Curriculum Vitae

Personal Information

Name	Pierluigi Zama Ramirez, PhD
Date of Birth	*December 29th, 1992*
Citizenship	*Italian*
Address	Viale del Risorgimento 2, 40136, Bologna
Email	pierluigi.zama@unibo.it (primary)
	zamapierluigi@hotmail.it (secondary)
Website	https://pierlui92.github.io/
Code	https://github.com/pierlui92
Google Scholar	https://scholar.google.com/citations?user=OAYAmKYAAAAJ&hl=it
ResearchGate	https://www.researchgate.net/profile/Pierluigi-Zama-Ramirez-2
Scopus	https://www.scopus.com/authid/detail.uri?authorId=57209021298
Semantic Scholar	https://www.semanticscholar.org/author/Pierluigi-Zama-Ramirez/80804241
DBLP	https://dblp.org/pid/228/7804.html
ORCID	https://orcid.org/0000-0001-7734-5064

About Me

Short Bio I received an M.S. degree in Computer Engineering and a PhD in Computer Engineering from the University of Bologna (Italy) in 2017 and 2021, respectively. I am currently a Post-Doctoral Research Fellow ("Assegnista di Ricerca") at the Department of Computer Science and Engineering (DISI) of the University of Bologna. I am covering the role of Adjunct Professor ("Professore a Contratto") in the same department.

Research Interests

Deep Visual Perception from RGB and Other Sensors — Inferring scene properties from data captured by sensors such as RGB cameras, LiDARs, or Multi-Spectral cameras is essential to any vision applications. The set of tasks addressing this goal employing deep neural networks is named *Deep Visual Perception*. In my research, I have developed novel techniques for many tasks, ranging from semantic segmentation, depth estimation, optical flow, camera pose estimation, camera calibration, and registration. Examples of publications in this field are [P2], [P5], [P7], [P10], [P11], [P17], and [J4].

3D Computer Vision — Since the early days of computer vision, researchers have been processing images stored as two-dimensional grids of pixels carrying intensity or color measurements. But the world that surrounds us is 3D, motivating researchers to try to process 3D data sensed/reconstructed from surfaces. In my research, I have developed approaches for point cloud classification and segmentation. Moreover, recently, I investigated a novel research direction, i.e., applying deep learning to 3D data represented as neural implicit functions. Examples of publications in this field are [P6] and [P14].

Weakly Supervised Learning — Machine learning and deep learning approaches require numerous training data with annotation to perform accurately in unseen environments. However, collecting such annotations is a time-consuming and tedious task. In my research, I developed several techniques to address this problem, ranging from transfer learning, unsupervised domain adaptation, self-supervised techniques, or representation learning approaches. Examples of publications in this field are [P3], and [J2], [J3].

Education

2017 – 2021 **Ph.D.** in Computer Science and Engineering *(Bologna, Italy)*
Fundings: T3Lab
PhD Thesis: *"Deep Scene Understanding with Limited Training Data."* approved after examination by Prof. Gabriel Brostow and Prof. Elisa Ricci.
Thesis available at: http://amsdottorato.unibo.it/9815/1/zamaramirez_pierluigi_tesi.pdf
Supervisor: Prof. Luigi Di Stefano

2019 International Computer Vision Summer School *(Sicily, Italy)*

2017 International Summer School on Deep Learning *(Bilbao, Spain)*

2014 – 2017 **Master Degree** in Computer Science and Engineering *(Bologna, Italy)*
110L/110 - Magna cum Laude
Thesis: *"Estimation of depth and semantics by a CNN trained on computer-generated and real data"*
Supervisor: Prof. Luigi Di Stefano

2011 – 2014 **Bachelor Degree** in Computer Science and Engineering *(Bologna, Italy)*
110L/110 - Magna cum Laude
Thesis: *"Control of peripheral devices mapped on a Zynq platform with Linux"*
Supervisor: Prof. Stefano Mattoccia

Work Experience

03/2021 – Now **Postdoctoral Researcher** @ "Department of Computer Science and Engineering (DISI)" *(Bologna, Italy)*

Fund Manager & Advisor: Luigi Di Stefano.

