JÉRÔME CHARTON

Birth date: 20.12.1983 / Nationality: French

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WORK EXPERIENCE

KIST - Center for Bionics team
Post-doc

2015 - Now
Korea Institute of Science and Technology (Seoul) - Korea

· Supervisor: YOUNGJUN KIM.
· Topic: Mesh processing in the context of Virtual Surgical Planning.
· Funding: KRF/NRF (National Research Foundation of Korea https://www.nrf.re.kr/eng/main)

LaBRI (UMR-5800) - Image & Sound research team
PhD Student / Assistant teacher

2011 - 2014
University of Bordeaux - France

· Subject: 3D Acquisition, reconstruction and fast prototyping of discrete surfaces by estimation of shape saliency characteristics.
· Jury members:

Alain BERNARD	University Professor	Examiner
	IRCCyN - École Centrale de Nantes	
Pascal DESBARATS	University Professor	Director
	LaBRI - University of Bordeaux	
Jean-Philippe DOMENGER	University Professor	Examiner
	LaBRI - University of Bordeaux	
Stefka GUEORGUIEVA	Assistant Professor	Co-director
	LaBRI - University of Bordeaux	
Christophe RENAUD	University Professor	Referee
	LISIC - University of Littoral Côte d'Opale	
Mateu SBERT	University Professor	Referee
	IIIA - University of Girona	

· PhD graduation obtained December 16th 2014.

LaBRI Transfert
Research Engineer

2008-2010
University of Bordeaux - France

· **Project Terahertz:** redesign and improvement of an existing software to create QTerahertz. QTerahertz is a software of visualisation of terahertz images. Implementation of a new architecture in collaboration with the laboratory of physics research of Bordeaux (LOMA UMR 5798). Developed in C++/Qt/OpenGL.
· **Project Simbals:** analysis and development of a music recognition software from singing. It uses pitch extraction and sequence comparison algorithms implemented in LaBRI. Developed in Java/C++ uses technology `JNA` and `hibernate` with QtJambi interface.
· **Project Moz'art:** analysis and development of a library and a mosaic creation software according to an innovative process, in collaboration with the company NOVALTESS. Developed in C++/Qt.
· **Project QIse:** Implementation of a Qt-plugin mechanism in an image segmentation software QIse (LaBRI). Comparison of exisiting image libraries, in order to replace the current implementation. Development of new interactive tools for drawing segmentations on 2D images.

Nextraining.net
Software Engineer

2005-2008
75011 Paris - France

· Website development training in finance. Developed in PHP/MySQL. Installation and administration of internal networks using Linux systems. Interaction with customers IT services.

EDUCATION

Master degree in Computer Science

2006 - 2008
University of Bordeaux - France

License degree in Computer Science

2003 - 2006
University of Bordeaux - France

SKILLS

Languages   French (mother tongue), English (fluent)
Software engineer   Design Patterns, UML
Programming Languages C, C++, Java, Python, php, script-shell, C#, Lisp
Operating Systems   Linux, UNIX, Windows
Data base   MySQL, SQLite, Oracle, PostgreSQL
Tools   SVN, Emacs, Eclipse, Visual Studio, Qt

RESEARCH

`International journals`

Boolean operations by a robust, exact, and simple method between two colliding shells. - *J. Charton*, L.H. Kim, Y.J. Kim - Journal of Advanced Mechanical Design, Systems, and Manufacturing, SCIE journal, Japan, Sept. 2017.

3D Boolean operations in virtual surgical planning. - *J. Charton*, M. Laurentjoye, Y.J. Kim - International Journal Computer Aided Radiology and Surgery, July 2017.

Mandibular surgery planning and 3D printed splint design. - M. Laurentjoye, *J. Charton*, P. Desbarats, Michel Montaudon - International Journal of Computer Assisted Radiology and Surgery 9 (Suppl 1): S253–54, 2014.

Anthropological Facial Approximation in Three Dimensions (AFA3D): Computer-Assisted Estimation of the Facial Morphology Using Geometric Morphometrics - P. Guyomarc´h, B. Dutailly., *J. Charton*, F. Santos, P. Desbarats, H. Coqueugniot - Journal Forensic Sciences, 2014.

`National journals`

Orthognathic mandibular osteotomy and condyle positioning: update and innovation - M. Laurentjoye, *J. Charton*, and M.J. Boileau - L'Orthodontie Française 86 (1), pages 73–81, 2015.

`International conferences`

3D Boolean operations in virtual surgical planning. - *J. Charton*, M. Laurentjoye, Y.J. Kim - International Society for Computer Aided Surgery, 2017, Barcelona, Spain.

3D surgical planning and analysis software for orbital fracture reconstruction. - Y.J. Kim, H.A. Kim, H.C. Cho, S.H. Kim, *J. Charton*, D.H. Lee, S.H. Park, W.S. Jeong, J.W. Choi, International Forum on Medical Imaging in Asia, Jan. 2017, Okinawa, Japan.

Boolean operations by a robust, exact, and simple method between two colliding shells. - *J. Charton*, L.H. Kim, Y.J. Kim - Asian Conference on Design and Digital Engineering, 2016, Jeju, Korea.

Mandibular surgery planning and 3D printed splint design. - M. Laurentjoye, *J. Charton*, P.

Desbarats, Michel Montaudon - CARS, 2014, Fukuoka, Japan.

Sinefitting: robust curvature estimation on surface triangulation - *J. Charton*, S. Gueorguieva, P. Desbarats. CGVCVIP, 2013, Praha, Czech Republic.

