Charalampos Karvelis

Nationality: Greek 📞 (+30) 6944397425 **Date of birth:** 19/08/1980 **Gender:** Male

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WORK EXPERIENCE

Data processing engineer
EUMETSAT, SEP Department [09/2019 – Current]

Address: Darmstadt (Germany)
City: Darmstadt
Country: Germany

Data processing engineer for the Jason-CS programme.
-Participate in the activities in the area of data processing as required by the program;
-Data processing system level engineering activities;
-Contribute to investigation and improvements of the relevant sub-system and facility components;
-Contribute to the coherency-checking of requirements with algorithms, product format, and file format specifications;
-Contribute to the definition and review of ICDs between data processing elements and other GS functions;
-Contribute to the definition and review of Testing and Operational scenarios for the Sentinel-6 data processing elements;
-Contribute to the definition and review of data processing concepts and tradeoffs to enhance requirements understanding and justification;
-Contribute to the requirements engineering in DOORS for Sentinel-6 data processing systems requirements;
-Contribute to the setup and installation of Sentinel-6 data processing elements in the EUMETSAT operational environment;
-Advising on technical solutions envisaged in Sentinel-6 data processing systems and reviewing documentation to confirm its compliance with the requirements;
-Software, Hardware configuration deployment and verification activities (installation, software patches, testing utilities)
-Contribute to verifying correct performance/behavior of new s/w and patches including the product's format;
-Perform data checks and comparisons between the different formats for the same products.
-Participate in the management of the Sentinel-6 data processing systems requirements baseline for data processing elements;
-Participate in the testing, integration, and acceptance of Sentinel-6 data processing elements;
-Contribute to the organization and preparation of the Sentinel-6 data processing systems test campaign, including the TRR, TRB, and VCB meetings;
-Coordinate the Data Processing services with other Service Providers;
-Support Anomalies investigation (investigation, identification, and fixing of application software problems, investigation, and implementation of new software requirements;
-Contribute to the setup of a Test Suite within the Automated Test Environment for individual processors and for the end-2-end data processing system;
-Contribute to documentation activities;
-Participate in the interaction with relevant partner organizations;
-Provide additional engineering contributions to the other EUM teams;
-Contribute to the training of the members of the Data Processing Competence Area on data processing aspects.
Data processing engineer for the EARS programme.
-Support EARS interfaces and control data flow;
-Support virtualization activities of EARS1.5;
-Support implementation of Monitoring on MEOS systems;
-Contribute to the prototyping activities for the EARS-NG data processing system;
-Implementation of processing data flows within the EARS-NG data processing system;
-Support Anomalies investigation.

Head of Remote Sensing Department - Data Processing Engineer
Hellenic National Meteorological Service, Division of Support and Operations [09/2016 – 09/2019]

Address: Athens (Greece)

City: Athens
Country: Greece

Head of the Remote Sensing Department (team of 7 people),
-Management (supervise, maintenance, operational support 24/7, data processing, data distribution, verification, validation, calibration, anomaly reports and investigation, monitoring, upgrade, procurement specification creation, documentation, systems' evolution) of Hellenic NMS's remote sensing systems (meteorological satellite data, weather radar network, lightning detection network) including the data processing systems.
-Handle issues of EUMETSAT, EUMETNET, WMO, and National Bodies in relation to remote sensing systems.
-Contribute to technical requirements and special terms definition for Hellenic NMS's Remote Sensing Systems including the data processing systems.
-Provide software and support to Hellenic Air Force for the processing of Remote Sensing data.
-Develop guidelines and methods for the full exploitation of remote sensing data and products.
-Contribute to the design of the HNMS's weather radar network.
-Coordinate engineering activities for the maintenance and evolution of the operational remote sensing systems.
-Coordinate the IV&V activities of individual remote sensing software into the data processing and distribution large scale systems.
-Elaborate the operational instructions for remote sensing systems in cooperation with the related departments.
-Advising about costing and pricing of meteorological remote sensing systems.
National delegate in the Council, STG, J-STG-AFG, AFG meetings of EUMETSAT,
Elected member of the Scientific and Technical Committee of HNMS (composed of three members).
Senior engineer for EARS Station in Athens and key Contact between HNMS and EUMETSAT.
-Provide operational support to the station and develop-design Hellenic NMS's dissemination system and contribute to the usage of EARS products.
Head of the team responsible for technical requirements for systems' follow-on-support for Hellenic NMS Weather Radar Network.
EUMETSAT's MTG Preparation User Group member.
Professor in Military Academy of Hellenic Air Force and Meteorological School of Hellenic NMS.
-Provide lessons and lectures in Remote Sensing Systems, Meteorology and Mathematics.
Provide lectures in the University of Athens (Department of Physics) for satellite products.