20/04/2020 – 20/09/2020 **Research Intern** @ "Google Zurich" *(Zurich, Switzerland)*

Supervisor: Prof. Federico Tombari

Job Description: Development of novel views synthesis techniques for image editing.

01/07/2017 – 31/10/2017 **Scholarship** @ Bierrebi *(Bologna, Italy)*

Advisor: Luigi Di Stefano

Job Description: Development of novel technologies for:
- Anomaly detection of fabrics on an industrial carry roller.
- Calibration techniques for linear cameras.

Projects

09/2023 – Now **Title:** Line Detection for Large Urban Environments Mapping

Project Supervisor: Prof. Luigi Di Stefano

External Supervisor: Alioscia Petrelli (SINA)

Description: Developing line detection techniques for large point clouds obtained by LiDAR sensors in urban scenarios. The deployed algorithms will be part of the SINA working pipeline.

Role: As a senior researcher, I am supervising a PhD student who is working on the project.

03/2023 – Now **Title**: Qualitrack 4.0

Project Supervisor: Prof. Luigi Di Stefano

External Supervisor: Donato Laico (SACMI), Gildo Bosi (SACMI)

Description: Developing novel anomaly detection techniques from RGB images and 3D data in industrial manufacturing. The deployed algorithms will be part of several SACMI products.

Role: As a senior researcher, I am supervising a PhD student who is working on the project.

03/2021 – 03/2022 **Title:** Multimodal Sensor Registration

Project Supervisors: Prof. Luigi Di Stefano, Prof. S. Mattoccia, Dr. M. Poggi, Prof. S. Salti

External Supervisor: Jussi Yli-Äyhö (Huawei)

Collaborator: Dr. Fabio Tosi

Description: Developing a new core technology for accurately registering two images captured by different modalities, such as an RGB and a multi-spectral (MS) sensor, using self-supervised deep learning techniques.

Role: Conceive and develop new ideas to achieve the objective.

Scientific Deliverables: The following is a list of the scientific deliverables produced in the project. These deliverables include flow estimation methods for different sensor combinations, a live demo of flow estimation, a feasibility study report, an online adaptive flow estimation method, evaluation methodologies and acquisition setup definition, a large annotated dataset with ground truth, and a protocol for evaluating the performance of developed methodologies:

- D.1.1: Flow estimation method for heterogeneous RGB sensors
- D.1.2: Flow estimation method for an RGB and a multi-spectral (MS) camera
- D.1.3: Live demo of flow estimation from heterogeneous RGB sensors
- D.1.4: Feasibility study report on flow estimation from RGB and event-based cameras
- D.1.5: On-line adaptive flow estimation method from an RGB camera and an MS sensor
- D.2.1: Evaluation methodologies and acquisition setup definition
- D.2.2: Large annotated dataset with ground truth
- D.2.3: Protocol for evaluating the performance of developed methodologies

Papers and Code: In this project, 4 papers were published at the CVPR and 3DV conferences, [P7], [P10], [P11], [P12]. One of these papers received the best honorable mention award at the 3DV 2021 conference [P7].

01/11/2017 – 01/05/2018 **Title:** AIDA - Adaptive Industrial Automation Through Cyber-Physical Vision System

Project Supervisor: Prof. Luigi Di Stefano

External Supervisor: Claudio Salati (T3Lab), Claudio Saporetti (Datalogic)

Description: AIDA is a co-funded Emilia-Romagna Region project for Industry 4.0.

Website: https://www.youtube.com/watch?v=UB00XwW5Gz4&t=47s

Role: Development of a deep learning architecture aimed at detecting hazardous materials and estimating the orientation of packages on an industrial carry roller.

