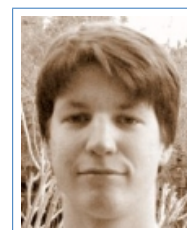


Julien Fayolle

Ph.D. student

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🌐 <http://www.irisa.fr/texmex/people/fayolle>

Education at the university of Rennes 1

- 2008–2009 **M.Sc. Signal, Image, Embedded Systems, Automatics.**
- 2005–2008 **Eng. Electronics, Industrial Informatics, Multimedia Data Processing.**

Research Topics

- General Information Retrieval; Natural Language Processing; Automatic Speech Recognition.
- Specific High-level and robust spoken content analysis; Approaches combining multi-level and reliable information for speech-based multimedia content retrieval.

Research Experience

- October 2009
currently in 2nd
year **Ph.D. in multimedia content retrieval, TEXMEX-INRIA, Rennes.**
“Information retrieval in TV streams” under the supervision of Fabienne Moreau, Christian Raymond, Guillaume Gravier and Patrick Gros.
Information Retrieval, Natural Language Processing, Automatic Speech Recognition.
- May 2009
6 months **M.Sc. internship in multimedia content retrieval, collaboration between the TEXMEX research group (IRISA, France) and the National Institute of Informatics (NII, Tokyo), 1 month in Rennes, 5 months in Japan.**
“Topic threading and tracking in French news programs” under the supervision of Ichiro Ide, Shin'ichi Satoh, Pascale Sébillot and Guillaume Gravier.
Information Retrieval, Natural Language Processing, Automatic Speech Recognition.
- April 2008
6 months **Eng. internship in video compression, TEMICS-IRISA, Rennes.**
“Spatio-temporal synthesis of textures for low-rate video compression” under the supervision of Christine Guillemot.
Implementation of new prediction methods (sparse representation and matching pursuit) into a h264-like video coder.

Publications

- [1] Julien Fayolle, Fabienne Moreau, Christian Raymond, and Guillaume Gravier. Reshaping automatic speech transcripts for robust high-level spoken document analysis. In *4th Workshop on Analytics for Noisy Unstructured Text Data, AND'10*, Toronto, Canada, October 2010.
- [2] Julien Fayolle, Fabienne Moreau, Christian Raymond, Guillaume Gravier, and Patrick Gros. Crf-based combination of contextual features to improve a posteriori word-level confidence measures. In *International Conference on Speech Communication and Technologies, Interspeech'10*, Makuari, Japon, September 2010.
- [3] Christian Raymond and Julien Fayolle. Reconnaissance robuste d'entités nommées sur de la

parole transcritte automatiquement. In *17e conférence sur le traitement automatique des langues naturelles, TALN'10*, Montréal, Québec, Canada, July 2010.

Skills

Informatic tools

Programmation	C/C++, Java, Matlab/Simulink, R	Description	Pascal, CSP, UML
Web	XHTML/CSS, PHP, Javascript	Database	Oracle/SQL
OS	Linux, Unix, Windows	Script	Perl, Bash

General

Information Retrieval	indexing, weighing, representation models for computing similarities between queries and documents, clustering of noisy documents
Natural Language Processing	language model, part-of-speech tagging, lemmatisation, extraction of complex terms, named entity recognition
Signal	detection, estimation, hidden Markov model, supervised classification and clustering, fusion, digital communication, source/channel coding, wavelets, adaptative filtering, speech recognition
Image	pattern recognition, image processing, statistical and geometrical modelling, analysis of image sequences, video communication
Mathematics for engineer	algebra, analysis, probability, statistics, optimisation

Languages

French	native language
English	read, written, spoken fluently
Japanese	beginner

Miscellaneous

Association	active member of PhD associations (ADOC-IRISA and Nicomaque-Rennes)
Hobbies	music, swimming, unicycle, organisation of guitar workshops