System Engineer - Operational Forecaster
Hellenic National Meteorological Service/Meteorological Office of Elefsina Base [11/2012 – 08/2016]

Address: Athens (Greece)
City: Elefsis
Country: Greece

System engineering supporting Meteorological Office's data processing systems, applications, and telecommunication types of equipment, -Support to EUMETCast, MetView, MetShell, and other types of Data Processing and circulation S/W.
-Maintenance, operational support 24/7, data processing, data distribution, IV&V, anomaly investigation, H//W procurement, specification creation, documentation, systems' evolution.
-Managing and monitoring all installed systems and infrastructure.
-Ensuring the highest levels of systems and infrastructure availability.
Officer of Elefsina Air Base Meteorological Office, responsible for operational monitoring (24/7)
and forecasting the weather conditions in the Greek territory.
Professor in Military Academy of Hellenic Air Force.
Professor in Meteorological School of Hellenic NMS.

Systems and Data Processing Engineer - Meteorologist
Hellenic National Meteorological Service, Division of Support and Operations [09/2009 – 09/2012]

Address: Athens (Greece)
City: Athens
Country: Greece

Officer of the Remote Sensing department.
-National delegate in the J-STG-AFG, AFG EUMETSAT's Bodies.
-Contribute to engineering activities (maintenance, operational support 24/7, operational documentation, procurement, monitoring, upgrade, anomalies, validation, verification, calibration, evolution) of Hellenic NMS's remote sensing systems including its data processing systems.
-Contribute to the design, development, IV&V, documentation, and maintenance of specific tools/scripts
-Contribute to the definition and maintenance of the requirements and specifications for existing and new Data Processing systems and their upgrades.

-Support the day-to-day operations and maintenance.
-Anomaly investigation and resolution.
-IV&V of the individual software components into the related data processing systems;
-Contact with external maintenance service providers on behalf of HNMS, setting up and implementing maintenance policies and procedures.
Hellenic NMS's Stuff for EARS Station in Athens.
-Provide operational support to the station
-Contribute to the first upgrade of EUMETSAT's EARS Station in Athens, in 2012.
Responsible for the scientific and technical requirements for the evolution of data processing systems of HNMS regarding remote sensing systems.
Professor in Meteorological School of Hellenic NMS.

Meteorologist, Data Processing Engineer
Hellenic National Meteorological Service [05/2009 – 05/2010]

Address: Athens (Greece)

City: Athens

Country: Greece

Validation and Forecasting Methods Department Officer.
-Reprocessing earth observation data for scientific validation needs.
-Responsible for the definition and maintenance of the requirements and specifications for validation and forecasting methods.
-Preparing and providing support for the day-to-day operations and maintenance.
-Support the weather certification preparation by reprocessing archive remote sensing data.
-Design of upgrades and enhancements for the data reprocessing system.
-Support the integration of individual software components into the related data processing systems.
-Study the evolution of the Global Weather Observation System regarding the aspects of WMO.

Operational Forecaster - System Engineer
Hellenic Natioanal Meteorological Service/Araxos Base Meteorological Office [07/2005 – 08/2009]

Address: Patra (Greece)

City: Patra

Country: Greece

Officer in Araxos Air Base Meteorological Office, responsible for operational monitoring (24/7)
and forecasting the weather conditions in the Greek territory.
System engineer responsible for the maintenance of telecommunication equipment and data processing/ distribution systems of the Meteorological Office.
Computer Security Officer of the Meteorological Office.

