

PERSONAL INFORMATION

Lorenzo Paolo Corgnati



 [Redacted]

 [Redacted]

 [Redacted]  
[Redacted]

 ResearcherID: F-9666-2015

Sex Male | Date of birth [Redacted] | Nationality Italian

JOB APPLIED FOR

WORK EXPERIENCE

2013 - present

**Coastal Radar, Data Management and Stereo Vision Research Engineer  
Tecnologo III livello – Matricola 17410**

National Research Council of Italy (CNR) - Institute of Marine Science (ISMAR) in Lerici Forte Santa Teresa, 19032 Pozzuolo di Lerici (SP), Italy

**Research contracts**

- 12/2018-present: Contratto TI, Protocollo CNR-ISMAR nr 8688 del 01/12/2018
- 04/2018-12/2018: Contratto TD, Protocollo CNR-ISMAR nr 0001368 del 22/02/2018
- 04/2017-03/2018: Contratto TD, Protocollo CNR-ISMAR nr 0001685 del 27/02/2017

**Research grants**

- 03/2016-03/2017: Assegno di Ricerca, Protocollo CNR-ISMAR nr 0000793 del 04/02/2016
- 03/2015-02/2016: Assegno di Ricerca, Protocollo CNR-ISMAR nr 0001532 del 18/02/2015
- 03/2013-02/2015: Assegno di Ricerca, Protocollo CNR-ISMAR nr 0000859 del 31/01/2013

**Business or sector** Oceanographic research

Main tasks include the management of the CNR-ISMAR Coastal High Frequency Radar (HFR) network for the monitoring of sea surface currents (2013-present), the technical coordination of the HFR data management within the European HFR Node (2018-present), the data management for oceanographic instruments and catalogues (2013-present), the 3D reconstruction of sea surface, marine waves, underwater environment and marine organism's detection (2013-2015).

**Areas of responsibility:**

Research and Development; Software Development; Infrastructure Manager; Scientific Production.

**Assignments:**

**Technical coordination of the European HFR Node for the integration and harmonization services of international HFR data and for the distribution services of HFR data towards Copernicus Marine Service In Situ Ocean TAC (CMEMS-INSTAC), EMODnet Physics and SeaDataNet (SDN)/SeaDataCloud (SDC) marine data portals.**

- **Team:** two researchers and two research engineers.
- **Role:** technical coordinator and software developer.
- **Methods:** collection, processing and distribution of standardized quality-controlled Near Real Time (NRT) HFR data towards CMEMS INSTAC, EMODnet Physics and SeaDataNet infrastructures. The performed activities consist in the design and implementation of all the software needed for the NRT data processing workflow and in the coordination and maintenance of the operational service for the creation and distribution of NRT HFR surface current data in standard format and compliant to a minimum set of Quality Control tests to the main European data distribution infrastructures.
- **Programming language:** Matlab, Python, bash scripts, xml, html, PHP
- **Tools:** M\_Map libraries, HFR\_Prog libraries, netCDF tools (NCO), THREDDS, MySQL.

- *Publications*: [4], [5], [6], [9], [13], [30], [32], [33], [34], [35], [36], [37], [48], [49], [50], [52], [53], [54], [55], [56]
- *Released software*: [58], [59], [60], [61], [62], [63], [64]

**Contribution to the Service Evolution Task for the Integration of the HF Radar (HFR) in the CMEMS INSTAC.**

- *Team*: two research engineers.
- *Role*: member of the working team.
- *Methods*: integration of quality-controlled Near Real Time (NRT) HFR data within the In Situ TAC products based on the INCREASE project recommendations. The performed activities aim to ensure a realistic calendar to start the provision of NRT HFR data in April 2019. The first task consists in organizing the Integration of the NRT HF Radar data in products such as Sea-In-Situ Near Real Time observations for first integration in V5 according to the recommendations produced in the INCREASE project. These include the delivery of standardized data with RTQC procedures. The second task consists in the support of the implementation of the production of NRT Total and Radial velocities of surface current that will be in place in a pre-operational mode in the INSTAC production unit for October 2018, and then delivered in V5 in April 2019 and V6 in April 2020.
- *Programming language*: Matlab, Python, bash scripts, xml, html
- *Tools*: M\_Map libraries, HFR\_Prog libraries, netCDF tools (NCO), THREDDS.
- *Publications*: [13], [30], [34], [35], [36], [37], [49], [50], [54], [55], [56]

**Contribution to the PNRA National Antarctic Data Centre (NADC) project for the design and implementation of a distributed IT infrastructure to ensure the homogenization, management, long-term stewardship and sharing at international level of data, metadata and scientific information produced within PNRA.**

- *Team*: one senior researcher, one research engineer, one research associate.
- *Role*: technical coordinator of the working team.
- *Methods*: design and implementation of a second-level node of the distributed IT infrastructure. This task consists in setting up a GeoNetwork instance, link it to the central node of the distributed infrastructure and populate it with standardized metadata of oceanographic datasets collected in Antarctica. This leverages on the metadata creation and standardization activity, carried on according to INSPIRE and GCMD metadata requirements.
- *Programming language*: Matlab, Python, bash scripts, xml, html, Java
- *Tools*: GeoNetwork, netCDF tools (NCO), THREDDS.

**Definition of data and metadata interoperable formats and QA/QC procedures to be adopted as European standards for coastal radar applications within Italian flagship project RITMARE, EU projects JERICO-NEXT, INCREASE (CMEMS) and SeaDataCloud (SDC), EuroGOOS HFR Task Team.**

- *Team*: three senior researchers, one technician and one research engineer.
- *Role*: member of the working team.
- *Methods*: definition of data and metadata formats compliant with CF-1.6, ACDD, Unidata Dataset Discovery and INSPIRE conventions. Definition of QA/QC procedures: QA procedures are based on IOOS best practices and QC methods are based on SNR, spatial geometry (GDOP) and statistics. The defined data and metadata formats and the QA/QC procedures are intended to be adopted as official European standards within the European HF Radar network and within the European services for delivery of NRT and historical HFR data (CMEMS and SDC).
- *Programming language*: Matlab, Python, bash scripts, xml, html
- *Tools*: M\_Map libraries, HFR\_Prog libraries, netCDF tools (NCO), THREDDS.
- *Publications*: [9], [13], [34], [35], [36], [37], [49], [50], [54], [55], [56]

**Sea surface current monitoring using High Frequency radar**

- *Team*: one senior researcher, one technician and one research engineer.
- *Role*: member of the working team.
- *Methods*: development of a control software tool for the data management, from data gathering at the sites to the final velocity data production. Realization of OGC compliant interoperable data format architecture (netCDF based) and management of a THREDDS catalog for data visualization and access.  
The data produced by the system are processed for quality control through signal to noise ratio analysis and GDOP analysis. Technical reports and scientific papers are produced.
- *Programming language*: Matlab
- *Tools*: M\_Map libraries, HFR\_Prog libraries, netCDF tools (NCO).