Awards

2021 **Best Paper Honorable Mention** to our work *"Neural Disparity Refinement for Arbitrary Resolution Stereo"* - International Conference on 3D Vision (**3DV 2021**) (https://3dv2021.surrey.ac.uk/prizes/)

Technologies & Languages

Languages	Italian: Mothertongue
	English, CEFR: C1, IELTS, 11/02/2017, Overall Brand 7.0/9.0
	Spanish, CEFR: B2
Programming languages	C, C++, C#, Java, Python, Lua, Scala, Prolog, VHDL, LateX
CV and ML frameworks	OpenCV, Tensorflow, PyTorch
Graphics	Blender, Unity
Development	VS, VS Code, Git

Teaching Activities

2023 - Now **Adjunct Professor**, Fundamentals of Computer Science (Module 2) @ Department of Electrical, Electronic, and Information Engineering "Guglielmo Marconi" (Bologna) (https://www.unibo.it/it/didattica/insegnamenti/insegnamento/2022/483848). Student Satisfaction Rate: 84,6% (Media CdS: 74,3%)

2023 **PhD Course Teacher**, "*Deep Scene Understanding From Images for Monitoring Applications*", PhD course in EIT4SEMM, University of Bologna (Bologna, Italy) with Dr. Matteo Poggi and Dr. Fabio Tosi, May 2023, 20 hours. (https://cvlab-unibo.github.io/deep_scene_understanding_from_images_for_monitoring_applications/)

2022 **PhD Course Teacher**, "*Deep Scene Understanding From Images*", PhD course in Computer Science and Engineering, University of Bologna (Bologna, Italy) with Dr. Matteo Poggi and Dr. Fabio Tosi, May 2022, 20 hours. (https://cvlab-unibo.github.io/deep_scene_understanding_from_images/)

2022 – Now **Teaching Assistant**, "Reti Logiche T - Automation, Electronic, and Telecommunication Engineering", @ University of Bologna *(Bologna, Italy)* with Prof. Tullio Salmon Cinotti, ~ 180 students

2019 – Now **Teaching Assistant**, "Computer Vision and Image Processing - Computer Science and Engineering", @ University of Bologna *(Bologna, Italy)* with Prof. Luigi Di Stefano, ~ 150 students

Co-Supervised Students (Non-Exhaustive List)

Bachelor Thesis

Pumilia, Andrea "Metodologie di Corrispondenza Stereo Basate su Deep Learning per Superfici Altamente Riflettenti e Trasparenti: Dataset e Architettura"

Chiarini, Alessandro "Procedural generation of a city model for training neural networks"

Zoffoli, Mattia "An Analysis of Training a Deep Object Detector with Synthetic Data"

Nadalini, Alessandro "Procedural Generation of 3D city models with Blender"

Fabiani, Federico "Semantic segmentation of ulcers by deep convolutional neural networks"

Damato, Alessandro "Synthetic urban dataset generation through Blender"

Malizia, Chiara "Convolutional Neural Networks for product sorting in fruit and vegetable sector"

Lella, Luigi "Tool for annotating 3D data in Virtual Reality"

Master Thesis

Malizia, Chiara "High-Resolution Monocular Depth Estimation with Stereo Proxy Supervision"

Menchetti, Daniele "Domain adaptation per classificazione di pointcloud mediante pseudo-annotazioni"

Costanzino, Alex "Mitigating non-Lambertian surfaces issues in Stereo Matching with Neural Radiance Fields"

Carloni, Gaia "Deep refinement of a deep semantic segmentation network"

Domeniconi, Federico "Deep Photometric Stereo"

Paternesi, Claudio "3D Semantic Labeling by Virtual Reality"

Cardace, Adriano "Learning Features Across Tasks and Domains"

Internships

Lella, Luigi "Perfezionamento, ingegnerizzazione e validazione sperimentale di un tool innovativo per l'annotazione di dati 3D basato su Virtual Reality (VR)"

Carboni, Ilenia "Interfacciamento di occhiali smart RayBan Stories e acquisizione di un dataset stereo"

Mostafa, Hazem Mohamed Hassan "Acquisizione di un dataset stereo in ambiente outdoor utilizzato per l'allenamento di una rete neurale per stereo-matching tramite algoritmi proxy-supervised."

