



Curriculum Vitae Europass

Personal information



First name(s) / Surname(s) **Valerio De Luca**

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Nationality Italian

Date of birth July 2,1982

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Occupational field **Information Technology - Remote Sensing Processing - GIS Geographic Information Systems - Teaching**

Work experience

Dates From May 2017 to date

Occupation or position held / Main activities and responsibilities Improving internal production processes and providing productive tools for customers in the field Software / Web / DataBase mainly in GIS. GeoDataBase Management, Development GIS Software, Python Environment for ArcGIS / QGIS.

Name and address of employer URBIS S.r.l. Via San Demetrio Corone, 8 - 00118 Roma <http://www.urbisproject.it>

Type of business or sector Information Technology, GIS

Dates From March 2015 to May 2017

Occupation or position held / Main activities and responsibilities Designing of operations and relative data processing in Topographic, Photogrammetry, Remote Sensing and GIS. Operational Design and Data Processing for SAPR - Remote Pilotage Systems (Swinglet, senseFly eBee, and Copter, DJI S900 and Aibotix X6). Designing, Producing, and Supervising of GIS Production for Public Administrations such as First Level Seismic Microzonation Plans, Municipal Emergency Plans, Topographic DBs, Toponymy DataBase Update. Planning, Implementation and Supervision of GIS Production in Public or Private Works: Volumetric Computations, State Monitoring, Cadastral Areas Estimation, Production Cartography Soil Use, Production of Digital Surface Model (DSM) and Terrain (DTM) without Vegetation and Anthropicism), Cartography from Lidar data. Use of Laser Scanner (FARO Focus3D X 330) and Canon EOS 6D Professional Reflex Camera. Working Areas: Road, Viaducts, Mining and Transformation Sites, Agricultural, Landfills, Urban, Instability Sites , Archaeological Sites. Works example: GIS Mapping for the geological project phases related to the A.S Rome Stadium of Tor di Valle / Vallerano, Structural Monitoring Fiumicino Strip Road, Design and Data Processing by SAPR (Drone) of Viaduct Favazzina and Viaduct Sfalassà A3 Salerno - Reggio Calabria. Production of Technical-Commercial Offers and Technical editions. SAPR (Drones) Documentation Supervision for Non Critical and Critical Areas. Tutor Company of the Master GIS FOR THE GOVERNANCE OF THE TERRITORY for University Roma TRE, Environmental Engineering. Internship Tutor Company of the Degree Course in Environmental Engineering for University of Cassino.

Name and address of employer GEORES S.r.l. Via Marittima snc - 03100 Frosinone Via R. Lepetit 234 - 00155 Roma <http://www.geores.it/>

Type of business or sector Geology, Geophysics, Geotechnical Engineering, Information Technology

Dates April 2014 - February 2015

Occupation or position held / Main activities and responsibilities Geographic and Environmental Data Processing for the Protection of Cultural Heritage Italian Sites. Vegetation health assessment techniques using Multispectral Remote and Proximity Sensing in UNESCO sites.

Name and address of employer CSI MANAGEMENT - Viale Cesare Pavese, 305, 00144 Roma - <http://www.csi.roma.it/>

Type of business or sector Information Technology, GIS

Dates October 2011 – March 2014

Occupation or position held / Main activities and responsibilities

Analisis and processing in Remote Sensing as:

Orthorectification, Study models for calculating the LST (Land Surface Temperature), Change Detection analysis in cases of Urban Sprawl and Burned Areas, Production Vegetation Indices Maps (NDVI, MCARI, TCARI, OSAVI,..), Atmospheric Correction, Pan-sharpening, Soils Classification from Multispectral satellite imagery, Production of Thematic Maps as True and False Color Composite from satellite data, Check coverage satellite data on the main commercial and open catalogs (USGS-EarthExplorer, Italian National Geoportal, RapidEye, DigitalGlobe,...).

