Augmented Reality Technology Company, start-up & spin-off venture from Trinity College Dublin, with a mission to bring holograms of real humans to consumers.*

### CHIEF OPERATIONS OFFICER | 09/2019 – present

- Involved in raising €1.5m seed capital from VC & Enterprise Ireland.
- Successfully raised €600K through Ireland & EU research grants
- Developed the Company's Intellectual Property (IP) strategy
- Filed 2 patent rights for EU member states & USA + 5 trademark applications for EU member states, UK & USA
- Set-up organisational structure & Data Privacy operational requirements: HR & Administration, Products, Business & Marketing, Technology.
- Recruited, primarily international employees, with a view to strengthen diversity for innovation, enhance the company's global presence & culture. Developed a clear on-boarding process
- Established corporate presence in Spain & Italy; acting legal representative for these entities.

### CHIEF SCIENTIFIC OFFICER | 04/2018 – 08/2019

- Involved in raising €850K pre-seed capital from VC & Enterprise Ireland
- Restructured backend API & set up programming standards / procedures

### Postdoctoral Research Fellow

TRINITY COLLEGE DUBLIN | Ireland  
Graphics Vision & Visualization Group  
**09/2016 – 05/2018**

*Member of the research project "V-SENSE "Extending visual Sensation through Image-based Visual Computing", led by Prof. Aljosa Smolic. Responsible for R&D of natural image matting & 3D reconstruction for volumetric video.*

- Successfully published scientific papers in top tier conferences / journals on AR/VR technologies
- Involved in the development of a mature 3D prototype system, used in several application examples and creative experiments
- Involved in the patent – method & device for creating a 3D model

### Software Engineer

SIEMENS AG | Berlin - Germany  
Mobility Division, Technology & Innovation  
**05/2015 – 06/2016**

*Responsible for the development of 3D Object recognition algorithms for Augmented Reality Products to be used for robustly detecting & recognizing a variety of objects in a Siemens Vectron Locomotive, from cameras embedded in different devices, such as tablets and mobile phones.*

### Research Associate

HUMBOLDT INNOVATION GmbH | Berlin – Germany  
Computer Vision Group  
**12/2015 – 06/2016**

Responsible for correcting systematic errors of a static camera through bundle adjustment

**Research Associate**

HUMBOLDT UNIVERSITY OF BERLIN | Germany 07/2012 – 06/2016

Computer Vision Group

Involved in R&D, as well as critical projects in the field of Computer Vision & Machine Learning, leading towards a PhD degree

**RESEARCH GRANTS**

- **INVICTUS (Innovative Volumetric Capture & Editing Tools for Ubiquitous Storytelling)**. €2m EU grant, HORIZON 2020: ICT-55 2018-2020 Interactive Technologies 2020 – 2022
- Tesla XP GPU card NVIDIA Corporation | 2017

**ACADEMIC SERVICES**

- Reviewer (Journals)
  - Computer Graphics Forum | 2020
  - IEEE Transactions on Multimedia | 2019
  - IEEE Image Understanding | 2017
  - EURASIP Image & Video Processing | 2017
  - ISPRS Photogrammetry & Remote Sensing | 2016
- Reviewer (Conferences)
  - European Signal Processing Conference | 2018
  - International Society for Photogrammetry & Remote Sensing | 2016
  - International Conference on Computer Vision Theory and Applications | 2016
- Session Chair
  - International Conference on Computer Vision Theory and Applications | Rome | 27-29 / 02 / 2016
  - International Conference on Computer Vision Theory and Applications | Berlin | 11-14 / 03 / 2015

**TEACHING EXPERIENCE**

- Trinity College Dublin
  - Computer Vision (Module CSGV1/ACAD) 2016-2017
  - AR (Module CS7034/ACAD) 2016-2017
  - Comp. Vision (Module CS4053/ACAD) 2016-2017
  - Vision Systems (Module CS7008/ACAD) 2016-2017
  - Comp. Graphics (Module CS4052/ACAD) 2016-2017
- Humboldt University of Berlin
  - Stereo Vision Module 32313 - ACAD Winter terms 2012 - 2016