Organization of Workshops

[W1] *"NTIRE 2023: 8th New Trends in Image Restoration and Enhancement Workshop and Challenges"*, **CVPR 2023** (Vancouver, Washington) [https://cvlab-unibo.github.io/booster-web/ntire][https://cvlai.net/ntire/2023/] - **Role:** Organizer

Track 1 - HR Depth from Images of Specular and Transparent Surfaces - Stereo [https://codalab.lisn.upsaclay.fr/competitions/10494]

Track 2 - HR Depth from Images of Specular and Transparent Surfaces - Mono [https://codalab.lisn.upsaclay.fr/competitions/10502]

Live Presentations at Workshops and Conferences

2023

Paris, France — Presentation of [P17] at the International Conference on Computer Vision (ICCV) 2023.

Milan, Italy — Presentation of [P17] at the Synapse 2023, the AI Symposium organized by Bending Spoons.

Vancouver, Canada — Presentation of [P15], [P16], and [W1] at the Computer Vision and Pattern Recognition Conference (CVPR) 2023.

Kigali, Rwanda — The ICLR 2023 work, [P14], was selected to be presented at the "Neural Fields across Fields: Methods and Applications of Implicit Neural Representations" workshop held in conjunction with ICLR 2023.

2022

New Orleans, USA — Poster presentation of [P10] and [P11] at the Computer Vision and Pattern Recognition Conference (CVPR) 2022.

2021

Online — Poster presentation of [P6] and [P7] at the International Conference on 3D Vision (3DV) 2021.

2020

Online — Oral presentation of [P4] at the 3rd International Conference on Artificial Intelligence & Virtual Reality.

Online — Poster presentation of [P6] at the Computer Vision and Pattern Recognition Conference (CVPR) 2020.

2019

Seoul, Korea — Poster presentation of [P3] at the International Conference on Computer Vision (ICCV) 2021

Los Angeles, USA — Poster presentation of the work "Shooting Labels by Virtual Reality" at the Third Workshop on Computer Vision for AR/VR, held in conjunction with CVPR 2019. Related Paper: https://static1.squarespace.com/static/5c3f69e1cc8fedbc039ea739/t/5d01638662182d0001b6f7f6/1560372111582/9_CVPR_2019_VR.pdf

2018

Perth, Australia — Poster presentation of [P2] at the 14th Asian Conference on Computer Vision

Nice, France — Oral presentation of [P1] at the Third IEEE International Image Processing, Applications and Systems Conference

Bologna, Italy — Poster presentation of the work "Novel Generative Model to Synthetize Realistic Training Images" at SIAM Conference on Imaging Science 2018, https://www.siam-is18.dm.unibo.it/presentations/874.html

Bologna, Italy — Oral presentation of the work "Large Scale 3D Semantic Mapping. European Machine Vision Association Forum" at the European Machine Vision Forum (EMVA) 2018

Bologna, Italy — Oral presentation of the work "Domain Adaptation by a Semantic-Aware GAN" at the European Machine Vision Forum (EMVA) 2018

Past and Ongoing Collaborations

Google Zurich – Switzerland (Dr. Alessio Tonioni, Prof. Federico Tombari) *publications*

Huawei – Finland (Jussi Yli-Äyhö) *research projects*

Eyecan.ai – Bologna (Daniele De Gregorio) *publications*

ETH – Switzerland (Prof. Radu Timofte) *workshop organization*

Sacmi – Italy (Gildo Bosi, Donato Laico) *research projects*

SINA – Italy (Alioscia Petrelli) *applied research projects*

Reviewing Services

CVPR - IEEE Conference on Computer Vision and Pattern Recognition (2021,2022,2023)

ECCV - European Conference on Computer Vision (2022)

ICCV - IEEE International Conference on Computer Vision (2021,2023)

WACV - IEEE/CVF Winter Conference on Applications of Computer Vision (2022)

IROS - IEEE/RSJ International Conference on Intelligent Robots and Systems (2018, 2023)

ECAI - European Conference on Artificial Intelligence (2020)

NTIRE - New Trends in Image Restoration and Enhancement Workshop and Challenges (2023)

