



Grenoble Informatics Laboratory (France)

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GETALP group leader



Study Group for Machine Translation and Automated Processing of Languages and Speech

Grenoble

- Rhône-Alpes Region, 2d in term of research activity
- Université Grenoble Alpes
 - 60k students ; 3700 PhD students ; 14 doctoral schools
 - High density of multinational firms in fields such as nano and micro-electronics, biotechnologies and ICT (ST microelectronics, Hewlett-Packard, Becton Dickinson, Schneider Electric, Roche Diagnostics, BioMerieux, Xerox RCE, Orange)

LIG

- Grenoble Informatics Lab.
- 5 research axes, 23 teams, 500 persons
- <http://www.liglab.fr>



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Laboratory (France)**

Research topics

- Computer Aided Translation
- Automatic Speech transcription and translation
- Processing of under-resourced languages
- Processing / analysis of speech and interactions in ambient environments
- Modelling social affects in spoken language
- Collection and interoperability of multilingual lexical resources
- Software engineering for multilingualism
- Multilingual lexical resources and automatic meaning clarification
- Automatic summarization of ambient data

Application areas (current projects ≈ 1M€)

- Multilingual information access
- Robotics
- Assistive technologies

Members

- 17 permanent staff (2 Prof., 11 Ass. Prof., 1 researcher and 3 engineers)
- 16 PhD theses in progress

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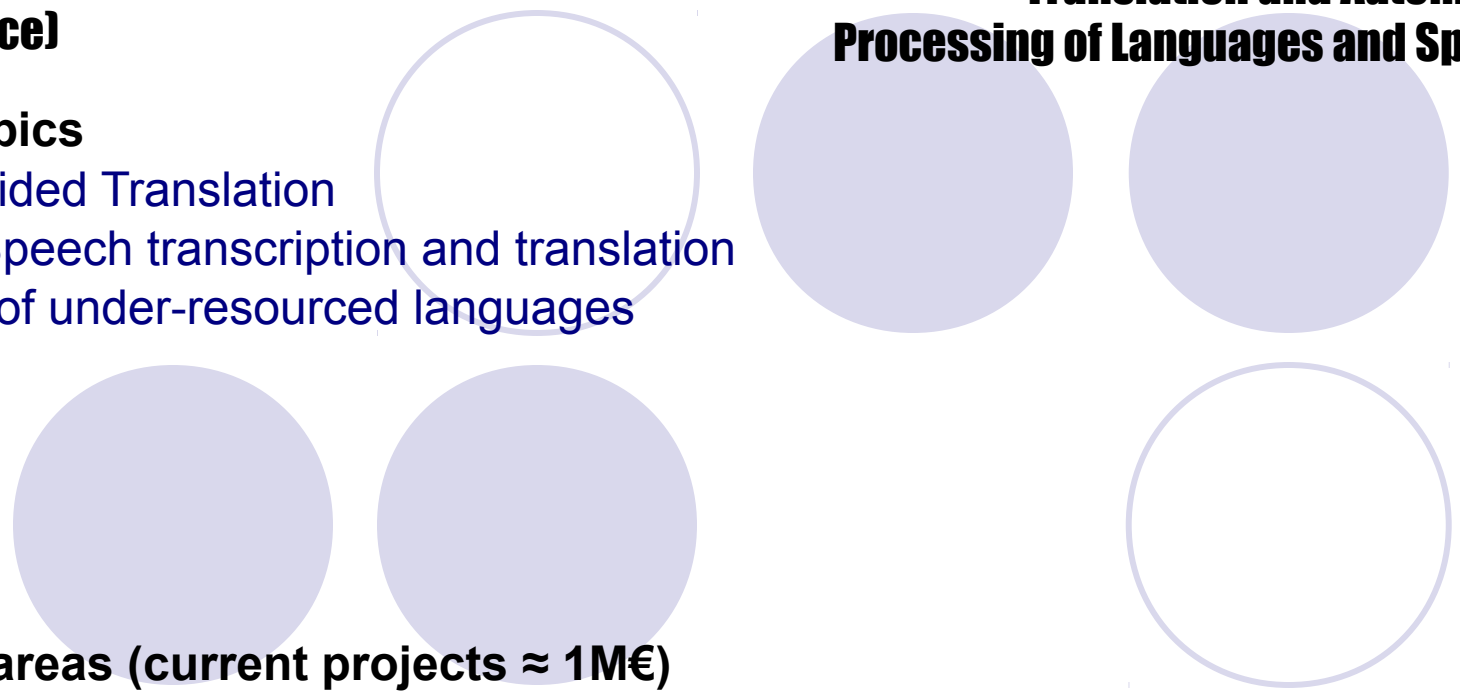
Members

- Exemples of current PhD subjects

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Automatic Speech transcription and Translation

- Efficient systems for several languages or language pairs
 - English, French, Modern Standard Arabic, ...
 - Based on Kaldi (transcription - ASR) & Moses (translation - MT) toolkits
- Tight coupling between ASR and MT
 - Machine translation from speech transcription lattices (graphs)
 - Using multiple morphological segmenters for spoken language translation of Arabic
 - IR-techniques for domain adaptation in MT or ASR
- Participation to machine translation shared tasks (evaluation campaigns) from 2009 to 2012
 - Text or Speech Translation Tasks



Processing under-resourced languages (1)

- Started **10 years ago** at LIG/GETALP
 - ... when nobody else was interested in the topic !
 - for natural language processing (PhD Vincent Berment in 2004)
 - for automatic speech recognition (PhD Viet Bac Le in 2006)
- Key idea : build efficient systems with few (language) resources
- Area of excellence of the team
 - **3 journal articles** (Speech Communication Journal) in **ASR for under-resourced languages** recently published
<http://www.sciencedirect.com/science/journal/01676393/56>
 - **Fast portability** of ASR systems with few resources, ASR of languages with **special phonological characteristics**, ASR for Romanian, Vietnamese, Malay, Khmer, Amharic, Swahili, etc.



Thanks!

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Équipe GETALP