

Bruno CONEJO

2nd year Graduate Student - Ecole Des Ponts ParisTech / Analyst Researcher - Caltech
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Summary

I am a result-oriented engineer researcher with excellent analytical and organizational skills. My field of expertise is at the boundary of computer vision and machine learning, where I design, implement and publish in top rank conferences algorithms for stereo-matching and graphical models inference. I have demonstrated the ability to quickly learn, apply knowledge and develop new tools, while timely completing tasks in challenging environments. I utilize leadership, communication and interpersonal skills to build successful work relationship.

Skills

Computer vision	Matlab including GUI & MEX	Research Paper writing
Machine Learning	C++	English & French

Research And Industry Experiences

Ecole Des Ponts ParisTech / Université Paris-Est: LIGM Laboratory

Oct 2013 PhD student

To now I research on Graphical Models for stereo-matching applications:

- Speeding-up inference of MRF/CRF (IbyL framework NIPS-2014),
- Learning the potentials of MRF/CRF (expected 2015),
- Enhancing MRF/CRF formulation for stereo-matching applications (expected 2015).



Ecole des Ponts
ParisTech

California Institute Of Technology (Caltech): GPS Division

Apr 2012 Analyst researcher

To now I research on remote sensing applications for geology:

- Stereo matching based on discrete graphical models (PCV-2014 paper)
- Estimation of topography evolution from LiDAR or DTM time series (AGU-2013 poster),
- Participation in the redaction of proposals.



Caltech

Sagem Defense Securite, Safran Group: International Industrial Company

Jan 2010 - System engineer within a project team of 30 members

Jul 2011 I conducted functional analysis and conception of new periscope products:

- Managed a team of two engineers and interfaced with clients on a weekly basis,
- Analyzed clients needs and expectations,
- Designed functional architecture and wrote the engineering specifications.



Nov 2007 - Lead image processing engineer within a project team of 80 members

Dec 2009 I lead design and development of image processing algorithms for new periscope products:

- Managed a team of three engineers,
- Was responsible for cost control, quality and timely delivery,
- Created and adapted algorithms of panoramic reconstruction and tone mapping.

Education

2012: Master's Degree, *Applied Mathematics* – M.V.A – E.N.S Cachan

Mathematics for machine learning and computer vision



2007: Master's Degree, *Electrical Engineering* – Information Processing Systems – Telecom Bretagne

Mathematics and Physics for Information Technology



Main Publications

NIPS: Inference by learning: Speeding-up graphical model optimization via a coarse-to-fine cascade of pruning classifier. B. Conejo, N. Komodakis, S. Leprince, and J. P. Avouac. In Advances in Neural Information Processing Systems 27, pages 1–9. 2014.

PCV: Fast global stereo matching via energy pyramid minimization. B. Conejo, S. Leprince, F. Ayoub, and J. P. Avouac. ISPRS Ann. Photogramm. Remote Sens. Spatial Inf. Sci., 2014.

AGU: A 2D and 3D registration framework for remote sensing data, B Conejo, S Leprince, F Ayoub, J Avouac, AGU Fall Meeting, 2013.

Referees

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