Publications

All publications are peer-reviewed conference or journal publications and top tier in the respective field. **ICCV**, **ICLR**, and **CVPR** are highly competitive with acceptance rates of less than 30%. **CVPR** and **TPAMI** are the most highly cited IEEE conference (https://research.com/conference-rankings/computer-science) and journal (https://research.com/journals-rankings/computer-science) with the highest impact in Engineering and Computer Science. **CVPR**, **ICLR**, and **ICCV** are among the four most impactful conferences in all of computer science. * indicates *Joint first authorship.*

Citation Indices

Number of Citations: 362 (Google Scholar), 177 (Scopus)

i10-Index: 10 (Google Scholar)

h-Index: 10 (Google Scholar), 8 (Scopus)

Accessed: 29.10.2023

Journals

[J4] **P. Zama Ramirez**, A. Costanzino, F. Tosi, M. Poggi, S. Salti, S. Mattoccia and L. Di Stefano, *"Booster: a Benchmark for Depth from Images of Specular and Transparent Surfaces"* in IEEE Transactions on Pattern Analysis and Machine Intelligence, https://doi.org/10.1109/TPAMI.2023.3323858

[J3] A. Cardace, A. Conti, **P. Zama Ramirez**, R. Spezialetti, S. Salti and L. Di Stefano, *"Boosting Multi-Modal Unsupervised Domain Adaptation for LiDAR Semantic Segmentation by Self-Supervised Depth Completion"*, in IEEE Access, vol. 11, pp. 85155-85164, 2023, https://doi.org/10.1109/ACCESS.2023.3304542.

[J2] **P. Zama Ramirez***, A. Cardace*, L. D. Luigi*, A. Tonioni, S. Salti and L. D. Stefano, "Learning Good Features to Transfer Across Tasks and Domains," in IEEE Transactions on Pattern Analysis and Machine Intelligence, https://doi.org/10.1109/TPAMI.2023.3240316.

[J1] D. De Gregorio, M. Poggi, **P. Zama Ramirez**, G. Palli, S. Mattoccia and L. Di Stefano, "Beyond the Baseline: 3D Reconstruction of Tiny Objects With Single Camera Stereo Robot," in IEEE Access, vol. 9, pp. 119755-119765, 2021, https://doi.org/10.1109/ACCESS.2021.3108626.

Proceedings

[P18] A. Cardace, **P. Zama Ramirez**, F. Ballerini, S. Salti, L. Di Stefano *"Neural Processing of Tri-plane Hybrid Neural Fields."*, The Twelfth International Conference on Learning Representations (**ICLR**, A++ GRIN Rank), 2024, https://openreview.net/pdf?id=zRkM6UcA22

[P17] A. Costanzino*, **P. Zama Ramirez***, M. Poggi*, F. Tosi, S. Mattoccia and L. Di Stefano, *"Learning Depth Estimation for Transparent and Mirror Surfaces"* 2023 IEEE/CVF International Conference on Computer Vision (**ICCV**, A++ GRIN Rank), pp.9244-9255, https://openaccess.thecvf.com/content/ICCV2023/papers/Costanzino_Learning_Depth_Estimation_for_Transparent_and_Mirror_Surfaces_ICCV_2023_paper.pdf

[P16] **P. Zama Ramirez**, F. Tosi, L. Di Stefano, R. Timofte, A. Costanzino, M. Poggi, S. Salti, S. Mattoccia, J. Shi, D. Zhang, Y. A, Y. Jin, D. Li, C. Li, Z. Liu, Q. Zhang, Y. Wang, S. Yin, , *"NTIRE 2023 Challenge on HR Depth From Images of Specular and Transparent Surfaces"*. 2023, IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Workshops, 2023, pp. 1384-1395. https://openaccess.thecvf.com/content/CVPR2023W/NTIRE/papers/Ramirez_NTIRE_2023_Challenge_on_HR_Depth_From_Images_of_Specular_CVPRW_2023_paper.pdf

