The context of this open postdoc position is the ERC advanced grant CLIM - Computational Light Field Imaging. The goal of the postdoc will be to develop methods for efficient compression of static and video light fields. Light fields are densely sampled high-dimensional signals containing information about the light rays interacting with the physical objects in the scene. They yield a very rich description of a 3D scene which enables advanced creation of novel images from a single capture [1][2]. However, Light fields constitute very large volumes of highly redundant data, hence the need to design efficient compression algorithms to enable practical use of this new imaging modality.

Although the ultimate goal is to develop novel compression schemes for dynamic light fields (light fields videos), the work will naturally start by developing methods for static light fields and then be extended taking into account the temporal dimension. The work will be at the frontier between signal processing, computer vision, and source coding theory. The proposed research is at the frontier of computer vision, signal processing, coding and information theory. In terms of application domains, the project will primarily target networked visual applications such as 3DTV, FTV, camera sensor networks, satellite and medical imaging applications.

More informations: https://www.inria.fr/en/teams/sirocco

L’essentiel pour réussir

PhD degree in signal and image processing; prior knowledge in the areas of image/video compression and multi-view processing will be appreciated.

Conditions pour postuler

Thank you for applying online.

Please submit your CV, cover letter and any recommendations.

Sécurité défense:

Ce poste est susceptible d’être affecté dans une zone à régime restrictif (ZRR), telle que définie dans le décret n°2011-1425 relatif à la protection du potentiel scientifique et technique de la nation (PPST). L’autorisation d’accès à une zone est délivrée par le chef d’établissement, après avis ministériel favorable, tel que défini dans l’arrêté du 03 juillet 2012, relatif à la PPST. Un avis ministériel défavorable pour un poste affecté dans une ZRR aurait pour conséquence l’annulation du recrutement.

Politique de recrutement:

Dans le cadre de sa politique diversité, tous les postes Inria sont accessibles aux personnes en situation de handicap.
considered to best de-correlate the signal along super-rays and motion trajectories. The goal will also be to explore ways to encode the designed representations using coding tools tailored to its statistical properties.

The position is funded by the ERC advanced grant project CLIM: Computational Light Fields Imaging led by Dr Christine Guillemot at INRIA in Rennes, France

References


Principales activités

Research, validation via software implementation, publication of the results

Compétences

- PhD degree in signal and image processing
- Solid programming skills (matlab, C/C++)
- Solid mathematical background
- Fluent in English, both written and spoken

Avantages sociaux

- Subsidised catering service
- Partially-reimbursed public transport
- Social security
- Paid leave
- Sports facilities

Rémunération

Gross salary: 2653 euros