Analisis and processing in GIS as:

Update Digital Cadastre, Geocoding address, Historical Raster Maps digitization for municipalities and local governments and refund in Vector format, Metadata writing, Online Publishing of processing data, Normalization geographic datasets and not.

Teaching Software Courses:

ArcGIS for Desktop 10.x, Base and Advanced Level.

Data types processed:

RapidEye, Geoeye, World View 1 - 2, OrbView, IKONOS, Landsat 8 and Landsat series, Pleiades, Komsat-5 RADAR, STEREO Komsat 3, data from public administration, GIS data, Urban data.

Other skills acquired:

Establishment of contacts in Italy and abroad with the technical areas staff of collaborating companies, government agencies, universities and training institutions, participants in the courses offered by the company and external courses company on specific topics of Remote Sensing and Geographic Information Systems (and their mutual integration). Stay informed on the latest developments in the field of Remote Sensing and in fields related to it such as GIS, periodically consulting the websites of major organizations such as Italian Space Agency (Italian: Agenzia Spaziale Italiana ASI), European Space Agency (ESA), National Aeronautics and Space Administration (NASA), joining a mailing list of industry as the MDPI Journals, ScienceDirect, DeepDyve, ESA newsletter, user groups such as Orfeo Tools Box Users, Quantum GIS Users, following magazines such as Italian Journal of Remote Sensing, European Journal of Remote Sensing, Geomedia and consultations in the web, new software solutions such as PCI Geomatics, ESRI and eCognition about: Native Vector Handling, Template matching, Point Cloud, 3D LIDAR Data, Live DEM Editing, Python Scripting, SAR Change Detection, Smart Geofill.

Name and address of employer

IPTSAT s.r.l. Via Sallustiana, 23 - 00187 Roma - <http://www.iptsat.com/index.php/it/>

Type of business or sector

Information Technology

Education and training

Dates

2014

Title of qualification awarded

Graduate Course of Telecommunications Engineering (Ministerial Decree 270/04) in the School of Engineering. Specialization in Geoinformation. Thesis Title:

Nowcasting of Mesoscale Convective Systems through Meteosat Data

Valerio De Luca discussed his Thesis of Master Degree in Engineering of Telecommunications, Geoinformation area, at the University of Rome "Tor Vergata", within the EOLab (Earth Observation Laboratory) in collaboration with the university spinoff GEO-K for the National Centre of Meteorology and Climatology Aeronautics (CNMCA). The topic of the thesis focuses on the short term prediction – *Nowcasting* – of position, shape and temperature of the cloud formations defined *Mesoscale Convective Systems (MCS)*. The tracking is developed exclusively from satellite data of the sensor Spinning Enhanced Visible and Infrared Imager (SEVIRI) mounted onboard the satellite Meteosat Second Generation (MSG). The thesis work was included as a part of the following intervention within the EUMETSAT 2014 conference 22 – 26 September:

A novel multispectral algorithm based on the Meteosat Second Generation satellite for the detection, the tracking and the nowcasting of the thunderstorms.

Authors : M. de Rosa², M. Picchiani^{1,2}, D. Biron³, D. Melfi³, F. Del Frate¹, A. Vocino³, E. Gasbarri², V. De Luca¹

1 "Tor Vergata" University of Rome, via del Politecnico, Rome, Italy

2 GEO-K srl, via del Politecnico, Rome, Italy

3 Centro Nazionale di Meteorologia e Climatologia Aeronautica, Via di Pratica di Mare, Pomezia, Italy

Principal subjects / occupational skills covered

Cultural area:

Transmission systems wired and wireless, operating mainly with digital signals. Architectures and protocols for networks of fixed and mobile telecommunications, with particular reference to local area networks (LAN), mobile networks, cellular networks, satellite networks and the Internet. Applications and services of the Internet. Remote sensing systems. Navigation.

