

**European curriculum
vitae format**



WORK EXPERIENCE

Dates	February 2022 - present
Name and address of employer	National Research Council (CNR) - Institute of Heritage Science (ISPC) Area Ricerca Roma 1, Via Salaria km 29.300, 00010 Montelibretti (RM)
Type of business or sector	Public Research
Occupation or position held	Researcher (academic position)
Main activities and responsibilities	<p>Research, develop and optimize technologies for cultural heritage documentation, preservation and enhancement with main focus on 3D virtual reconstruction and interactive immersive visual experiences.</p> <p>Specialized in:</p> <ul style="list-style-type: none">● Photogrammetry, Multi Image Spherical Photogrammetry● 3D modeling and texturing, high fidelity reality based reconstruction● 2D/3D data management, editing, optimization and publishing● Physics-based modeling and simulation● 360° Immersive contents production● Complex multimedia architecture design and management● Rapid prototyping tools and softwares (vvvv language)● Virtual Reality, Mixed Reality, Spatial AR tools development● Tangible User Interface design and prototyping● Evaluation of new technology based on AI, ML, CV <p>Themes: image-based modeling, structure from motion, bundle adjustment, computer graphics (real-time photorealistic rendering, photoreal material modeling, motion capture), HDRI, virtual reality, spatial augmented reality, immersive media, motion graphic, interaction design, natural interaction, collaborative design, creative coding.</p>

Curriculum Vitae

Dates	February 2014 - February 2022
Name and address of employer	National Research Council (CNR), Institute of Heritage Science (ISPC) (until 2020 Institute for Technologies Applied to Cultural Heritage (ITABC)) Area Ricerca Roma 1, Via Salaria km 29.300, 00010 Montelibretti (RM)
Type of business or sector	Public Research
Occupation or position held	Post-doctoral research fellow (academic position)
Main activities and responsibilities	Involved in many archeological 3D survey campaigns aimed at producing 3D reconstructions for experts, the public of museums, gamers. Involved as a software designer and interactive content creator in several National and European funded research projects as CEMEC Connecting Early Medieval European Collections and V-MUST.Net Virtual Museum Transnational Network). More detailed description in "Other info/Research projects)

Dates	February 2010 - February 2022
Name and address of employer	Eng. d'Annibale Studio Via Macinini 77, Ortona (CH), IT
Type of business or sector	Private - Creative Information Technology
Occupation or position held	Free-lance Engineer / Designer Roles: Consultant, visual designer, VR expert, video projection technician, software developer, structural engineer, photographer, project manager.
Main activities and responsibilities	Over 10 years of professional experience in virtual reality and multimedia staging projects for museums, festivals or expo at national and international level. Several experiences were carried out in collaboration with private companies, artists, research centers, associations and students. The activities are mainly focused on design, development and setting interactive technology for innovative visual experience. Technologies and products: virtual tour, video projection mapping, immersive content, interactive hologram (Pepper's ghost), virtual conference, mixed reality virtual set.

EDUCATION AND TRAINING

Dates	2009 - 2012
Name and type of organization providing education and training	Università Politecnica delle Marche, Faculty of Engineering, Ancona.
Principal subjects Skills covered	Multi Images Spherical Photogrammetry, Virtual Reality, Creative Coding Thesis title: Close-Range Photogrammetry and Visual Design for Cultural Heritage
Title of qualification awarded	Ph.D. in Engineering Science – Geomatics (ICAR06, Photogrammetry and Topography)
Dates	1999 - 2008
Name and type of organization providing education and training	Università Politecnica delle Marche, Faculty of Engineering, Ancona.
Principal subjects Skills covered	Photogrammetry , Image-based Modeling, HDRI, Computer Graphics Thesis title: Protection and preservation of cultural heritage. Innovative method for 3D recording and processing of architectonic digital model
Title of qualification awarded	M.Sc. Building Engineering Architecture (LM-4 c.u.)

