

Jean-Paul Kasprzyk

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Date of birth : 85-02-21

Nationality : belgian

Marital status : single

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Curriculum Vitae

PROFESSIONAL EXPERIENCE

Since October 2019 University of Liege (Geomatics Unit) – Lecturer
Theoretical and practical teaching in these fields:

- GIS
- Spatial databases
- Web mapping

Since May 2017 University of Liege (Geomatics Unit) – Researcher

Research activities

Participation in national and international applied geomatics research projects in various fields (oceanography, archaeology, cities digital twins, Earth observation):

- Design and implementation of GIS.
- Supervision of researchers.

Examples of projects:

- SPW - AlphaGround: high precision cartography for Advanced Driver Assistance Systems (ADAS)
- ULiège – CERBERE: CityJSON 3D data management for urban digital twins
- ESA - EO4SIBS (Earth Observation Data for Science and Innovation in the Black Sea): GIS for the dissemination of oceanographic data on the web
- SPW - Ecocity Tools: 3D GIS for establishing environmental and energy diagnoses at the neighborhood scale
- SPHERES - WEFFEM: web platform for disseminating meteorological data from the MAR forecasting model.
- SPW - EO Regions!: sharing of Earth observation data and processing in a web market place
- Coudenberg Palace: Archaeological Information System based on 3D point clouds

Academic activities

- Supervision of students for their master thesis (promoter, reader) and GIS projects
- Business intelligence seminars for master students in geography
- Member of doctoral thesis jury

Since November 2015 University of Liege (« Service d'Etude en Géographie Economique Fondamentale et Appliquée », SEGEFA) – Researcher

Research activities

Participation in national and international applied geomatics research projects in different fields (economic geography, urban security, environment):

- Preparation of proposals
- Project management and coordination
- Design, implementation and maintenance of GIS

Examples of projects:

- SPI: risk analysis for emergency services in the Province of Liège
- Interreg – VISES (“Valorisation de l'Impact Social de l'Entrepreneuriat Social”): GIS for the creation, archiving, analysis and dissemination of French and Belgian socio-economic data through the web.
- SIAMU (Fire and Emergency Medical Aid Service of the Brussels-Capital Region): design and development of the OSCAR tool (GIS and Cartographic Tool for Risk Analysis)
- SPW - LOGIC 2.0: GIS for Localization and Management of Commercial Installations
- Vinçotte: GIS for the automatic generation of AutoCAD plans relating to a drilling campaign of a former industrial site
- SEGEFA: GIS for the creation, storage, analysis and dissemination of data related to commercial surveys in the field

January 2009 to September 2015 University of Liege (Geomatics Unit) – Assistant

Academic activities

Practical teaching for the following courses:

- Introduction to geography (geomatics part)
- Earth Sciences (geomatics part)
- Cartography and GIS
- Cartography complements
- Databases
- GIS
- Support of student master thesis

Other activities

- Organization of the “Crime Mapping” workshop of the SAGEO 12 conference (Liège)
- Secondary education day: “Behind the scenes of the experts” workshop

- Collaboration in the RACE project ("Rapid Assessment of the Marine Coastal Environment")
- Collaboration in the "Digital Atlas of Belgium" project

October 2008 to December 2008 University of Liege (Geomatics Unit) – Attached to the General Directorate of Local Authorities (Walloon Region)

- PICVerts project: digitization of cartographic data related to green municipal routes
- Evaluation of the INSPIRE directive

UNIVERSITY EDUCATION

2009 to 2015 PhD in sciences – University of Liege

Thesis under the supervision of Professor Jean-Paul Donnay "Integration of spatial continuity in the multidimensional structure of a data warehouse - SOLAP raster"

2009 to 2015 Doctoral training in science – University of Liege

- Internship at the federal police (DJO/MAC)
- SOLAP training at Laval University (Quebec)
- IFRES educational training
- Participation in various conferences: SAGEO, Montpellier-Sherbrooke meetings, AAG Annual meeting, Assises du GDR MAGIS

2003 à 2008 Master in geographical sciences (geomatics and geometrology option) – University of Liège: distinction

Master thesis under the direction of Professor Roland Billen "Development of 3D geocoding for building modelling": great distinction

IT SKILLS

GIS ArcGIS, PostGIS, QGIS, OpenJump, OpenLayers, Leaflet, Turf.js, MapServer, GeoServer, GeoMondrian, GeoKettle, Ilwis, Idrisi, MapViewer, AutoCad, Standards OGC (WMS, WFS, SOS, Sensorthings API), standard NetCDF, Elyx 3D, Potree, Advanced Driver-Assistance Systems