**PROGRAMMING COMPETENCES**

- Operating Systems .....Unix / Windows
- Programming Languages .....C / C++ / Python
- Script Languages .....MATLAB
- C++ Libraries .....Boost / OpenMP
- OPT / Math Framework .....Ceres / Eigen / FADBAD
- CV Frameworks .....OpenCV / MVS / MVG / PCL
- AR Frameworks .....MetaioSDK
- Revision Control Systems .....Git / SVN
- Build Systems .....CMake
- Unit Testing .....Google Tests
- Typesetting .....LaTeX

**TRAINING & CERTIFICATIONS**

- Overview and an in-depth analysis of the state-of-the art research in Computer Vision. **International Computer Vision Summer School** | Sicily | 09-15 / 07 / 2017
- Security City: Bringing Information Security to Life **Siemens AG, License: Z001NVMP** | Berlin | 05/2015
- Drones applied to Cultural Heritage & Archaeology **International Summer School** | Pontignano (Siena) 20-26 / 09 / 2013

**HONORS / AWARDS / MENTIONS**

- VOLOGRAMS “Top Virtual Reality Companies in Ireland (2021)” **Welp Magazine** | 02/2021
- VOLOGRAMS “Top 100 Hot Startups to watch”. **The Sunday Business Post Ireland** | 2018 / 2019 Best Journal Paper Award
- **Journal of Visual Comm. & Image Representation** 06/2019. Affordable Content Creation for Free-Viewpoint Video and VR/AR Applications
- Campus Company Recognition Award **Trinity College Dublin Innovation Awards** | 12/2018 VOLOGRAMS acknowledged by TCD for its innovative research & entrepreneurship.
- 1st Prize NEM Art & Design Competition **Art & Design Competition NEM Summit** | Madrid | 11/2017 “Virtual Play: After Samuel Beckett” V-Sense Trinity College
- 1st Prize Reading Group Competition **Inspiring Computer Vision System Solutions** | Italy 07/2017. Grounded on the seminar / workshop 3D scanning work “The Digital Michelangelo Project”
- Distinction in Piano Performance **Hellenic Ministry of Culture** | 06/2008
- Distinction in Music Theory & Composition **Hellenic Ministry of Culture** | 06/2006
- Piano Performance Scholarship **Nefeli Conservatory** | Athens • Greece | 2003/2004

**VOLUNTEER WORK**

- CAREER MENTOR **The Tipping Point in Education**  
Empower youth to connect with industry role models (mentors) to take their once-in-a-life time decision for their career
- BUSINESS MEMBER & ADVISOR **The Hellenic Community of Ireland**

**AFFILIATIONS**

- EC initiative for Extended Reality (**XR4ALL**)
- Institute of Electrical & Electronics Engineers (**IEEE**)
- The British Machine Vision Association (**BMVA**)
- Association for Computing Machinery (**ACM**)
- The Computer Vision Foundation (**CVF**)
- International Society for Photogrammetry & Remote Sensing (**ISPRS**)
- Greek Startup Universe (**GSU**)

## Publications

Citations **245** • h-index **6** • i10-index **4**  
(Last update: 29/01/2023)