Mother tongue	Italian
Other languages	English
Reading / writing / verbal skills	B2 / B2 / B1 (Common European Framework of Reference for Languages (CEFR))

PERSONAL SKILLS

Personal skill	<p>I work at the intersection of art, design, optical illusion and creative coding.</p> <p>Long experience working in a multi-disciplinary team, including, artists, designers, humanists, documentary maker, qualified workers.</p> <p>Experience across all stages of a project from conception, to prototyping, wireframing, optimizing and delivering new technologies and experiences.</p> <p>Experience working in a team structure to develop and re-develop ideas for projects.</p> <p>Experience designing and implementing 3D games or applications.</p> <p>Willingness to learn new technologies and new methodologies.</p> <p>Really interested in real-time graphics, eg. Unreal and/or Unity.</p> <p>Eager to expand my views on art and cultural heritage.</p> <p>Ability to work in an Agile environment, manage time and prioritize tasks independently and maintain objectives.</p> <p>Ability to work under pressure with a deadline time and with multiple project.</p>
Social skills	<p>Positive, passionate and committed to my work.</p> <p>Eager to work in an inspiring environment, with skilled and creative colleagues.</p> <p>Excellent to stimulate colleagues and technicians towards new approaches and new perspectives.</p> <p>Good in inspiring team members' creativity.</p> <p>Able to work independently as a communicative team player.</p> <p>Experienced working in various environments, social and professional.</p> <p>Experience in national and international projects in several European countries as well as other states such as Libya, Jordan, Ghana, Malaysia.</p> <p>Good flexibility, willingness to communicate and co-operate.</p> <p>Good communication and organization skills.</p>
Technical skills	<p>Excellent knowledge of technologies and tools for 2D/3D data processing.</p> <ul style="list-style-type: none"> ● 3d Reconstruction: Agisoft Photoscan/Metashape, 3DF Zephyr, Sphera ● Image editing: GIMP, Adobe Photoshop ● Panorama stitching: Hugin, Ptgui ● 3D modeling and rendering: 3D Studio Max, Blender ● Point cloud and mesh processing: Meshlab, Cloud Compare <p>Long experienced in creative coding (using vvvv) to develop real-time interactive experiences through multiple iterations from sketches to working prototypes.</p> <p>vvvv (vvvv.org) is a powerful visual live-programming environment for easy prototyping and development.</p> <p>Creatively solve problems using code or computational thinking.</p> <p>Experiences in video editing: Resolve, Premiere, FFMPEG</p> <p>Familiar with media streaming: OBS, NDI, Spout</p> <p>Familiar with on line meeting and training platform.</p> <p>Good knowledge of Microsoft Office, Open Office</p> <p>Daily work on Windows OS and Mac OS</p> <p>Good knowledge about construction, materials and structures.</p>
Driving license	B

ADDITIONAL INFORMATION

Selection of Published Papers

Fanini, B.; Ferdani, D.; Demetrescu, E.; Berto, S.; d'Annibale, E. - **ATON: An Open-Source Framework for Creating Immersive, Collaborative and Liquid Web-Apps for Cultural Heritage**. - Applied Sciences Journal 2021, 11, 11062 - <https://doi.org/10.3390/app112211062> - 2021

Pagano A.; Pietroni E.; Ferdani D.; d'Annibale E. - **User eXperience (UX) Evaluation for MR Cultural Applications: The CEMEC Holographic Showcases in European Museums** - Applied system innovation Journal; 4,92 Special Issue Advanced Virtual Reality Technologies and Their Applications, SSN: 2571-5577 - <https://doi.org/10.3390/asi4040092> - 2021

Emanuel Demetrescu, Enzo d'Annibale, Daniele Ferdani, Bruno Fanini, - **Digital replica of cultural landscapes: An experimental reality-based workflow to create realistic, interactive open world experiences**. - Journal of Cultural Heritage; Volume 41, 2020, Pages 125-141, ISSN 1296-2074 - <https://doi.org/10.1016/j.culher.2019.07.018> - 2020

S. Pescarin, E. d'Annibale, B. Fanini, D. Ferdani - **Prototyping on site Virtual Museums: the case study of the co-design approach to the Palatine hill in Rome (Barberini Vineyard) exhibition**. In proceeding of 2018 3rd Digital Heritage International Congress (DigitalHERITAGE) and 2018 24th International Conference on Virtual Systems & Multimedia (VSMM 2018) [10.1109/DigitalHeritage.2018.8810135](https://doi.org/10.1109/DigitalHeritage.2018.8810135) - 2019