[P15] A. Cardace, **P. Zama Ramirez**, S. Salti and L. Di Stefano, *"Exploiting the Complementarity of 2D and 3D Networks to Address Domain-Shift in 3D Semantic Segmentation", 2023, IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Workshops, pp. 98-109* https://openaccess.thecvf.com/content/CVPR2023W/WAD/papers/Cardace_Exploiting_the_Complementarity_of_2D_and_3D_Networks_To_Address_CVPRW_2023_paper.pdf

[P14] L. De Luigi*, A. Cardace*, R. Spezialetti*, **P. Zama Ramirez**, S. Salti, L. Di Stefano, "Deep Learning on Implicit Neural Representations of Shapes", The Eleventh International Conference on Learning Representations (**ICLR**, A++ GRIN Rank), 2023, https://openreview.net/forum?id=OoOIW-3uadi

[P13] A. Cardace, R. Spezialetti, **P. Zama Ramirez**, S. Salti and L. D. Stefano, "Self-Distillation for Unsupervised 3D Domain Adaptation," 2023 IEEE/CVF Winter Conference on Applications of Computer Vision (WACV, A GRIN Rank), Waikoloa, HI, USA, 2023, pp. 4155-4166, https://doi.org/10.1109/WACV56688.2023.00415.

[P12] M. Poggi*, **P. Zama Ramirez***, F. Tosi*, S. Salti, L. Di Stefano, S. Mattoccia, *"Cross-Spectral Neural Radiance Fields"*, at the 2022 International Conference on 3D Vision (3DV), Prague, Czech Republic, 2022, pp. 606-616, https://doi.org/10.1109/3DV57658.2022.00071.

[P11] **P. Zama Ramirez***, F. Tosi*, M. Poggi*, S. Salti, L. Di Stefano, S. Mattoccia, *"Open Challenges in Deep Stereo: the Booster Dataset"*, 2022 IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**, A++ GRIN Rank), 2022, pp. 21136-21146, https://doi.org/10.1109/CVPR52688.2022.02049.

[P10] F. Tosi*, **P. Zama Ramirez***, M. Poggi*, S. Salti, L. Di Stefano, S. Mattoccia, *"RGB-Multispectral Matching: Dataset, Learning Methodology, Evaluation"*2022 IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**, A++ GRIN Rank), 2022, pp. 15937-15947, https://doi.org/10.1109/CVPR52688.2022.01549.

[P9] A. Cardace, L. De Luigi, **P. Zama Ramirez**, S. Salti and L. Di Stefano, "Plugging Self-Supervised Monocular Depth into Unsupervised Domain Adaptation for Semantic Segmentation," 2022 IEEE/CVF Winter Conference on Applications of Computer Vision (WACV, A GRIN Rank), Waikoloa, HI, USA, 2022, pp. 1999-2009, https://doi.org/10.1109/WACV51458.2022.00206.

[P8] A. Cardace, **P. Zama Ramirez**, S. Salti and L. Di Stefano, "Shallow Features Guide Unsupervised Domain Adaptation for Semantic Segmentation at Class Boundaries," 2022 IEEE/CVF Winter Conference on Applications of Computer Vision (WACV, A GRIN Rank), Waikoloa, HI, USA, 2022, pp. 2010-2020, https://doi.org/10.1109/WACV51458.2022.00207.

[P7] F. Aleotti*, F. Tosi*, **P. Zama Ramirez***, M. Poggi, S. Salti, L. Di Stefano, S. Mattoccia, *"Neural Disparity Refinement for Arbitrary Resolution Stereo"*, 2021 International Conference on 3D Vision (**3DV**), 2021, pp. 207-217, https://doi.org/10.1109/3DV53792.2021.00031. (**ORAL**) (**Best Paper Honarable Mention Award**)

[P6] A. Cardace, R. Spezialetti, **P. Zama Ramirez**, S. Salti and L. D. Stefano, "RefRec: Pseudo-labels Refinement via Shape Reconstruction for Unsupervised 3D Domain Adaptation," 2021 International Conference on 3D Vision (3DV), London, United Kingdom, 2021, pp. 331-341, https://doi.org/10.1109/3DV53792.2021.00043. (**ORAL**).