Meteorologist
Hellenic National Meteorology Service [05/2003 – 06/2005]

Address: Athens (Greece)

City: Athens

Country: Greece

Officer of the National Forecast Center of HNMS.

Information Assistance
Hellenic National Telecommunication Organization [05/1998 – 2002]

Address: Patra (Greece)

City: Patra

Country: Greece

-Information Department Stuff, responsible to provide general information and support to organization's customers.

EDUCATION AND TRAINING

Certificate in Remote Sensing (International School on Applications with the Newest Multi-Spectral Environmental Satellites)
EUMETSAT - C.N.M.C.A./Italian Met Service [10/2017 – 10/2017]

Address: Bracciano (Italy)

Certificate in Management and Staff
Hellenic Air Force, Military School of Management and Staff [03/2016 – 08/2016]

Address: Athens (Greece)
Level in EQF: EQF level 6

MSc Degree in Environmental Physics
University of Athens, Department of Physics [10/2013 – 11/2015]

Address: Athens (Greece)
Level in EQF: EQF level 7

Certificate in Remote Sensing
Hellenic National Meteorological Service, Meteorological School, Remote Sensing School [05/2009 – 05/2009]

Address: Athens (Greece)

Degree in Meteorology
Hellenic National Meteorological Service, Meteorological School [07/2004 – 09/2005]

Address: Athens (Greece)
Level in EQF: EQF level 6

MSc Degree in Mathematics of Computers and Decision Making
University of Patras, Department of Computer Engineering and Informatics and the Department of Math [10/2002 – 10/2004]

Address: Patra (Greece)
Level in EQF: EQF level 7

Degree in Mathematics
University of Patras, Department of Mathematics [10/1998 – 09/2002]

Address: Patra (Greece)
Field(s) of study: Mathematics and statistics
Level in EQF: EQF level 6

LANGUAGE SKILLS

Mother tongue(s): **Greek**

Other language(s):

English	**German**
LISTENING C2 **READING** C2 **WRITING** C2	**LISTENING** A2 **READING** A2 **WRITING** A2
SPOKEN PRODUCTION C2 **SPOKEN INTERACTION** C2	**SPOKEN PRODUCTION** A2 **SPOKEN INTERACTION** A2

DIGITAL SKILLS

My Digital Skills

Systems

Excellent computer analysis and administration skills. / Excellent knowledge in Docker / Excellent knowledge in major Linux distributions / Good knowledge of Network application protocols (ftp, sftp, ssh, http(s), etc)

Programming - Scripting

Excellent Knowledge of Python and Bash / Programmin language PYTHON / Scripting in Python and/or Bash / Good ability to Matlab / Excellent knowledge of Earth Observation data

Earth Observesion

ECMWF Reanalysis (ERA-Interim, ERA-5) / Meteorological data manipulation (grib, netCDF, bufr, HDF) / Data formats: HDF5, NetCDF, plain Binary, GRIB, GRIB2 / ecCodes, Metview/Magics, ecFlow (ECMWF packages) / Knowledge of geophysical data formats / Medium knowledge of JavaScript HTML CSS / Meteorological Weather Analysis (NCL, GrADS, McIDAS, Pytroll, MEOS, SNAP, etc)

Automation - IV&V

CICD tools(Jenkins GitLab CI) / Basic knowledge in automation (Ansible) / Good knowledge of Jenkins

Versioning

Excellent Knowledge of GIT and SVN

Other

Communication and Documentation Tools (JIRA, confluence, Redmine, etc)) / Rational DOORS / Microsoft Office: Word, Excel, Access, Power Point, Outlook.

PUBLICATIONS

Publications

-Karvelis C. et. al. 2018: "Optimizing Rainfall Estimates from HNMS Weather Radar Data". COMECAP,2018, Alexandroupoli, October 2018 (Publish in the International Conference COMECAP 2018 a paper related with data processing system).