- *Publications:* [4], [5], [6], [7], [8], [9], [10], [11], [15], [16], [17], [19], [21], [31], [32], [38], [39], [40], [51]

#### **Installation and data management of a High Frequency radar network for sea surface current monitoring**

- *Team:* one senior researcher, one technician and one research engineer.
- *Role:* member of the working team
- *Methods:* installation of 4 sites of the radar network, from the infrastructure to the IT framework. Calibration of the antenna patterns is made through the use of a transponder moving along circular paths centred in the antenna sites. The network products are validated through the analysis of current velocity data sensed by drifters deployed in the radar coverage area and of Acoustic Doppler Current Profilers installed in the radar coverage area. Technical reports and scientific papers (peer-reviewed and conference proceedings) are produced.
- *Programming languages:* Matlab, bash scripts.
- *Tools:* Codar SeaSonde radars, transponder for calibration, drifters for validation.
- *Publications:* [4], [5], [6], [7], [8], [9], [10], [11], [15], [16], [17], [19], [21], [31], [32], [38], [39], [40], [51]

#### **Design and implementation of a data management system for real-time retrieval and quality control of data collected from research vessels and automatic cruise report generation (<http://cruise.sp.ismar.cnr.it>)**

- *Team:* one senior researcher, one technician and one research engineer.
- *Role:* member of the working team.
- *Methods:* development of a control software tool for the data management for data gathering at the research vessels, preliminary quality check, real time presentation on a web platform, complete Quality Control, automatic cruise report generation and production of final data in interoperable formats. Realization of a semantic framework (based on Resource Description Framework) for data and of OGC compliant interoperable data format architecture (netCDF based).  
The data processed by the system are collected by CTDs and Acoustic Doppler Current Profilers. The data produced by the system are processed for Quality Control according to the standards of the specific instruments. Technical reports and scientific papers (peer-reviewed and conference proceedings) are produced.
- *Programming language:* Matlab, Python, bash scripts, xml, html, MySQL, PHP.
- *Tools:* M\_Map libraries, RDI WinADCP, RDI VMDas, netCDF tools (NCO), RDF, CSS.

#### **Experimental design and implementation of an acoustic underwater point-to-point communication channel for dispatching operations.**

- *Team:* one senior researcher and one research engineer.
- *Role:* leader of the working team
- *Methods:* operational test of the acoustic modems via Hyperteminal application, design and implementation of software tools for text string and image compression and binary coding, design and implementation of the software tools for controlling and synchronizing the two acoustic modems, installation and operation of the software tools onboard Raspberry Pi mini PC, test of the acoustic point-to-point network in tank and at sea. Technical report and is produced.
- *Programming languages:* Python, bash scripts.
- *Tools:* Pyserial libraries, Binascii libraries, Base64 libraries, Hyperteminal, Trittech Micron Data Modem, Raspberry Pi.

#### **Design and implementation of a method for gelatinous zooplankton automatic recognition**

- *Team:* one senior researcher and two research associates.
- *Role:* member of the working team
- *Methods:* image processing, feature extraction, Machine Learning, feature elimination.  
The developed method is based on the Elastic Net Tikhonov Regularization method and it allows for the training of predictive models for gelatinous zooplankton identification. The generated models automatically detect gelatinous zooplankton specimens in underwater images. The validation of the models is made in a cross-validation framework based on ground truth datasets. Technical reports and scientific papers (peer-reviewed and conference proceedings) are produced.
- *Programming language:* Python
- *Tools:* OpenCV libraries, L1L2 libraries.
- *Publications:* [1], [2], [3], [12], [14], [17], [22], [23], [24]

**Design and realization of an autonomous underwater imaging system for the gelatinous zooplankton monitoring**

- *Team*: one senior researcher and two research associates.
- *Role*: member of the working team
- *Methods*: design and realization of prototypes with high resolution cameras, Raspberry Pi mini-PC, lighting system, underwater case, battery pack. Development of calibration methods and software tools for the management of the camera firmware.  
Software tools for calibration of the optical sensors are developed based on the pinhole camera model. Calibration activity is performed on the system sensors. Technical reports and scientific papers (peer-reviewed and conference proceedings) are produced.
- *Programming language*: Python, C++, LUA
- *Tools*: OpenCV libraries, CHDK, Canon SDK, Magic Lantern.
- *Publications*: [1], [2], [3], [12], [14], [17], [22], [23], [24]

**Design and implementation of a method for 3D reconstruction of sea surface and wave field feature extraction aimed at the wave field spectral characterization:**

- *Team*: one senior researcher and two research associates.
- *Role*: member of the working team
- *Methods*: calibration, rectification, disparity evaluation of the stereo data. Remapping of the point clouds into elevation domain. Pattern Recognition techniques for wave crests and troughs detection. Wave field feature extraction.  
The developed method is based on the acquisition and processing of large datasets of images sensed in the visible band. The method results are validated through the acquisition of image datasets of a wave tank able to generate regular and irregular waves of known period, significant height and wavelength. Technical reports and scientific papers (peer-reviewed and conference proceedings) are produced.
- *Programming language*: Python, C++
- *Tools*: OpenCV libraries, Point Cloud libraries.
- *Publications*: [20]

**Design and realization of a stereo vision system for the sea surface imaging aimed at the wave field spectral characterization:**

- *Team*: one senior researcher and two research associates.
- *Role*: member of the working team
- *Methods*: design and realization of prototypes with reflex high-resolution cameras and adequate lenses. Development of calibration methods and software tools. Design of a mathematical model for the system design optimization.  
Software tools for calibration of the optical sensors are developed based on the pinhole camera model. Calibration activity is performed on the system sensors. Technical reports and scientific papers (peer-reviewed and conference proceedings) are produced.
- *Programming language*: Python, C++
- *Tools*: OpenCV libraries, Point Cloud libraries.
- *Publications*: [20]

**Shipboard on R/V SARS in Arctic Sea for the research cruise “PREPARED and Polar Plastics – EUROFLEETS 2”**

- *Team*: 40-person crew.
- *Role*: member of the scientific crew
- *Methods*: preparation and deployment of 3 moorings for current, salinity, temperature, conductivity, sedimentary measurements.
- *Tools*: CTD, currentmeters, sedimentary traps, acoustic releaser, various probes.
- *Publications*: [57]

**2007 – 2013 Film Company - 'Due Monete' (now DUEL:Film) - Founder and Joint Owner**

Due Monete Snc  
Via Ponzio 3, 10141 Torino (TO), Italy

**Business or sector** Movie production, advertisement

Communication and video company operating in scriptwriting and in the production of short films and videos for both advertising and individual client productions. The company also produces their own short films some of which have received international recognition and nominations at various film festival, most notably in the Cannes Film Festival for the film "Il Resto" in 2010.