[P5] F. Tosi*, F. Aleotti*, **P. Zama Ramirez***, M. Poggi, S. Salti, L. Di Stefano, S. Mattoccia, *"Distilled Semantics for Comprehensive Scene Understanding from Videos"*, 2020 IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**, A++ GRIN Rank), 2020, pp. 4653-4664, https://doi.org/10.1109/CVPR42600.2020.00471.

[P4] **P. Zama Ramirez**, C. Paternesi, L. D. Luigi, L. Lella, D. D. Gregorio and L. D. Stefano, "Shooting Labels: 3D Semantic Labeling by Virtual Reality," 2020 IEEE International Conference on Artificial Intelligence and Virtual Reality (AIVR), Utrecht, Netherlands, 2020, pp. 99-106, https://doi.org/10.1109/AIVR50618.2020.00027 (**ORAL**) (**Best Paper Finalist**)

[P3] **P. Zama Ramirez**, A. Tonioni, S. Salti and L. D. Stefano, "Learning Across Tasks and Domains," 2019 IEEE/CVF International Conference on Computer Vision (**ICCV**, A++ GRIN Rank), Seoul, Korea (South), 2019, pp. 8109-8118, https://doi.org/10.1109/ICCV.2019.00820

[P2] **P. Zama Ramirez**, M. Poggi, F. Tosi, S. Mattoccia, L. Di Stefano. "Geometry meets semantics for semi-supervised monocular depth estimation". In Computer Vision–ACCV 2018: 14th Asian Conference on Computer Vision, Perth, Australia, December 2–6, 2018, Revised Selected Papers, Part III 14 (pp. 298-313). Springer International Publishing. https://doi.org/10.1007/978-3-030-20893-6_19

[P1] **P. Zama Ramirez**, A. Tonioni and L. Di Stefano, "Exploiting semantics in adversarial training for image-level domain adaptation," 2018 IEEE International Conference on Image Processing, Applications and Systems (IPAS), Sophia Antipolis, France, 2018, pp. 49-54, https://doi.org/10.1109/IPAS.2018.8708884 (**ORAL**)

Arxiv

[U1] **P. Zama Ramirez**, A. Tonioni, F. Tombari *"Unsupervised Novel View Synthesis from a Single Image"*, https://arxiv.org/abs/2102.03285

Released Datasets and Code

Scientific Datasets (Non-exhaustive list)

Booster Dataset	Dataset related to [P11], https://amsacta.unibo.it/6876/ Project Page: https://cvlab-unibo.github.io/booster-web/
Booster Dataset - Monocular Split	Dataset related to [U2], https://amsacta.unibo.it/7161/ Project Page: https://cvlab-unibo.github.io/booster-web/
RGB-MS Dataset	Dataset related to [P10], Dataset: http://amsacta.unibo.it/6877/, Project Page: https://cvlab-unibo.github.io/rgb-ms-web/
X-NeRF dataset	Dataset related to [P12], Dataset: https://amsacta.unibo.it/7142/, Project Page: https://cvlab-unibo.github.io/xnerf-web/

Codes (Non-exhaustive list)

inr2vec	Code related to [P14], https://cvlab-unibo.github.io/inr2vec/
FeatureDistillation	Code related to [P13], https://cvlab-unibo.github.io/FeatureDistillation/
D4	Code related to [P9], https://github.com/CVLAB-Unibo/d4-dbst
NDR	Code related to [P7], https://cvlab-unibo.github.io/neural-disparity-refinement-web/
RefRec	Code related to [P6], https://cvlab-unibo.github.io/shootinglabelsweb/
omeganet	Code relative to [P5], https://github.com/CVLAB-Unibo/omeganet.
ShootingLabels	Code related to [P4], https://cvlab-unibo.github.io/shootinglabelsweb/
ATDT	Code related to [P3], https://github.com/CVLAB-Unibo/ATDT
SemanticMonoDepth	Code related to [P2], https://github.com/CVLAB-Unibo/Semantic-Mono-Depth