

Curriculum Vitae

PERSONAL INFORMATION

Name: **ALFREDO FAVENZA**
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Place and date of birth: Torino (Italy) 19/05/1980

SUMMARY

Senior Researcher and Project Manager with experience in managing international projects in the areas of Big Data, Cloud Computing, Location-Based Services and Intelligent Transport Systems.

H2020 expert evaluator at European Commission and **representative member of the Big Data Value Association (BDVA)**, an industry-led contractual counterpart to the European Commission for the implementation of the Big Data Value Public Private Partnership (BDV PPP) and to boost **European BIG DATA VALUE** research.

I am interested **project management**, **business development** and **innovation transfer** from the research to the industry and the society.

WORK EXPERIENCE

Feb. 2018 - Today

Position: **Seconded National Expert**
Employer: **European Commission – Research Executive Agency (REA)**
Type of Business: Governmental
Task: H2020 EIC - Fast Track to Innovation proposals evaluator

May 2007 - Today

Position: **R&D Project Manager**
Employer: **Istituto Superiore Mario Boella / Microsoft Innovation Centre Torino**
Type of business: Research & Development – Technology Transfer
Tasks: International projects management
Technical leadership
Business development and fund raising
Grant proposal preparation, including budget and financial aspects
Research activities in the fields of big data, cloud computing, mobile and location-based service.
Technical developments and scientific results production.

Projects:

OptiTruck *Optimal fuel consumption with Predictive PowerTrain control and calibration for intelligent Truck* **Goal:** design and develop a global optimizer based on cloud computing and Big Data for effective powertrain management, using the environment data related to the transport mission, road topography, weather and road conditions and surrounding vehicles. **Activities:** Team Leader of Work Package 3 “Architecture and System Design”.

MUV *Mobility Urban Values* **Goal:** increase the citizen awareness on the quality of the urban environment leveraging crowdsourcing, big data and cloud computing technologies. **Activities:** leader of cloud architecture design and development team.

Goal: increase the resilience of citizens and assets to natural disasters through the use of mobile data, geospatial data and social network sentiment analysis.

Activities: support to project management and coordination. Privacy and Security Manager. Leader of Work Package 5 "Service Oriented Architecture".

Intellego

Goal: valorisation of the big amount of data generated from the National Education Evaluation Platform (Sistema Nazionale di Valutazione - MIUR) in order to apply Data Analytics techniques for the evaluation of the performances of the national education system.

Activities: Technical Manager, leader of Proof of the Concept.

iScint
Internal project

Goal: early detection of atmospheric scintillation events occurring at equatorial and Antarctic regions to reduce the impact on GPS navigation systems.

Activities: Machine learning algorithms (decision trees, random forest, support vector machines and neural networks) and models implementation

GHOST
Galileo Enhancement as
Booster of the Smart CiTies

Goal: Design and validation of a GALILEO-based intelligent system for public vehicles and new cross-functional applications for city infrastructures maintenance.

Activities: Leader of Work Package "Needs analysis & system requirements". Management of technical activities related to the mobile application development for the collection of urban data.

FLOODIS
Floods management and
forecast service

Goal: Design and development of cloud based services for the management of geo-located data in case of floods emergency.

Activities: support to project management and coordination. Design and development of an EGNOS/EDAS augmentation module in cloud-computing.

iDea
Innovative Diesel Engine
Application

Goal: Design and development of an innovative Diesel Engine compliant with future CO2 emission regulations and which could be integrated in a multi-modal hybrid architecture

Activities: coordination of technical activities. User needs and requirements analysis and architectural design of cloud based service for the fruition of SBAS positioning augmentation information from vehicles on-board units.

PROSA
Professional Software
Receiver for Secure
Application

Goal: GPS/Galileo Software Receivers design and development.

Activities: Algorithms design and development

Thales DGPS

Goal: Design and development of a Ground Based Augmentation System software

Activities: Algorithms design and development

GAIN
Galileo for Interactive driving

Goal:

Activities: Supervision of technical activities. Analysis, test and validation of satellite navigation solutions for road applications based on EGNOS/EDAS.

SMAT-F2

Goal: Monitoring and control of urban, traffic, crops, pollution and also emergency situations like floods, fires and landslides by the use of the Unmanned Aerial Vehicles (UAVs)

Activities: design and configuration of data-grab systems based on low-cost ARM platforms..

ROSA-ROSSA
Research and Operational
Satellite and Software
Activities

Goal: increase the knowledge of climate change through the uses of radio occultation techniques to perform the vertical profile of atmospheric temperature, pressure and humidity.

Activities: design and development of a 3-tier Java web application, for the monitoring and management of data through GPS atmospheric limb sounding.

WebDMS
Internal project

Goal: provide a management tool for scientific research laboratories.