**Positions held**

Executive producer (2007-2012)  
Head of production (2007-2012)  
Director assistant (2007-2012)  
Camera operator (2007-2012)  
Editor (2007-2012)  
Colorist (2010-2012)

**Areas of responsibility**

As founder and joint owner of Due Monete my responsibilities covered many differing roles within the company: company management, fund raising, promotion, strategy planning, accounting, supply chain manager, head of production, post-production and motion graphics, distribution and teaching.

**2001-2011 Forest Fires Early Warning Research Associate**

Politecnico di Torino  
Corso Duca degli Abruzzi 24, 10128 Torino (TO), Italy

**Research grants**

08/2009-07/2011: Assegno di Ricerca, Protocollo Politecnico di Torino nr 14078.VII.17 del 31/07/2009  
08/2007-70/2009: Assegno di Ricerca, Contratto Politecnico di Torino nr 183/2007/AR del 31/07/2007

**Business or sector** Remote sensing research

Main tasks included the development of a Doppler excess prediction software in radio-occultation satellite link (2001-2004), the development of a predictive fire danger index evaluation system suited for alpine regions (2004-2006) and the development of an integrated monitoring system for wildfires monitoring and early warning (2007-2011).

**Areas of responsibility:**

Instrumentation development; Supply chain management; Software development; Infrastructure manager; Promotion and outreach; Teaching activity; Scientific production

**Assignments:****Design and implementation of a software for image rectification:**

- **Team:** research team, consisting of myself and two PhD students
- **Role:** leader of the working team
- **Methods:** projective approach based on Digital Terrain Models and geospatial information.
- The developed method was based on the acquisition and the processing of large datasets of images sensed in the visible, near infrared and thermal infrared bands. The geo-referenced outputs were validated through comparison with ground control points in the monitoring coverage. Technical reports and scientific papers (peer-reviewed and conference proceedings) are produced.
- **Programming language:** Matlab, C++
- **Tools:** Digital Terrain Models, IDRISI GIS
- **Publications:** [25], [26], [41]

**Design and implementation of a software for false alarm reduction in alpine forest fires early warning:**

- *Team:* research team, consisting of myself and two PhD students
- *Role:* leader of the working team
- *Methods:* image analysis, pattern recognition, wavelet analysis and machine learning.  
The method is based on the acquisition and processing of large datasets of images sensed in the visible and near infrared bands. The results were validated using machine learning methods in cross-validation framework, based on ground truth data. Technical reports and scientific papers (peer-reviewed and conference proceedings) are produced.
- *Programming languages:* Matlab, C++
- *Tools:* OpenCV libraries.
- *Publications:* [18], [25], [41]

**Design and implementation of a software for smoke detection in alpine forest fires:**

- *Team:* research team, consisting of myself and two PhD students
- *Role:* leader of the working team
- *Methods:* image analysis, pattern recognition.  
The developed method was based on the acquisition and the processing of large datasets of images sensed in the visible, near infrared and thermal infrared bands. The software results were validated through the application of machine learning methods in cross-validation frameworks based on ground truth data. Technical reports and scientific papers (peer-reviewed and conference proceedings) are produced.
- *Programming language:* Matlab, C++
- *Tools:* OpenCV libraries
- *Publications:* [25], [41]

**Design and implementation of a software for hot spot detection in alpine forest fires:**

- *Team:* research team, consisting of myself and two PhD students
- *Role:* leader of the working team
- *Methods:* image analysis, pattern recognition and radiometric analysis.  
The developed method was based on the acquisition and the processing of large datasets of images sensed in the visible, near infrared and thermal infrared bands. The software results were validated through the application of machine learning methods in cross-validation framework, based on ground truth data. Technical reports and scientific papers (peer-reviewed and conference proceedings) are produced.
- *Programming languages:* Matlab, C++
- *Tools:* radiometric model developed by the team.
- *Publications:* [25], [41], [42], [43]

**Design and implementation of an observing system for forest fires monitoring and early warning:**

- *Team:* research team, consisting of myself and two PhD students
- *Role:* leader of the working team
- *Methods:* realization of prototypes through the modification of consumer cameras (IR filter removal and additional filters addition) and thermal cameras for Visible, Near InfraRed and Thermal InfraRed imaging. Realization of the control software for the integration with a pan-tilt system for the monitoring scan management.  
The prototypes were installed in a fixed station and on a mobile station (van with internal lab). The developed system was based on the acquisition of large datasets of images sensed in the visible, near infrared and thermal infrared bands. Software tools for calibration of the visible and infrared sensors were developed based on the pinhole camera model. Calibration activity was performed on the system visible and infrared sensors. Technical reports and scientific papers (peer-reviewed and conference proceedings) are produced.
- *Programming languages:* Matlab, C++
- *Tools:* consumer camera, modification of optical sensors, optical filters, pan-tilt engines.
- *Publications:* [25], [41], [43]

**Design and implementation of a software forecast tool for fire danger index evaluation suited for alpine region**

- *Team:* research team, consisting of myself and one thesis student
- *Role:* leader of the working team
- *Methods:* modelling extension of the Canadian Forest Weather Index (FWI) through the analysis and the modelling of climatological, orographic and vegetation conditions. Integration of numerical weather prediction data provided by ECMWF.

Land surface temperature data sensed by MODIS have been studied and analysed as a potential input for the model. Vegetation index data sensed by ATSR-2 and MODIS have been studied and analysed as potential input for the model. The model results were validated through the application of machine learning methods in cross-validation frameworks, based on ground truth data (historical forest fires time series). Technical reports and scientific papers (peer-reviewed and conference proceedings) are produced.