Databases PostGreSQL, MySQL, Mondrian, MongoDB, SQL Server, 3DCityDB

Langages SQL, MDX, JavaScript, NodeJS, PHP, HTML, CSS, Java, Perl, VRML, Python, C++

Environnements Windows, Mac OS, Linux (Ubuntu, CentOS)

Other Microsoft Office, OpenOffice, Photoshop, Ableton Live, Audacity

LANGUAGES

French Native Language

English Good knowledge

Dutch Basic knowledge

INTERESTS

Music Guitar player, singer, composer

- Performances in various belgian festivals: Dour, les Francfolies de Spa, les Ardentes, Brussels Summer Festival, Couleur Café
- International tours : England, France, Luxembourg, Switzerland, Canada, USA.

Sport Swimming, cycling, judo (amateur level)

PUBLICATIONS PRINCIPALES

M. Grégoire, A. Alvera Azcarate, L. Buga, A. Capet, S. Constantin, F. D'ortenzio, D. Doxaran et al. "Monitoring Black Sea environmental changes from space: New products for altimetry, ocean colour and salinity. Potentialities and requirements for a dedicated in-situ observing system." *Frontiers in Marine Science*, 9 (26 January 2023). doi:10.3389/fmars.2022.998970

Kasprzyk, Jean-Paul, and Guénaël Devillet. 2021. "A Data Cube Metamodel for Geographic Analysis Involving Heterogeneous Dimensions" *ISPRS International Journal of Geo-Information* 10, no. 2: 87. <https://doi.org/10.3390/ijgi10020087>

Poux, Florent, Roland Billen, Jean-Paul Kasprzyk, Pierre-Henri Lefebvre, and Pierre Hallot. 2020. "A Built Heritage Information System Based on Point Cloud Data: HIS-PC" *ISPRS International Journal of Geo-Information* 9, no. 10: 588. <https://doi.org/10.3390/ijgi9100588>

A. Holemans, J.-P. Kasprzyk, and J.-P. Donnay. "Coupling an Unstructured NoSQL Database with a Geographic Information System." In *GEOProcessing 2018. The Tenth International Conference on Advanced Geographic Information* edited by C.-P. Rückemann and Y. Doytsheer, 23-28. 2018.

Kasprzyk J. P., Donnay J. P. (2017). A Raster SOLAP Designed for the Emergency Services of Brussels Agglomeration. *CLOUD COMPUTING 2017 - The Eighth International Conference on Cloud Computing, GRIDs, and Virtualization*. Février 2017. Athènes. pp. 32-38. <http://hdl.handle.net/2268/208235>

Kasprzyk J. P., Donnay J. P. (2016). A Raster SOLAP for the Visualization of Crime Data Fields. *Proceedings of The Eighth International Conference on Advanced Geographic Information Systems, Applications, and Services (GEOProcessing 2016)*. Avril 2016. Venise. pp 109-117. <http://hdl.handle.net/2268/196272>

Kasprzyk J. P. (2015). *Intégration de la continuité spatiale dans la structure multidimensionnelle d'un entrepôt de données – SOLAP raster*. Université de Liège, Liège. <http://hdl.handle.net/2268/182360>

Kasprzyk J. P. (2014). Prototype SOLAP appliqué sur des champs continus en mode raster. Analyse de hotspots de criminalité. *SAGEO 2014 : Atelier Demo*. 24 novembre. Grenoble. <http://hdl.handle.net/2268/174582>

Kasprzyk J. P., Trotta M., Broxham K., Donnay J. P. (2012). Reconstitution of the journeys to crime and location of their origin in the context of a crime series. A raster solution for a real case study. In M., Leitner (Ed.) *Crime Modeling and Mapping Using Geospatial Technologies*. New York: John Wiley & Sons. <http://hdl.handle.net/2268/134429>

Kasprzyk J. P., Billen R. (2009). A Geocodification for 3D objects terrestrial surveys. In T., Neutens, M. De Ryck, P. De Maeyer (Eds.). *Proceedings of the 4th International Workshop on 3D Geo-information*. 5 Novembre. Gand. <http://hdl.handle.net/2268/27987>

Liste exhaustive des publications: <https://tinyurl.com/y28pg5ls>