

---

## Post-doc/Expert Engineer : Video retrieval

- **Field** : Video description and retrieval, Computer Vision, Multimedia
- **Institution** : INRIA
- **Duration** : 2 years
- **Location** : Rennes, France. <http://en.wikipedia.org/wiki/Rennes>.
- **Environment** : The TEXMEX project-team in INRIA (<http://www.irisa.fr/texmex>). The candidate will be integrated in a comfortable and stimulating environment. Rennes is a dynamic middle-sized town with a student population rate above 30%, 2 hours from Paris by train.
- **Description** : The problem considered is the one of video retrieval on a relatively large scale. Two tasks are considered : copy detection and recognition of objects in videos (searching instances). This position consists in 1/ improving and optimizing new techniques for copy detection and video retrieval and 2/ in designing a full video system. A typical objective is to obtain top results in international competition or evaluation such as TRECVID (<http://www-nlpir.nist.gov/projects/trecvid>). For this purpose, all stages of the retrieval system pipeline will be considered : the representation of videos (descriptors, image/audio/video), the subsequent indexing techniques, and precise comparison metrics computed for the best hypothesis, including the fusion of modalities. This work will be done in the context of the Quaero project (<http://quaero.org>), where we consider in particular the detection of video copies on websites hosting user-generated content. The successful candidate will work closely with researchers and PhD students. The expected output of this position are 1/ a video system outperforming the current state of the art 2/ publications in international venues or journals.
- **Profile** : Grand Ecole Profile (for french applicants) or MS in Computer Sciences. A PhD degree is a big plus. Strong programming and algorithmic skills are required (fluent in C, knowledge of Python/Linux appreciated). The candidate should ideally be familiar with image processing/indexing.
- **Salary** : depends on professional experience. 0 – 3 years : 2320 euros with PhD (net, including social protection and medicare), 2060 euros without PhD.
- **Contact** : Hervé Jégou and Patrick Gros ([Firstname.Lastname@inria.fr](mailto:Firstname.Lastname@inria.fr))
- **References** :
  - [1] "Improving bag-of-features for large scale image search"  
Herve Jégou, Matthijs Douze and Cordelia Schmid  
International Journal of Computer Vision, 2010
  - [2] "An image-based approach to video copy detection with spatio-temporal filtering"  
M. Douze, H. Jégou and C. Schmid  
IEEE Transactions on Multimedia, 2010
  - [3] "Compact video description with precise temporal alignment"  
M. Douze, H. Jégou, C. Schmid and P. Perez  
European Conference on Computer Vision, 2011
  - [4] "On Space-Time Interest Points"  
I. Laptev  
International Journal on Computer Vision, 2005