-Karvelis C. et. al. 2016: "Comparison of the synoptic environment and the mechanisms of two cases of surface cyclogenesis in Greek area associated to strong low level cold surges". COMECAP 2016, Thessaloniki, September 2016.

-Hans Peter Roesli, Charalampos Karvelis 2018, «Long – range Dust outbreak over Africa and Greece», EUMETSAT web page.

RECOMMENDATIONS

Ex. Hellenic NMS's Director General
Name: Athanasios Gatopoulos
Phone number: (+30) 9699000

Hellenic NMS Director General letter of recommendation. Please see attached letter

HONOURS AND AWARDS

Honours and awards

Praise Graduation with Distinction from University of Athens, Department of Physics, Nov 2016,

Praise Graduation with Distinction from University of Patras, Department of Computer Engineering and Informatics and the Department of Mathematics, Nov 2004,

Praise Graduation with Distinction from University of Patras, Department of Mathematics, Nov 2002,

Scholarship for master studies in "Mathematics", Sep 2001, State Scholarships Foundation

Scholarship for master studies in "Mathematics", Sep 1999, State Scholarships Foundation

Scholarship for master studies in "Mathematics", Sep 1998, State Scholarships Foundation

ORGANISATIONAL SKILLS

Organisational skills

-Responsible for effective management of remote sensing budget in Hellenic NMS.

-Leadership capabilities and strong analytical skills.

-Excellent interpersonal and communication skills.

-Excellent organizational skills gained as head of Remote Sensing Department and EUMETSAT meeting groups delegation.

-Excellent team-leading skills, creating and keeping deadlines, decision-making, teamwork, and team management.

-Self-motivation, and ability to work efficiently with minimal supervision.

-Flexibility when facing changing organizational priorities and user needs.

-Jul. 2003 Awarding the rank of Second Lieutenant

-Sep. 2006 Awarding the rank of Lieutenant

-Sep. 2010 Awarding the rank of Captain

-Sep. 2016 Awarding the rank of Major

COMMUNICATION AND INTERPERSONAL SKILLS

Communication and interpersonal skills

-Excellent communication skills gained through particapating in various forums, forecaster role and participation in discussions and meetings. Easily convey information via phone, email and in person.

-Experience in working in an international environment.

-Ability to brainstorm and to share ideas-opinions with the aim of problem solving.

-Team player. I enjoy the opportunity to be part of a team

-Experience in leading/coordinate engineering team gained from my role as Head of Remote Sensing Department.

- Confident, articulate and professional speaking ability.

- Speaking in public to groups or via electronic media.

- Excellent presentation skills

JOB-RELATED SKILLS

Job-related skills

-Excellent knowledge of Geophysical Products and Formats, as an ex-weather forecaster and current data processing engineer in the area.

-Proven experience in engineering of Data Processing systems following well established processes,

covering the full development lifecycle and relevant technical standards.

-Proven experience in software development lifecycles and change control processes.

-Proven experience in preparation of requirements, design, interfaces and testing documentation for data

processing systems considering the systems engineering aspects of data processing management and data

provision.

-Proven experience in requirements engineering process, including relation between requirements, ICDs,

design and testing documentation.

-Proven experience in working in multi-complex environments with different teams.

-Proven experience in IV&V activities of Data Processing Systems.

-Proven experience in providing support and technical advice on data processing systems.

-Proven experience in the management/coordination of engineering teams.

-Proven experience in managing contracts.

-Proven ability to communicate with and understand the complex requirements of users in the use of large volumes of data and software

-Proven ability to work under pressure and interact with demanding users.

-Proven ability to write accurate and consistent technical documentation

-Proven knowledge of ECSS and CCSDS standards.

-Proven experience with L0/L1/L2 processing software for Earth Observation missions,

-Proven experience in weather products and meteorological formats and data.

-Proven experience in weather tools and software not only as remote sensing engineer but also as end-user.

OTHER SKILLS

Other skills

-first aid: certified in providing first aid, as part of my fire fighter training.

-music: playing mandolin for the Mandolin Orchestra of Patras.