Area of activity:

Analysis of the accuracy and precision of the metric mapping. Normalizing datasets. Geocoding addresses. Digitizing historical maps (RASTER) for municipalities and local governments, with refunds in standard vector formats (shp, dwg, gml, kml). Analysis of the signals and their interaction with the circuits. Analog and digital processing of signals with electronic and optoelectronic devices and circuits. Transmission methodologies. Analysis of the sub-systems and transmission systems and remote sensing. Principles of signaling, switching, addressing, routing, and interconnection network. Principles of detection radar and satellite navigation. Methodologies for the design of architectures and protocols of telecommunications networks. Methodologies for the design of systems and optical networks, satellite, mobile radio and multimedia. Principles of safety systems and telecommunication networks. Methods of design and operation of air navigation services and related infrastructure, communication, navigation and surveillance.

Career opportunities:

Systems design and operation of telecommunications systems and remote sensing. Sizing and design of networks and telecommunications services. Infrastructure Management of fixed and mobile networks and their users / customers. Marketing in telecommunications. Designing services and distributed applications on the Internet. Subsystem Design telecommunications and remote sensing. Management of telecommunications projects. Development, acquisition and management of systems and equipment for the control of air and sea traffic.

Name and type of organisation providing education and training

University of Rome Tor Vergata
1 / Politecnico Street 00133 Roma (Italia)

Level in national or international classification

ISCED 52

Geoinformation area exams (Graduate Course Degree):

Satellite Monitoring

Knowledge and identification of satellite orbits for land monitoring and objectives of the major space missions for Earth observation. Aware of the requirements and operating parameters of the devices for remote sensing. Knowledge of the physical principles of remote sensing. Knowledge of procedures for the processing of multispectral and multitemporal remote sensing data that allow you to transform a raw data into a product application to provide the user. Ability to interpret multispectral and multitemporal remote sensing data with particular emphasis on applications developed for the Internet. Knowledge of methods that allow you to achieve two main objectives of remote sensing: classification and inversion. Knowledge of the most innovative remote sensing techniques such as GNSS-R (Global Navigation Satellite System - Reflectometry).

Electromagnetic Propagation

Knowledge of the propagation problems, guided and free space, useful for the design of telecommunication systems, radar and remote sensing.

Electromagnetic Fields

Provide the electromagnetic basic skills required by the information and communication technologies (ICT), in particular in the field of telecommunications, electronics, earth observation, remote sensing and positioning. Electromagnetic radiation and general properties of the field and antennas. Electromagnetic scattering and application to satellite monitoring. Group speed, dispersion of wave packets. Guided modes from foil and fiber in continuous and discontinuous change in the index. Guided transport of field not monochromatic and notes on the propagation of solitons.

Electromagnetic Pollution

The course will provide the technical-scientific basis for the acquisition of methods of measurement of electromagnetic fields, for the understanding of the regulatory aspects for the design of new solutions with low risk.

Navigation and Remote Sensing Systems

Reminders on navigation and radio facilities. Satellite Navigation; structure of a GNSS (space segment, control, user) and its performance (accuracy, continuity, availability, integrity); sources of error, dilution of precision (DOP parameters); the receiver. GNSS systems in existing and development (GPS, Galileo, GLONASS, Beidou, IRNSS, QZSS). Integrity monitoring & Augmentation.

ATC - Air Traffic Control and related monitoring systems (PSR, SSR, WAM-MLAT, ADS-B). Traffic control airport (SMGCS and sensors: SMR, ADS-B, MLAT local). Marine traffic control (VTS, VTMS, coastal radar, AIS).

Theory and Technique Radar

Knowing the purpose, main applications and operation of radar systems with the necessary basic elements, both theoretical and technical-operational. Knowing how to evaluate system-level, performance in terms of scope, discrimination, ambiguity, Doppler filtering (MTI Improvement Factor) and Pulse Compression (analysis of waveform radar).

Date

2011 - 2016

Roma at iptsat s.r.l.

Course "ArcGIS for Desktop Rel.10, Basic Level" (Certificate).

Course "ArcGIS for Desktop Rel.10, Advanced Level" (Certificate).