- *Programming languages:* Matlab
- *Tools:* ECMWF numerical weather previsions, GRIB data format, IDRISI GIS.
- *Publications:* [25], [27], [41], [43], [44]

**Design and development of a software for GPS signal Doppler shift prediction in radio-occultation satellite link:**

- *Team:* research team, consisting of a professor, a senior researcher and myself
- *Role:* member of the working team
- *Methods:* simulation of signal behaviour in radio-occultation satellite link, based on ray-tracing approach and Runge-Kutta solution for fourth order differential equations
- Teaching (Numerical analysis, radiometry)
- *Programming language:* Matlab
- *Publications:*[28], [29], [45], [46], [47]

1999 - 2006

**Head of Production – film company**

Associazione culturale Immagina  
Strada Berteu 5, 10020 Casalborgone (TO), Italy

**Business or sector** Education, movie production, movie workshops

*Short description of job title:*

Festival coordinator (2003-2006)

Executive producer (2000-2006)

Editor (1999-2006)

Camera operator (1999-2006)

Workshop coordinator (1999-2006)

*Areas of responsibility*

Festival management; Fund rising; Promotion; Strategy planning; Accounting; Head of production, Post-production and motion graphics; Teaching.

2002 - 2005

**Head of Guest Lodging Office**

Cinemambiente Environmental International Film Festival  
Via Montebello 15, 10100 Torino (TO), Italy

**Business or sector** Film Festival

Management of the Guest Lodging Office (2002-2005)

*Areas of responsibility*

Festival management; Drivers department coordination; Accounting; Supply chain manager; Festival organization

## EDUCATION AND TRAINING

- 2020 **Course in Julia programming**  
Coursera – University of Cape Town
- Julia programming language
- 2019 **ADCP Crash Course (by SINAPSI Interreg Project)**  
Università di Genova – DICCA Dipartimento di Ingegneria Civile, Chimica e Ambientale, Italy
- Fundamentals of ADCP use, deployment and maintenance
  - Fundamentals of ADCP data processing and management
- 2019 **WERA Operator Seminar**  
Helzel Messtechnik GmbH, Germany
- WERA hardware structure
  - WERA site geometry
  - WERA software solutions
- 2019 **I-STORM THREDDS workshop**  
National Research Council of Italy (CNR) – Institute of Marine Science (ISMAR), Italy
- THREDDS architecture
  - THREDDS server deployment and maintenance
  - Metadata formats
  - THREDDS catalog management for data access and distribution
- 2017 **Summer school on HF and X-band radars**  
ISSOR (International Summer School on Radio-Oceanography) at Université de Caen, France
- Fundamentals for radio-oceanography
  - HF radar: technology, validation and measurements
  - X-band radar: technology and measurements
  - Data analysis for surface currents
  - HF radars for high tidal currents
  - Data analysis for sea states
  - Radio-oceanography: quality controls, coupling with other methods and applications
  - HF radar for tsunami detection
  - Data Assimilation
- 2016 **Course in Monitoring the Oceans from Space**  
EUMETSAT by Imperative Space
- Oceans and climate
  - Oceans, weather and climate impacts
  - Ocean transport and hazards
  - Living oceans (bio-geochemistry)
  - Oceans and us (socio-economics)
- 2014 **School in Mediterranean Sea models, observations and experiments**  
National Research Council of Italy (CNR) – Institute of Atmospheric Science and Climate (ISAC), Italy
- Ocean modelling
  - Operational oceanography
  - Lagrangian oceanography
  - Eulerian oceanography
  - Oceanographic geology
  - Ocean satellite observation

- 2014 **Course in Getting and cleaning data**  
Coursera – Johns Hopkins University
- R
  - Tidy data
  - Statistical data cleaning
- 2014 **Course in R Programming**  
Coursera – Johns Hopkins University
- R
- 2014 **Course in Machine Learning**  
Coursera – Stanford University
- Machine Learning
  - Logistic regression
  - Neural networks
  - Support Vector Machines
- 2013 **School in Pattern Analysis and Computer Vision**  
Italian Institute of Technology, Italy
- Computer Vision
  - Pattern analysis
  - Pattern recognition
  - Machine learning
- 2013 **School in Regularization Methods for High Dimensional Learning**  
Università degli Studi di Genova - DIBRIS, Italy
- Machine Learning
  - Tikhonov Regularization
  - LASSO
  - L1L2 regularization and feature selection
- 2004-2006 **PhD in Electronics and Communication Engineering** EQF 8
- Politecnico di Torino  
Corso Duca degli Abruzzi 24, 10128 Torino (TO), Italy
- Active and passive remote sensing
  - Radiometry
  - Forest fires monitoring and early warning
  - Forest fires risk analysis
  - Computer science
  - Numerical calculus
  - Information technology
  - GPS signal analysis
- 1995-2003 **Master degree in Telecommunication Engineering** EQF 7  
Grade:  
101/110
- Politecnico di Torino  
Corso Duca degli Abruzzi 24, 10128 Torino (TO), Italy
- Active and passive remote sensing
  - Radiometry
  - GPS signal analysis
  - Computer science
  - Signal processing
  - Information technology
  - Electronics

1990-1995 **High school degree**

EQF 4  
Grade:  
60/60

Liceo Scientifico "G. Segrè"  
Corso Alberto Picco 14, 10131 Torino (TO), Italy

- Italian literature
- Latin language and literature
- Mathematics
- Physics
- Chemistry
- History
- Philosophy

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
PET. Passed with merit (1995).					
German	A1	B1	A1	A1	A1
High school class (1990-1995)					

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user  
Common European Framework of Reference for Languages

- Communication skills**
- Good communication skills gained through my experience as a company owner and as a researcher.
  - Good team working skills gained through my experience in research groups and as the head of production.
- Organisational / managerial skills**
- Leadership - experience as company manager, head of production and coordinator of educational activities.
  - Organisational skills - experience in coordinating field experiments, as head of production and as festival coordinator.
- Job-related skills**
- Good command of production processes - experience as responsible of movie executive production.
- Computer skills**
- Proficient user of Microsoft Windows™ OS.
  - Proficient user of Macintosh OS.
  - Proficient user of Linux Ubuntu OS.
  - Proficient command of Microsoft Office™ tools (MS Office, MS Excel, MS PowerPoint).
  - Proficient command of LaTeX.
  - Proficient command of MATLAB™.
  - Proficient command of C and C++.
  - Proficient command of Python.
  - Advanced command of R.
  - Advanced command of Julia.
  - Proficient command of Visual Studio suite.
  - Advanced command of HTML5 and CSS.
  - Proficient command of PHP.
  - Advanced command of MySQL.
  - Basic command of IDL.
  - Advanced command of IDRISI GIS.
  - Proficient command of OpenCV library, PCL library.
  - Proficient command of Final Cut Suite.
  - Proficient command of Adobe Creative Suite.
- Driving licence**
- A
  - B