Activities: Design and development of a 3-tier Java based web application for the monitoring and management of scientific laboratory data activities.

NFC-Wallet
Internal project

Goal: develop an electronic wallet for micro-payments exploiting mobile device equipped with near field communication antennas.

Activities: NFC-based mobile payments application development

Feb. 2007 – Apr 2007

Position: **Researcher - Internship**

Employer: **Telecom Italia Lab (TILab)**

Activity: Design and development of a content guide tool for the fruition of mobile multimedia services

Nov. 2005 – Nov. 2006

Position: **Consultant**

Employer: **While 1 s.r.l.**

Activity: Software analysis and design

EDUCATION AND TRAINING

2015 BIGDIVE 4th Edition - Full-stack Data Science Training (Machine Learning, Network Analysis, Hadoop and Data Visualization).

Final project: design and development of a data analytics tool for Online Frauds Detection. Machine learning techniques and advanced data visualization tools have been used to build a Decision Support System (DSS).

2014 Tackling the Challenges of Big Data – MIT Professional Education

MIT Online course focused on the state-of-the-art topics in Big Data, looking at data collection, data storage and processing, extracting structured data from unstructured data, systems issues, analytics, visualization, and a range of applications.

2003 - 2007 M.Sc. in Computer Science, 107/110, Università di Torino.

Thesis Title: "A system for the extraction of semantically relevant fragments from television news textual transcriptions" (Information retrieval, Natural Language Processing, Java).

2000 - 2003 B.Sc. in Computer Science, 102/110, Università di Torino.

Thesis Title: "Design and development of a multi-platform high performance decoder for BTFTP protocol" (IPV6, DVB-T, C/C++, Java, DVB-T).

SKILLS AND COMPETENCES

Languages: **Italian (mother tongue)**
English – Full professional proficiency

Social skills: Team working, good communication skills. Used to work in multicultural and international environment. Able to support technical conference and phone call in English.

Organisational skills: Ability to coordinate effectively work contributions from several different parties.
Good attitude and proficiency in project management and R&D activities.
Able to establish and maintain effective working relationship.
Able to work on different tasks in the same period. Good problem solving attitude.

Technical skills: Big data, Data Analytics, Data Visualization, Cloud computing, mobile solutions, web services, navigation technologies, python, R, MongoDB, Microsoft Azure, C/C++. Software development, good coding skills. Good Technical and scientific writing skills.

Computer skills: Microsoft Project, Microsoft Office, Microsoft Visio, Photoshop.

Awards and acknowledgements: On March 2013, as a former member of NavSAS Research Lab, ESA awarded me a certificate for being part of the first 50 users of the Galileo System in the world.
Best Poster Award at 7th IEEE/ACM International Conference on Utility and Cloud Computing.
Member of the Program Committee for the Data Science for Emergency Management workshop at IEEE BigData 2017.

- Relevant publications:
- Favenza A, Farasin A., Linty N., Dosis F, "A Machine Learning Approach to GNSS Scintillation Detection: Automatic Soft Inspection of the Events", accepted at 30th International Technical Meeting of The Satellite Division of the Institute of Navigation (ION GNSS+), Portland, Oregon, USA, 09/2017.
 - Favenza A., Linty N., Dosis F., "Exploiting Standardized Metadata for GNSS SDR Remote Processing: A Case Study", 29th International Technical Meeting of The Satellite Division of the Institute of Navigation (ION GNSS+), Portland, Oregon, USA, 09/2016.
 - Favenza, A., C. Rossi, D. Brevi, G. Gavilanes Castillo, and G. Marucco, "IDEA: a location-based system for innovative hybrid diesel engine applications", 22nd ITS World Congress, Bordeaux, France, 10/2015.
 - Favenza, A., C. Rossi, M. Pasin, and F. Dominici, "A Cloud-based Approach to GNSS Augmentation for Navigation Services", 7th IEEE/ACM International Conference on Utility and Cloud Computing (UCC), London, United Kingdom, 12/2014.
 - Favenza, A., M. Pasin, G. Marucco, J. Huang, and F. Scullino, "Challenges and Opportunities of EGNOS/EDAS Augmentation and Integrity Computation in the Cloud", 27th International Technical Meeting of The Satellite Division of the Institute of Navigation (ION GNSS+), Tampa, Florida, USA, pp. 3343-3351, 09/2014.
 - Favenza, A., M. Cataldi, M. L. Sapino, and A. Messina, "Topic Development Based Refinement of Audio-Segmented Television News", Proceedings of the 13th international conference on Natural Language and Information Systems: Applications of Natural Language to Information Systems: Springer Verlag Berlin, pp. 226–232, 2008.

Referring to the European Commission laws (D.lgs. Privacy n. 196/03), my personal data can be inserted in data banks for personnel recruitment or used for specific communications related to recruitment.