Antal A., Bota, E., Ciongradi C., d'Annibale E., Demetrescu E., Dima C., Fanini B., Ferdani D. - **A Complete Workflow From the Data Collection on the Field to the Deployment of a Virtual Museum: the Case of Virtual Sarmizegetusa**. In proceeding of the 14th Eurographics Workshop on Graphics and Cultural Heritage (2016) - <http://dx.doi.org/10.2312/gch.20161386> - 2016

Enzo d'Annibale, Bruno Fanini. - **A Framework for Compact and Improved Panoramic VR Dissemination**. In proceeding of the 14th Eurographics Workshop on Graphics and Cultural Heritage - <http://dx.doi.org/10.2312/gch.20161380> - 2016

Perla Gianni Falvo, Enzo D'Annibale. A virtual itinerary for a real experience. The Frescoes of the Chapel of the Magi in Palazzo Medici riccardi, Florence SCIRES it Journal, Archive Volume 6, Issue 1 [doi: http://dx.doi.org/10.2423/i22394303v6n1p41](http://dx.doi.org/10.2423/i22394303v6n1p41) - 2016

B. Fanini, E. d'Annibale, E. Demetrescu, D. Ferdani and A. Pagano - **Engaging and shared gesture-based interaction for museums, the case study of K2R international expo in Rome**. In proceeding of 2015 Digital Heritage, pp. 263-270 - doi: [10.1109/DigitalHeritage.2015.7413880](https://doi.org/10.1109/DigitalHeritage.2015.7413880) - 2015

E. S. Malinverni, E. d'Annibale, E. Frontoni, A. Mancini, C. A. Bozzi - **Multimedia Discovery of the Leonardo's Vitruvian Man** - SCIRES it Journal, Archive Volume 5, Issue 1 - <http://dx.doi.org/10.2423/i22394303v5n1p69> - 2015

E. d'Annibale, A. N. Tasseti, and E. S. Malinverni - **From panoramic photos to a low-cost photogrammetric workflow for cultural heritage 3d documentation**. - Int. Arch. Photogrammetry. Remote Sensing Spatial Information Sciences, XL-5/W2, 213–218, 2013 <https://doi.org/10.5194/isprsarchives-XL-5-W2-213-2013> - 2013

d'Annibale, E. and Fangi, G. - **Interactive modeling by projection of oriented spherical panorama - Ad Deir, Petra, Jordan**. - Int. Arch. of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, volume 38, Issue 5W1 - <http://www.isprs.org/proceedings/XXXVIII/5-W1/> - 2009

ADDITIONAL INFORMATION**Selection of CNR ISPC (ex ITABC) Research Projects**

Date: 2020 - on going

Name: **CODEX4D**

(POR FESR Lazio 2014-2020 Regional founded)

Info: The project concerns the definition and testing of a methodological pipeline for digital archiving and the 3D use of information relating to elements that are no longer visible or hidden in the structure of the ancient code. Starting from digital acquisition through common photogrammetric approach and infrared thermography and reflectography techniques it is possible to create a multi dimensional model explorable on different levels. Role: Responsible for 3D reconstruction pipeline definition and data optimization, design and development of interactive holographic showcase. 3D motion graphic contents creation.

Date: 2016 - 2019.

Name: **CEMEC (Connecting Early Medieval European Collections)**

Info: CEMEC is an EU-funded cooperation project that aims to create a collaborative network, and a cost-effective business model, between European museum collections and technical partners.

Role: Mixed Reality creator; responsible of 3D reconstruction, designer and development of holographic showcases in:

- "Crossroads traveling through Middle Ages" at the Art & History Museum in Bruxelles. Belgium 2019
- "Europa in Bewegung. Lebenswelten im frühen Mittelalter" at the LVR-Landes Museum in Bonn. Germany 2019
- "Byzantium and the Others in the First Millennium: An Empire of stability in a turbulent era" at the Byzantine and Christian Museum di Atene. Grecia 2018
- "Crossroads" at the Allard Pierson Museum di Amsterdam. Olanda 2017
- "Avars Revived" at the Hungarian National Museum, Budapest. Ungheria 2016

Date: 2014 - 2015.