## PUBLICATIONS

## ISI journal articles

- [1] Peirano, A., Bordone, A., Corgnati, L., Marini, S., 2023. Time-lapse recording of yearly activity of the sea star *Odontaster validus* and the sea urchin *Sterechinus neumayeri* in Tethys Bay (Ross Sea, Antarctica). *Antarctic Science*, 35(1), 4-14. doi:10.1017/S0954102022000529. WOS:000949016700001
- [2] Marini, S., Bonofiglio, F., Corgnati, L., Bordone, A., Schiaparelli, S., Peirano, A., 2022. Long-term High Resolution Image Dataset of Antarctic Coastal Benthic Fauna. *Sci Data* 9, 750. <https://doi.org/10.1038/s41597-022-01865-7>. Scopus: 2-s2.0-85143242766
- [3] Marini, S., Bonofiglio, F., Corgnati, L., Bordone, A., Schiaparelli, S., Peirano, A., 2022. Long-term automated visual monitoring of Antarctic benthic fauna. *Methods in Ecology and Evolution*, 13, 1746–1764. <https://doi.org/10.1111/2041-210X.13898>. WOS: 000804031000001
- [4] Lorente, P., Aguiar, E., Bendoni, M., Berta, M., Brandini, C., Caceres-Euse, A., Capodici, F., Cianelli, D., Ciralo, G., Corgnati, L., Dadic, V., Doronzo, B., Drago, A., Dumas, D., Falco, P., Fattorini, M., Gauci, A., Gomez, R., Griffa, A., Guerin, C.-A., Hernandez-Carrasco, I., Hernandez-Lasheras, J., Licer, M., Magaldi, M. G., Mantovani, C., Mihanovic, H., Molcard, A., Mourre, B., Orfila, A., Revelard, A., Reyes, E., Sanchez, J., Saviano, S., Sciascia, R., Taddei, S., Tintoré, J., Toledo, Y., Ursella, L., Uttieri, M., Vilibic, I., Zambianchi, E., Cardin, V., 2022. Coastal high-frequency radars in the Mediterranean – Part 1: Status of operations and a framework for future development. *Ocean Science*, 18, 3, 761–795. <https://os.copernicus.org/articles/18/761/2022>. doi: 10.5194/os-18-761-2022. WOS: 000804132300001
- [5] Reyes, E., Aguiar, E., Bendoni, M., Berta, M., Brandini, C., Caceres-Euse, A., Capodici, F., Cardin, V., Cianelli, D., Ciralo, G., Corgnati, L., Dadic, V., Doronzo, B., Drago, A., Dumas, D., Falco, P., Fattorini, M., Fernandes, M. J., Gauci, A., Gomez, R., Griffa, A., Guerin, C.-A., Hernandez-Carrasco, I., Hernandez-Lasheras, J., Licer, M., Lorente, P., Magaldi, M. G., Mantovani, C., Mihanovic, H., Molcard, A., Mourre, B., Revelard, A., Reyes-Suarez, C., Saviano, S., Sciascia, R., Taddei, S., Tintoré, J., Toledo, Y., Uttieri, M., Vilibic, I., Zambianchi, E., Orfila, A., 2022. Coastal high-frequency radars in the Mediterranean – Part 2: Applications in support of science priorities and societal needs. *Ocean Science*, 18, 3, 797–837. <https://os.copernicus.org/articles/18/797/2022>. doi: 10.5194/os-18-797-2022. WOS: 000804138300001
- [6] Mantovani C., Corgnati L., Horstmann J., Rubio A., Reyes E., Quentin C., Cosoli S., Asensio JL., Mader J., Griffa A., 2020. Best Practices on High Frequency Radar Deployment and Operation for Ocean Current Measurement. *Frontiers in Marine Science*, vol. 7, ISSN 2296-7745, doi: 10.3389/fmars.2020.00210. WOS:000525186600001
- [7] Berta M., Corgnati L., Magaldi M.G., Griffa A., Mantovani C., Rubio A., 2020. Small scale ocean weather during an extreme wind event in the Ligurian Sea. *Copernicus Marine Service Ocean State Report Issue 4, Journal of Operational Oceanography*, vol. 13, pp. s149-s155, doi: 10.1080/1755876X.2020.1785097. WOS: 000573645400001
- [8] Rubio A., Manso-Narvarte I., Caballero A., Corgnati L., Mantovani C., Reyes E., Griffa A., Mader J., 2019. The seasonal intensification of the slope Iberian Poleward Current. *Copernicus Marine Service Ocean State Report 3, Journal of Operational Oceanography*, vol. 12, pp. s13-s18, doi: 10.1080/1755876X.2019.1633075. WOS:000495675100011
- [9] Roarty H., Cook T., Hazard L., George D., Harlan J., Cosoli S., Wyatt L., Alvarez Fanjul E., Terrill E., Otero M., Largier J., Glenn S., Ebuchi N., Whitehouse B., Bartlett K., Mader J., Rubio A., Corgnati L., Mantovani C., Griffa A., Reyes E., Lorente P., Flores-Vidal X., Saavedra-Matta KJ., Rogowski P., Prukpitikul S., Lee S-H., Lai J-W., Guerin C-A., Sanchez J., Hansen B., Grilli S., 2019. The Global High Frequency Radar Network. *Frontiers in Marine Science*, vol. 6, ISSN=2296-7745, doi: 10.3389/fmars.2019.00164. WOS:000467919400001
- [10] Corgnati L., Mantovani C., Griffa A., Berta M., Penna P., Celentano P., Bellomo L., Carlson DF., D'Adamo R., 2019. Implementation and Validation of the ISMAR High-Frequency Coastal Radar Network in the Gulf of Manfredonia (Mediterranean Sea). *IEEE Journal of Oceanic Engineering*, vol. 44, no. 2, pp. 424-445, doi: 10.1109/JOE.2018.2822518. WOS:000464929900013
- [11] Sciascia R., Berta M., Carlson DF., Griffa A., Panfili M., La Mesa M., Corgnati L., Mantovani C., Domenella E., Fredj E., Magaldi MG., D'Adamo R., Paziienza G., Zambianchi E., Poulain PM., 2018. Linking sardine recruitment in coastal areas to ocean currents using surface drifters and HF radar: a case study in the Gulf of Manfredonia, Adriatic Sea. *Ocean Science*, vol. 14, pp. 1461-1482, doi: <https://doi.org/10.5194/os-14-1461-2018>. WOS:000451278500001
- [12] Marini S., Corgnati L., Mantovani C., Bastianini M., Ottaviani E., Fanelli E., Aguzzi J., Griffa A., Poulain PM., 2018. Automated estimate of fish abundance through the autonomous imaging