Statistical facial approximation in 3D with TIVMI using geometric morphometrics - P. Guyomarc´h, J. Martin, *J. Charton*, F. Santos, B. Dutailly. 19th mondial meeting of the International Association of Forensic Sciences (IAFS), 2011, Funchal, Madeira, Portugal.

National conferences

Virtual Surgical Planning and Surgical Guide Design System for Mandibular Reconstruction Surgery - Hanna Kim (김한나), Youngjun Kim (김영준), Hyeoncheol Jo (조현철), *J. Charton*, Deukhui Lee (이득희), Leahyeon Kim (김래현), Sehyeon Park (박세형), Jeongwoo Lee (이정우) - 한국 CDE학회 2017 동계학술대회 Proceedings, Feb. 2017, Seoul, Korea.

Surgical planning simulation software for mandible reconstruction - Hanna Kim (김한나), Youngjun Kim (김영준), Hyeoncheol Jo (조현철), Shim Eungjun (심응준), *J. Charton*, Hyeona Kim (김현아), Deukhui Lee (이득희), Leahyeon Kim (김래현), Sehyeon Park (박세형), Jeongwoo Lee (이정우) - 한국 CDE학회 2016 부문연합학술대회 Proceedings, Aug. 2016, Seoul, Korea.

Ostéotomie mandibulaire : de la planification virtuelle á la chirurgie. A propos d'un guide chirurgical contrôlant l'occlusion et le condyle mandibulaire. - M. Laurentjoye, *J. Charton*, A.S. Ricard, A. Veyret, M.J. Boileau, P. Desbarats, M. Montaudon - 49ème congres de la Socitée francaise de stomatologie, chirurgie maxillo-faciale et chirurgie orale, 2013, Versailles, France.

Conception virtuelle de guides imprimés de positionnement osseux pour la chirurgie des dysmorphoses maxillo-mandibulaires - *J. Charton*, M. Laurentjoye, TIC-Santé, 2012, Bordeaux, France.

Courbures discrètes: outils d'évaluation de formes saillantes sur des maillages - *J. Charton*, S. Gueorguieva, P. Desbarats. AFIG, 2012, Calais, France.

Awards

Post-doctoral award - International Advisory Committee Meeting Center for Bionics, Biomedical Research Institute, KIST - Jury members: William Zev Rymer, M.D./Ph.D. & Russell H. Taylor, Ph.D. - *J. Charton*, Dec. 2016, Seoul, Korea. http://www.unesco.org/new/en/communication-and-information/flagship-project-activities/memory-of-the-world/about-the-programme/international-advisory-committee-iac/

MF Planning: software for virtual surgical planning - Y.J. Kim, H.C. Cho, H.N. Kim, E.J. Shim, *J. Charton*, H.A. Kim, D.H. Lee, L.H. Kim, S.H. Park, G.W. Noh , J.W. Lee. - Ministerial award of "Science, ICT (Information Communication Technology) and future planning" of Korea, Sept. 2016, Seoul, Korea.

Projects

SmithDR (Scientific Multi Imaging Tool Handled by a DAG layeR) is a platform for designing image processing algorithms. These images can be of any kind, from volumes (e.g. CTscan, MRI, Microscan) to surfaces (e.g. laser scanning and marching cube reconstruction). Developed in C++ under GPL licence. http://www.lab327.net/projects/SmithDR/

TEACHING

Introduction to Geometric Modelling   2015-2016
CM-6h - Master 2 - Bio-mechanical engineering   University of Science et Technology - Korea

Geometric Modelling   2014-2015
TA-12h - Master 2 - computer science speciality ISV   University of Bordeaux - France

Using Unix Systems   2014-2015
Lecture-30h - Licence 3 - computer science and management   University of Bordeaux - France

Numeric Image Initiation   2013-2014
TA-12h - License 2 - computer science   University of Bordeaux - France

Programming projects   2013-2014
TA-7h30 - Master 1 - computer science   University of Bordeaux - France

Geometric Modelling   2013-2014
TA-12h - Master 2 - computer science speciality ISV   University of Bordeaux - France

Project management   2013-2014
Lecture-30h/TA-24h - Master 2 - computer science speciality software   PUF - International University
                                                             Hô Chi Minh City - Viêt-nam

Event programming - C#   2012-2013
Lecture-30h - Licence 3 Pro - computer science   PUF - International University
                                                             Hô Chi Minh City - Viêt-nam

Using Unix Systems   2012-2013
Lecture-30h - Licence 3 - computer science and management   University of Bordeaux - France

Geometric Modelling   2012-2013
TA-12h - Master 2 - computer science speciality ISV   University of Bordeaux - France

Programming projects   2012-2013
TA-2h - Master 1 - computer science   University of Bordeaux - France

Advanced Data Base   2011-2012
Lecture-30h - Master 2 - computer science speciality software   PUF - International University
                                                             Hô Chi Minh City - Viêt-nam

Geometric Modelling   2011-2012
TA-12h - Master 2 - computer science - ISV   University of Bordeaux - France

Programming projects   2011-2012
TA-18h - Master 1 - computer science   University of Bordeaux - France

Project of end of studies   2011-2012
TA-6h - Master 2 - computer science   University of Bordeaux - France

Resume

Years/Cat.	2011-12	2012-13	2013-14	2014-15	2015-16	Lecture	TA	Total
Hours	66heta	74heta	85heta	96heta	9heta	124h/186heta	142heta	328heta

ACTIVITIES

Hobbies   Motorbike, Karate, Diving