Name: **V-Must | Virtual Museum Transnational Network.**

Info: V- Must is a Network of Excellence, funded by the European FP7 Network of Excellence (Grant Agreement 270404), focused on Virtual Museums.

Role: Responsible of interactive holographic showcase design, development and setting for "Keys to Rome" exhibitions in the following location (at the same time, late 2014):

- Museum of the Imperial Fora, Rome, Italy
- Allard Pierson Museum, Amsterdam, Netherlands
- Vijećnica City Hall, Sarajevo, Bosnia and Herzegovina
- Bibliotheca Alexandrina, New Library of Alexandria, Egypt

ADDITIONAL INFORMATION**Selection of professional experience**

Dates	2020 - 2022
Name and address of employer	Emotional Experience s.r.l. - via De' Carracci, 69/2, 40129, Bologna, Italy
Type of business or sector	Private - Creative Information Technology
Occupation or position held	Free-lance Engineer / Designer Roles: Consultant, immersive video projection expert, building engineer.
Main activities and responsibilities	Immersive video projection design and setup in the following exhibition: 2022. "Vivaldi, The Four Season" at Verket Art Museum in Avesta (Sweden) 2020. "Vivaldi. La mia vita, la mia musica" at Palazzo Fava in Bologna (Italy)

Curriculum Vitae

Dates	2020
Name and address of employer	R&D - REDRIM S.C. - Corso Francia 325, 10142, Torino, Italy
Type of business or sector	Private - Creative Information Technology
Occupation or position held	Freelance Consultant / VR expert
Main activities and responsibilities	Design and customization of a virtual reality platform (<i>Learnbrite</i>) for online VR meeting and e-learning.
Dates	2009 - 2020
Name and address of employer	TOUCHWINDOW s.r.l. - Via dell'Industria, 13 int. 1, Zona Industriale Montaletto, 48015 Cervia (RA), Italy
Type of business or sector	Private - Creative Information Technology
Occupation or position held	Freelance Consultant, Visual Designer, Software Developer, Structural Engineer, Contents Creator
Main activities and responsibilities	<p>Activities / products: VR tour, 3D simulation, immersive video projection, video projection mapping, interactive hologram.</p> <p>Most significant experiences:</p> <p>2020. Museo di Dante in Chiostrì Francescani, Ravenna, Italy</p> <p>2016. "Museo della Biodiversità" in Vallo della Lucania (SA), Italy</p> <p>2015. "Museo dei culti arborei" museum in Accettura (MT), Italy</p> <p>2014. "Model of Falcon Cap" video projection mapping in Doha, Qatar</p> <p>2014. "La Rocca delle Fiabe" museum in Sant'Agata Feltria (RI), Italy</p> <p>2013. "La Madonna di Foligno" exhibition in Palazzo Marino, Milano, Italy</p> <p>2012. "Spadò" exhibition in Mole Vanvitelliana, Ancona, Italy</p> <p>2012. "MUVI Museo virtuale di Caselle in Pittari". Cilento park, (SA), Italy</p> <p>2010. "TAMO, tutta l'avventura del Mosaico". San Nicolò, Ravenna, Italy</p> <p>2009. "New museum of Libya". Royal Palace Tripoli, Libya</p>
Dates	2019
Name and address of employer	ETT S.P.A. - Via Enrico Albareto, 21, 16153 Genova GE, Italia
Type of business or sector	Private - Creative Information Technology
Occupation or position held	Freelance Consultant and Developer
Main activities and responsibilities	Interactive light-audio-video exhibition setup for "6000 Campanili" event in the ancient village of Valsinni (MT), Italia
Dates	2015 - 2016
Name and address of employer	SPACE S.P.A. - Via Torelli, 24, 59100 Prato PO, Italia
Type of business or sector	Private - Creative Information Technology
Occupation or position held	Freelance designer, software developer, specialized technician
Main activities and responsibilities	<p>Immersive video projection mapping setup in the follow exhibition:</p> <p>2016. "Nuovo Port Center" in Fortezza Vecchia of Livorno</p> <p>2015. "Museo del Parco Archeologico in Classe" (Ravenna)</p> <p>2015. "Museo A come Ambiente" di Torino</p>

01/08/2022