Milan at TRE Telerilevamento Europa

"MONITORING THE ENVIRONMENT WITH RADAR SATELLITE"

Principles, insights and applications. The SqueeSAR™ technique (Certificate).

Roma at ESRI Italy

Course "ArcGIS for Desktop III – GIS Workflows and Analysis" ArcGIS Rel.10 (Certificate).

Course "Building the Geodatabase" ArcGIS Rel.10 (Certificate).

Course "Introduction to ArcGIS Server" ArcGIS Rel.10 (Certificate).

ArcGIS for Developers, ArcGIS Online, WebApp Builder, Geolocation server, client and cloud. API Javascript, SDK for Android and iOS, GeoEnrichment.

Obtaining Certification ECDL-GIS (n° GIS001406).

Cartographic Representation, GIS, Using a GIS software (ESRI ArcGIS). Attested by AICA Italian Association for Informatics and Automatic Calculation

Webinar/Workshop/Conferences: Dati.gov.it, Planetek, Sysdeco, ISPRA, SIFET 2016 (Lecce).

Pisa at Faunalia

Course "Quantum GIS Advanced Level: Analysis" (Certificate). Contents: Quantum Gis, Sextante, GRASS, SAGA, Orfeo ToolBox.

Course "Geodatabase PostgreSQL and PostGIS" (Certificate). Contents: PostgreSQL, PostGIS, Quantum GIS, PhpPgAdmin, PgAdmin 3.

Course "WebMapping": WebGIS, WMS, WFS, WFS-T, WCS, WPS, LizMap (Certificate).

Several training courses of ArcGIS for Desktop Rel. 10 and 10.1 - Basic and Advanced level (teaching) and lessons in preparation for the achievement of the ECDL Certification GIS - AICA Italian Association for Informatics and Automatic Calculation (teaching).

Roma at TerreLogiche

Course "3D Photogrammetric Survey and Managing Mesh". Software: Agisoft Photoscan, MeshLab.

Roma at GEORES S.r.l.

"CoursePhotogrammetry - FBK"

1. PHOTOGRAMMETRY - SENSORS, THEORY & EXAMPLES

2. PLATFORMS AND ALGORITHMS FOR RELIEF AND 3D MODELING - RECENT DEVELOPMENTS AND SOLUTIONS

3. 3D SURVEYING & MODELING with UAVs (Unmanned Aerial Vehicle)

Lecturer: Fabio Remondino FBK, Researcher at Foundation Bruno Kessler, Trento - Italy

<https://3dom.fbk.eu/>

Course 3D-Target S.r.l

"Virtual Tour". Kolor Panotour Pro, Kolor Autopano Giga Pro, PTGUI Pro, Nodal Ninja.

<http://www.3dtarget.it/eu/it>

Personal skills and competences

Mother tongue(s)

Other language(s)

Self-assessment

European level (*)

English

Italian

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
B2	Independent use	B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user

(*) [European language levels](#)

Computer skills and competences

Softwares: PCI Geomatica, ESRI ArcGIS for Desktop, ESRI ArcGIS ModelBuilder, ESRI ArcGIS Online, QUANTUM GIS, GRASS, ENVI, BEAM, Opticks, Neural Lab, ASF Tools SAR Training Processor, Next ESA SAR Toolbox (NEST), PCI SAR Polarimetry Target Analysis, SARscape, PolSARpro, ERDAS, ILWIS, Sextante, Orfeo ToolBox, Sentinel-1 Toolbox, eCognition, Agisoft Photoscan, MeshLab.

Programming Languages: C++, MATLAB, xml, Python.

Database and GeoDatabase: ESRI ArcGIS Server, PostgreSQL, PostGIS, MySQL, GeoServer.

Other: OS Linux based as Ubuntu, GNU/Linux Debian.

For more details, please visit my website:

<http://www.mainjoin.eu/experience/>

<http://www.mainjoin.eu/certificates/>

Driving licence

B (own car)

I authorise the use of my personal data in compliance with Legislative Decree 196/03.

April, 2017

Valerio De Luca