- device GUARD1. Measurement, vol. 126, pp. 72-75, doi: <https://doi.org/10.1016/j.measurement.2018.05.035>. WOS:000444627000008
- [13] Rubio A., Mader J., Corgnati L., Mantovani C., Griffa A., Novellino A., Quentin C., Wyatt L., Schulz-Stellenfleth J., Horstmann J., Lorente P., Zambianchi E., Hartnett M., Fernandes C., Zervakis V., Gorringer P., Melet A., Puillat I., 2017. HF Radar Activity in European Coastal Seas: Next Steps toward a Pan-European HF Radar Network. *Frontiers in Marine Science*, vol. 4, ISSN 2296-7745, doi: 10.3389/fmars.2017.00008. WOS:000457690600008
- [14] Corgnati L., Marini S., Mazzei L., Ottaviani E., Aliani S., Conversi A., Griffa A., 2016. Looking inside the Ocean: Toward an Autonomous Imaging System for Monitoring Gelatinous Zooplankton. *Sensors*, Vol. 16, N. 12, ISSN 1424-8220, doi: 10.3390/s16122124. WOS:000391303000143
- [15] Carlson DF, Griffa A., Zambianchi E., Suaria G., Corgnati L., Magaldi MG, Poulain PM, Russo A., Bellomo L., Mantovani C., Celentano P., Molcard A., Borghini M., 2016. Observed and modeled surface Lagrangian transport between coastal regions in the Adriatic Sea with implications for marine protected areas, *Continental Shelf Research*, ISSN 0278-4343, doi: 10.1016/j.csr.2016.02.012. WOS:000374078400003
- [16] Bellomo L., Griffa A., Cosoli S., Falco P., Gerin R., Iermano I., Kalampokis A., Kokkini Z., Lana A., Magaldi M. G., Mamoutos I., Mantovani C., Marmain J., Potiris E., Sayol J. M., Barbin Y., Berta M., Borghini M., Bussani A., Corgnati L., Dagneaux Q., Gaggelli J., Guterma P., Mallarino D., Mazzoldi A., Molcard A., Orfila A., Poulain P. -M., Quentin C., Tintoré J., Uttieri M., Vetrano A., Zambianchi, E., Zervakis, V., 2015. Toward an integrated HF radar network in the Mediterranean Sea to improve search and rescue and oil spill response: the TOSCA project experience. *Journal of Operational Oceanography*, pp. 1.13, doi: 10.1080/1755876X.2015.1087184. WOS:000368118900002
- [17] Aliani S., Berta M., Borghini M., Carlson D. F., Conversi A., Corgnati L. P., Griffa A., Magaldi M. G., Mantovani C., Marini S., Mazzei L., Suaria G., Vetrano A., 2014. Biodiversity conservation: an example of a multidisciplinary approach to marine dispersal. *Rend. Fis. Acc. Lincei*, doi:10.1007/s12210-014-0357-2 (ISSN: 2037-4631). WOS:000351639100005
- [18] Losso A., Corgnati L., Perona G., 2011. False alarm reduction in forest fires detection with low cost commercial sensors. *Italian Journal of Remote Sensing* 43, 75-86. WOS:000287941600006

## Non ISI journal articles

- [19] Carlson, D. F.; Corgnati, L. P.; Griffa, A.; Magaldi, M. G.; Mantovani, C.; Poulain, P. M.; Zambianchi, E., 2014. Observations of Lagrangian transport in the Adriatic Sea from GPS tracked surface drifters. *Mixing, Transport, and Coherent Structures* 01/2014; DOI:10.4171/OWR/2014/04

## ISI conference publications

- [20] Corgnati, L.; Mazzei, L.; Marini, S.; Isoppo, B.; Ottaviano, E.; Besio, G.; Magaldi, M.G., "High resolution stereo imaging of sea waves for validation and optimization of wave modelling," in *OCEANS 2015 - Genova*, vol., no., pp.1-8, 18-21 May 2015. doi: 10.1109/OCEANS-Genova.2015.7271382. WOS:000380485500065
- [21] Corgnati, L.; Mantovani, C.; Griffa, A.; Bellomo, L.; Carlson, D.F.; Magaldi, M.G.; Berta, M.; Paziienza, G.; D'Adamo, R., "The ISMAR high frequency coastal radar network: Monitoring surface currents for management of marine resources," in *OCEANS 2015 - Genova*, vol., no., pp.1-8, 18-21 May 2015. doi: 10.1109/OCEANS-Genova.2015.7271524. WOS:000380485500206
- [22] Marini, S.; Corgnati, L.; Mazzei, L.; Ottaviano, E.; Isoppo, B.; Aliani, S.; Conversi, A.; Griffa, A., "GUARD1: An autonomous system for gelatinous zooplankton image-based recognition," in *OCEANS 2015 - Genova*, vol., no., pp.1-7, 18-21 May 2015. doi: 10.1109/OCEANS-Genova.2015.7271704. WOS:000380485500383
- [23] Mazzei, L.; Corgnati, L.; Marini, S.; Ottaviano, E.; Isoppo, B., "Low cost stereo system for imaging and 3D reconstruction of underwater organisms," in *OCEANS 2015 - Genova*, vol., no., pp.1-4, 18-21 May 2015. doi: 10.1109/OCEANS-Genova.2015.7271554
- [24] Corgnati, L.; Mazzei, L.; Marini, S.; Aliani, S.; Conversi, A.; Griffa, A.; Isoppo, B.; Ottaviano, E., "Automated Gelatinous Zooplankton Acquisition and Recognition," *Computer Vision for Analysis of Underwater Imagery (CVAUI)*, 2014 ICPR Workshop on, vol., no., pp.1,8, 24-24 Aug. 2014. doi: 10.1109/CVAUI.2014.12. WOS:000358733600001
- [25] Corgnati L., Losso A., Perona G., 2010. SIRIO high performance decision support system for wildfire fighting in alpine regions: an integrated system for risk forecasting and monitoring. *WIT Transactions on Ecology and the Environment*, Volume: 137, WIT Press, pp. 163-172. DOI:

10.2495/FIVA100151. WOS:000309430400015

- [26] Losso A., Corgnati L., Perona G., 2010. Innovative image geo-referencing tool for decision support in wildfire fighting. *WIT Transactions on Ecology and the Environment*, Volume: 137, WIT Press, pp. 173-183. DOI: 10.2495/FIVA100161. WOS:000309430400016
- [27] Corgnati L., Gabella M., Perona G., 2008. FIREcast system - Previsional fire danger index computation system for alpine regions. *WIT Transactions on Ecology and the Environment*, Volume: 119, WIT Press, pp. 71-80. DOI: 10.2495/FIVA080081. WOS:000260498200008
- [28] Gabella, M.; Corgnati, L.; Perona, G.; Morin, E., "TRMM-derived Range-adjustment of Ground-based Radars in two Mediterranean Countries," in *Geoscience and Remote Sensing Symposium, 2006. IGARSS 2006. IEEE International Conference on*, vol., no., pp.2639-2642, July 31 2006-Aug. 4 2006. doi: 10.1109/IGARSS.2006.681. WOS:000260989401273
- [29] Notarpietro R., Corgnati L., Gabella M., Perona G., 2004: ROSA: the Italian Space Agency GPS Radio Occultation receiver. Signal tracking characteristics and terrestrial measurement campaign, *11nd International Workshop on Occultations for Probing the Atmosphere and Climate (OPAC-2)*, September 13-18, Graz, Austria. WOS:000239155400014

#### Non ISI conference publications

- [30] Corgnati L., Mantovani C., Rubio A., Mader J., Reyes E., Igoa JL., Novellino A., Gorringer P., Griffa A., 2020. The European HF Radar Node: focal point to promote land-based remote sensing of coastal surface currents and its applications. *EGU General Assembly Conference Abstracts*, pp. 1537
- [31] Berta M., Griffa A., Corgnati L., Magaldi MG., Mantovani C., Huntley H., Poje A., Ozgokmen T., 2020. Submesoscales variability from surface drifter and HF radar measurements: scale and wind dependence of kinematic properties. *EGU General Assembly Conference Abstracts*, pp. 18620
- [32] Rubio A., Mader J., Corgnati L., Mantovani C., Griffa A., Igoa JL., Reyes E., Tarot S., 2019. High Frequency Radar-derived surface currents: a powerful new data set for CMEMS. *Geophysical Research Abstracts*, vol. 21
- [33] Corgnati L., Mantovani C., Igoa JL., Rubio A., Mader J., Reyes E., Novellino A., Gorringer P., Griffa A., 2019. The European High Frequency Radar Node. *Geophysical Research Abstracts*, vol. 21
- [34] Corgnati L., Mantovani C., Rubio A., Igoa JL., Reyes E., 2018. Building strong foundations towards the pan-European high frequency radar network. *Boll. Geof. Suppl.*, vol. 59, pp. 246-247
- [35] Corgnati L., Mantovani C., Rubio A., Reyes E., Quentin C., Cosoli S., Novellino A., Mader J., Griffa A., 2018. The European common data and metadata model for real-time High Frequency Radar surface current data. *EGU General Assembly Conference Abstracts*, pp. 13317
- [36] Mader J., Rubio A., Igoa JL., Corgnati L., Mantovani C., Griffa A., Gorringer P., Alba M., Novellino A., 2017. INCREASE: Innovation and Networking for the integration of Coastal Radars into European mARine SERVICES. *EGU General Assembly Conference Abstracts*, pp. 19261
- [37] Rubio A., Mader J., Griffa A., Mantovani C., Corgnati L., Novellino A., Schulz-Stellenfleth J., Quentin C., Wyatt L., Ruiz MI., Lorente P., Hartnett M., Gorringer P., 2016. Joint Efforts Towards European HF Radar Integration. *AGU Fall Meeting*, pp. OS13B-1806
- [38] Carrara P., Corgnati L., Cosoli S., Griffa A., Kalampokis A., Mantovani C., Oggioni A., Pepe M., Raffa F., Serafino F., Uttieri M., Zambianchi E. (2014) The RITMARE coastal radar network and applications to monitor marine transport infrastructures. *Geophysical Research Abstracts*, 16: 14149
- [39] Carrara P., Corgnati L., Cosoli S., Forneris V. Griffa A., Kalampokis A., Mantovani C., Oggioni A., Pepe M., Raffa F., Santoleri R., Serafino F., Tronconi C., Uttieri M., Zambianchi E., 2014. The RITMARE Italian coastal radar network: operational system and data interoperability framework. *7<sup>th</sup> EuroGOOS Conference*, 28-30 October 2014, Lisbon (Portugal).
- [40] Carlson D.F., Mantovani C., Corgnati L., Paziienza G., Magaldi M., Bellomo L., Griffa A., D'Adamo R., Zambianchi E., Celentano P., 2014. HF radar and drifter observing system in the Adriatic for fishery management and security. *7th EuroGOOS Conference*, 28-30 October 2014, Lisbon (Portugal).
- [41] Losso A., Corgnati L., Bertoldo S., Allegretti M., Notarpietro R., Perona G., 2012. SIRIO: an integrated forest fire monitoring, detection and decision support system - performance and results of the installation in Sanremo (Italy). *WIT Transactions on Ecology and the Environment*, Volume: 158, WIT Press, pp. 79-90. DOI: 10.2495/FIVA120071
- [42] Bertoldo S., Corgnati L., Losso A., Perona G., 2012. Safety in forest fire fighting action: a new radiometric model to evaluate the safety distance for firemen working with hand-operated

systems. WIT Transactions on Ecology and the Environment, Volume: 158, WIT Press, pp. 3-12. DOI: 10.2495/FIVA120011

