

Charles Troupin · Data analyst & modeler · Engineer in Physics (2005) · PhD in Oceanography (2011)

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Recent employments

2017/01–	Researcher University of Liège (ULiège) · Liège, Belgium Development of a user interface for data interpolation on a cloud system and implementation of <i>Web Processing Service</i>	Python Leaflet Open data Julia Spatial data analysis Jupyter-notebooks User training OGC standards
2014/03– 2017/01	Head of Data Centre facility Balearic Islands Coastal Ocean Observing and Forecasting System (SOCIB) · Palma de Mallorca, Spain	Team leading Data visualisation Scientific outreach Project management Recruitment Big data Data analysis Quality control Training
2013/03– 2014/03	Post-doctoral researcher Mediterranean Institute for Advanced Studies (IMEDEA) · Esporles, Spain <i>Combined analysis of in situ, altimetry and HF radar data</i>	Data analysis Matlab Python Signal processing Satellite image processing
2010/10– 2013/02	Research assistant University of Liège (ULg) · Liège, Belgium <i>Reconstruction of incomplete satellite images in the North Sea using model forecasts</i>	Matlab Multivariate statistics Numerical modelling Teaching Data analysis
2006/10– 2010/09	PhD Candidate GeoHydrodynamics and Environment Research (GHER) · University of Liège, Belgium <i>Study of the Cape Ghir filament using data analysis and numerical modelling</i>	Numerical modelling Fortran Oceanographic campaign Spatial interpolation Tcl/Tk Process-oriented modelling Bash Version control system LaTeX

Skills and Competencies

Technical skills —	Author or co-author of more than 20 articles on data analysis in international, peer-reviewed journals
Data analytics	Quality control · Filtering · Data mining · Statistics · Predictive modelling · Format conversion
Engineering	Fluid mechanics · Aerodynamics · Finite-element method · Atmospheric physics · Numerical simulations · Internal product development · Signal processing · Optimization · High-performance computing
Oceanography	Spatial interpolation · Time-series analysis · Principal component analysis · Database management · Satellite image processing · Singular events
IT skills —	
O.S.	Preference with Linux (Mint, Ubuntu) · Experience with Mac OS X Lion, Microsoft Windows
Programming	Python: general (logging, virtualenv, unittest, regex), data analysis (numpy, scipy, pandas), geo-location (geopy, geoip, tweepy), data formats (json, netCDF4, csv, gpx, shapefiles), visualisation (bokeh, matplotlib, folium, plotly) Matlab/Octave: data reading and processing, plotting, geostatistics, interpolation Bash scripting: awk, cronjob, wget, ssh, ncftp Julia: interpolation, plotting, data I/O Other: Fortran 77, 90, Tcl/Tk, JavaScript (Leaflet, Highcharts), MySQL, PostgreSQL
NetCDF	nco, cdo, ncdump, ESMF (regridding), OPeNDAP, ncview; libraries in Python, Julia, Matlab and Fortran
Web	HTML, CSS, markdown, AngularJS, D3, javascript, Jekyll, wordpress, Dokuwiki, Mediawiki
Image processing	Darktable, GIMP, ImageMagick, Inkscape, ffmpeg
Other tools	Version control (SVN, git) · LaTeX (documents, posters, presentations, leaflet) · Ocean-related software: Ocean Data View, DIVA (spatial interpolation), DINEOF (spatio-temporal interpolation of satellite images)
Soft skills —	
Management	Team leading · Planning and monitoring · Scientific and technical reporting · Adhering to deadlines · Writing specification documents · Applications for grants and supports
Communication	Presentations in international conferences · Social networking · User training · Design of posters and leaflets
Organisation	Co-organiser of the 48th International Liège Colloquium on Ocean Dynamics in 2016 (200 participants from 40 countries) · Main organiser of several editions of the Diva workshop from 2007 to 2013
Languages	Native speaker in French · Daily use of Spanish, English and Catalan in the most recent working environments · Basic level in German

Personal interests

Photography · Trail and mountain running · Map editing (OpenStreetMap) · Travel blogging · Road cycling · UrbEx · Coaching