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Rémi CURA | Doctor, Engineer

Status: PhD. in Computer Science, freelance training and consulting
Research fields: Computer vision, Computer graphics, Procedural modelling, Remote sensing, Point cloud
Prefers: Graphical/visual, Model-oriented, Big data, Long-term working solution
Computer Skills: C/C++, Python, (PLpg-)SQL, Git, Latex, JavaScript
Activities: *Certified cabinet maker*, travels/trekking (*one year around the world 2011*), bouldering

Work Experience

Paris School of Economics, Belle Époque project, France – Post-doctorate
08.2016 – 02.2017

Historical (1800-) collaborative geocoding for Paris. Collaborative editing and knowledge extraction from historical map, fuzzy modeling of time and addresses, interactive web edit.
Research topics: computer vision, databases, fuzzy modelling, on-line collaborative editing
Key achievements: Coherent, efficient, extendable solutions for challenging data (uncertainty).

Thales TTS/IGN (MATIS, COGIT), France – PhD candidate, Thesis in industrial context
04.2013 – 09.2016

Inverse procedural street modelling: from interactive to automatic reconstruction. Complete workflow from management of massive amount of point clouds to automated street modelling at large scale (Paris), and collaborative (database-based) editing of the model. Two research labs and a dev team for a multi-company/multi-disciplinary project. Emphasize on actual usability.
Research topics: procedural/grammar modelling, image processing, point cloud management, big data, relational database, collaborative editing, numerical optimization
Key achievements: Both prototypes (*StreetGen*, *PointCloud Server*) are in industrial use today. Dozens of small side-projects with colleagues. *Several publications*/conf. including one awarded.

Thales TTS, France – Master thesis: Analysis of Open Data Paris dataset, data mining (association rules). POC.
03.2012-09.2012

Ozone, France – new computer network (hardware), choice of a CRM adapted to the company
07.2009 – 09.2009

Teaching / Training

Oslandia, France – Freelance consulting and training
05.2017 – Now

Creating *a new formation* for Oslandia from scratch: Open source tools for point clouds. Theory and context, main tools (CloudCompare, Meshlab, PCL, PDAL), experiential approach.
Key achievements: Tailored for each client (needs, datasets, exercises). Very positive feedbacks.

Lavoisier School, France – Math examiner for preparatory class (undergraduate)
09.2008 – 06.2016

Education

PhD in Computer Science (spec. in geographical information) – Université Paris-Est, France	04.2013 – 09.2016
Master degree in Computer Science (Engineer degree) - Telecom ParisTech	2007 – 2012

Publications

International Journal :

> **Cura, R.**, J. Perret, N. Paparoditis (2017): <u>A scalable and multi-purpose point cloud server (PCS) for easier and faster point cloud data management and processing</u>, ISPRS Journal of Photogrammetry and Remote Sensing, Volume 127, pp.39-56

International conferences :

> (Best student paper award, session GeoBigData)
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> **Cura, R.**, J. Perret, N. Paparoditis (2015): <u>Point Cloud Server (PCS): point clouds in-base management and processing</u>, ISPRS Annals of Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume II-3/W5, pp.531--539. ISPRS Geospatial Week 2015, La grande Motte, France.
>
> **Cura, R.**, J. Perret, N. Paparoditis (2015): <u>StreetGen: In-base procedural-based road generation</u>, ISPRS Annals of Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume II-3/W5, pp.409--416. ISPRS Geospatial Week 2015, La grande Motte, France.

Invited speaker :

> **Cura, R.** (2014) <u>A PostgreSQL Server for Point Cloud Storage and Processing</u>. PgDays 2014, Paris.

Open Access publication (not reviewed) :

> **Cura, R.**, J. Perret, N. Paparoditis (2016): <u>Implicit LOD for processing, visualisation and classification in Point Cloud Servers</u>, arxiv.org