- [43] Perona G., Corgnati L., Losso A., Ciavoli Cortelli L., Falzini S., Palutan F., Fiorani A., 2009. Development of an Integrated Methodology for Early Firing Alarm And Real Time Monitoring. Proceedings of 33rd International Symposium on Remote Sensing of Environment, 4-8 May 2009, Stresa (VB).
- [44] Corgnati L., Bertoldo S., Tartaglione N., Perona G., 2008. Use of MERIS and AATSR data in previsual fire danger index computation system for alpine regions. ESA ESRIN second joint MERIS and (A)ATSR workshop, 22-26 September 2008, Frascati (Italy).
- [45] Gabella M., Corgnati L., Morin E., Perona G., Combining multisource data observations: how to use the TRMM spaceborne weather radar to adjust meteorological radars at ground level, 7th INTERNATIONAL WORKSHOP on PRECIPITATION IN URBAN AREAS Extreme Precipitation, Multisource Data Measurement and Uncertainty December, 2006, St. Moritz, Switzerland.
- [46] M. Gabella, L. Corgnati, S. Turso, G. Perona, "Taratura e messa a punto di radar meteorologici operanti nel Mediterraneo mediante il TRMM Precipitation Radar", Riunione Annuale SIEm, Torino, Italy, Sep.2006.
- [47] Notarpietro R., Corgnati L., Gabella M., Perona G., 2004: Modelling and Inverting GPS radio-occultation signals using a physical optics approach, XV Riunione Nazionale di Elettromagnetismo, Cagliari.

#### Technical reports

- [48] Rubio A., Reyes E., Mantovani C., Corgnati L., Lorente P., Solabarrieta L., Mader J., Fernandez V., Pouliquen S., Novellino A., Karstensen, J. and Petihakis G., 2021. *European High Frequency Radar network governance*. EuroSea Deliverable, D3.4. EuroSea, 41 pp. DOI: [10.3289/eurosea\\_d3.4](https://doi.org/10.3289/eurosea_d3.4).<http://oceanrep.geomar.de/52708/>
- [49] Copernicus Marine in situ TAC (2020). Copernicus in situ NRT current product user manual (PUM). CMEMS-INS-PUM-013-048. <https://doi.org/10.13155/73192>
- [50] Copernicus Marine In Situ Tac Data Management Team (2021). Copernicus Marine In Situ NetCDF format manual. <https://doi.org/10.13155/59938>
- [51] Magaldi M. G., Barbieri L., Mantovani C., Baratti M., Bendoni M., Berta M., Berto D., Bigongiari N., Boccacci A., Bramanti L., Brandini C., Calace N., Caliani I., Cannicci S., Casini S., Connès C., Corgnati L. P., Costanza L., Coudray S., Cristofori S., Di Mento R., Doronzo B., Dumas D., Fattorini M., Femiano R., Fratini S., Galgani F., Galli T., Gozzini B., Gramoullé A., Grassini I., Griffa A., Guizien K., Guérin C.-A., Iozzelli M., Lapucci C., Lenoble V., Maltese S., Mario S., Mazoyer C., Mengoni A., Menonna V., Molcard A., Oliva M., Ortolani A., Ourmières Y., Padrón M., Piermarini R., Pretti C., Romanelli G., Ruberti G., Scarpato A., Sciascia R., Silvestri C., Taddei S., Ugolini A., Vanneste H., Vannucchi V., Xu D. (2021). Strumenti e indicazioni di governance transfrontaliera. Piano d'azione e linee guida del progetto IMPACT. Instruments et indications pour la gouvernance transfrontalière. Plan d'action et lignes directrices du projet IMPACT, Lerici (SP), Italy, CNR Edizioni, 40p., doi: 10.26383/CNR-ISMAR.2021.3
- [52] Etienne H., Verbrugge N., Boone C., Rubio A., Corgnati L., Mantovani C., Reyes E., Chifflet M., Mader J., Carval T., 2020. Global Ocean-Delayed Mode in-situ Observations of surface (drifters and HFR) and sub-surface (vessel-mounted ADCPs) water velocity. Quality Information Document (QUID). Copernicus Marine In Situ TAC, doi: 10.13155/41256
- [53] Verbrugge N., Etienne H., Mader J., Corgnati L., Mantovani C., Reyes E., Rubio A., 2019. Copernicus Marine In Situ TAC quality information document for near real-time waves (QUID NRT WAVES). Copernicus Marine In Situ TAC, doi: 10.13155/74324
- [54] Corgnati L., Mantovani C., Novellino A., Jousset S., Cramer R.N., Thijsse P., 2019. SeaDataNet data management protocols for HF Radar data, WP9 - Deliverable D9.12. Version 1.6. SeaDataNet, 83pp. DOI: <https://dx.doi.org/10.25607/OBP-1011>
- [55] Corgnati L., Mantovani C., Novellino A., Rubio A. and Mader, J., 2018. Recommendation Report 2 on improved common procedures for HFR QC analysis. JERICO-NEXT WP5-Data Management, Deliverable 5.14, Version 1.0. Brest, France, IFREMER, 82pp, (JERICO-NEXT-WP5-D5.14-V1.). DOI: <http://dx.doi.org/10.25607/OBP-944>
- [56] Mader J., Rubio A., Asensio J.L., Novellino A., Alba M., Corgnati L., Mantovani C., Griffa A., Goringe P., Fernandez V., 2016. The European Hf Radar Inventory. Eurogoos Hf Radar Task Team Publication 2016
- [57] Lucchi R., Kovacevic V., Aliani S., Caburlotto A., Celussi M., Corgnati L., Cosoli S., Deponte D., Ersdal E.A., Fredriksson S., Goszczko I., Husum K., Ingrosso G., Laberg J.S., Łacka M., Langone L., Mansutti P., Mezgec K., Morigi C., Ponomarenko E., Realdon G., Relitti F., Robijn A., Skogseth R., Tirelli V., 2014. PREPARED Present and past flow regime. On contourite

drifts west of Spitsbergen. Technical report.

#### Released software

- [58] EU\_HFR\_NODE\_\_WebForm: DOI 10.5281/zenodo.3460422
- [59] HFR\_Node\_\_Centralized\_Processing: DOI 10.5281/zenodo.2639558
- [60] HFR\_Node\_\_Historical\_Data\_Processing: DOI 10.5281/zenodo.3569518
- [61] HFR\_Node\_\_REP\_Temporal\_Aggregation: DOI 10.5281/zenodo.3707649
- [62] HFR\_Node\_\_SDC\_Processing: DOI 10.5281/zenodo.3855468
- [63] HFR\_Node\_tools: DOI 10.5281/zenodo.2639555
- [64] EU\_HFR\_NODE\_db4HOORT: DOI 10.5281/zenodo.7324253