No.	Title	Citations	Year
1.	<b>Volumetric Imaging</b> R Pagés, J Ondrej, K Amplianitis, S Arnaldo, V Olyunina US Patent App. 17/584,928		2022
2.	<b>Method and apparatus for generating a three-dimensional model</b> A Smolic, R Pages, J Ondrej, K Amplianitis, D Monaghan US Patent App. 16/955,564		2022
3.	<b>Volumetric Video Content Creation for Immersive XR Experiences</b> Aljosa Smolic, Konstantinos Amplianitis, Matthew Moynihan, Neill O'Dwyer, Jan Ondrej, Rafael Pagés, Gareth W Young, Emin Zerman		2022
4.	<b>Volograms &amp; V-SENSE Volumetric Video Dataset</b> R Pagés, K Amplianitis, J Ondrej, E Zerman, A Smolic ISO/IEC JTC1/SC29/WG07 MPEG2021/m56767	5	2021
5.	<b>Forge: A volumetric video processing platform for everyone</b> Rafael Pagés, Jan Ondřej, Konstantinos Amplianitis, Nicolás Moreno de Palma, Aljosa Smolic NEM SUMMIT 2020, June 30 – July 2, Dublin, Ireland	1	2020
6.	<b>Beckett in VR: Exploring narrative using free viewpoint video</b> Néill O'Dwyer, Nicholas Johnson, Rafael Pagés, Jan Ondřej, Konstantinos Amplianitis, Enda Bates, David Monaghan, Aljoša Smolić ACM SIGGRAPH 2018 Posters, 1-2	11	2018
7.	<b>AlphaGAN: Generative adversarial networks for natural image matting</b> S Lutz, K Amplianitis, A Smolic arXiv preprint arXiv:1807.10088	127	2018
8.	<b>Affordable content creation for free-viewpoint video and VR/AR applications</b> R Pagés, K Amplianitis, D Monaghan, J Ondřej, A Smolić Journal of Visual Communication and Image Representation 53, 192-201	58	2018
9.	<b>Samuel Beckett in Virtual Reality: Exploring narrative using free viewpoint video</b> Néill O' Dwyer, Nicholas Johnson, Enda Bates, Rafael Pagés, Konstantinos Amplianitis, David Monaghan, Aljoša Smolic Leonardo Journal (ISAST), 10	6	2018
10.	<b>Jonathan Swift: augmented reality application for Trinity library's long room</b> Néill O'Dwyer, Jan Ondřej, Rafael Pagés, Konstantinos Amplianitis, Aljoša Smolić Interactive Storytelling: 11th International Conference on Interactive Digital Storytelling, ICIDS 2018, Dublin, Ireland, December 5–8, 2018, Proceedings 11	7	
11.	<b>Virtual play in free-viewpoint video: Reinterpreting Samuel Beckett for virtual reality</b> Néill O'Dwyer, Nicholas Johnson, Enda Bates, Rafael Pagés, Jan Ondřej, Konstantinos Amplianitis, David Monaghan, Aljoša Smolić 2017 IEEE International Symposium on Mixed and Augmented Reality (ISMAR-Adjunct)	20	2017
12.	<b>Inspiring Computer Vision System Solutions</b> Julian Zilly, Amit Boyarski, Micael Carvalho, Amir Atapour Abarghouei, Konstantinos Amplianitis, Aleksandr Krasnov, Massimiliano Mancini, Hernán Gonzalez, Riccardo Spezialetti, Carlos Sampedro Pérez, Hao Liar Xiv preprint arXiv:1707.07210, 2017		2017
13.	<b>Leave a Trace - A People Tracking System Meets Anomaly Detection</b> D Rueß, K Amplianitis, N Deckers, M Adduci, K Manthey, R Reulke The International Journal of Multimedia & Its Applications (IJMA) 9, 13		2017
14.	<b>Human Recognition in RGBD combining Object Detectors and Conditional Random Fields</b> K Amplianitis, R Hänsch, R Reulke International Conference on Computer Vision Theory and Applications (VISAPP)	1	2016
15.	<b>Towards a 3D Pipeline for Monitoring and Tracking People in an Indoor Scenario using Multiple RGBD Sensors.</b> K Amplianitis, M Adduci, R Reulke International Conference on Computer Vision Theory and Applications (VISAPP)	1	2015
16.	<b>A Quality Evaluation of Single and Multiple Camera Calibration Approaches for an Indoor Multi Camera Tracking System.</b> M Adduci, K Amplianitis, R Reulke International Archives of the Photogrammetry, Remote Sensing & Spatial Information Sciences	1	2014
17.	<b>Calibration of a multiple stereo and RGB-D camera system for 3D human tracking</b> K Amplianitis, M Adduci, R Reulke ISPRS - International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XL-3/W1, 2014 EuroCOW 2014, the European Calibration and Orientation Workshop, 12-14 February 2014, Castelldefels, Spain	7	2014
18.	<b>3D Object Detection and Tracking in an Indoor Environment</b> K Amplianitis, M Adduci, R Reulke Anwendungsbezogener Workshop zur Erfassung, Modellierung, Verarbeitung und Auswertung von 3D-Daten		2014

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19.	<b>3D Personenerkennung und Verfolgung mit Stereo-und RGB-D Kameras</b> M Adduci, K Amplianitis, S Bodas, M Misgaiski-Haß, R Reulke Humboldt-Universität zu Berlin, Institut für Informatik, Computer Vision		2014
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