Evaluating these animations is not straightforward and different evaluation metrics are needed to compare models, or the compression capability of the extracted latent representation. Synthesis and transmission of these models over the network is the sparsity of their event-based coding, which eventually changes the appearance of the garments. A possible aspect to consider for future work is the use of physics-inspired methods to model the interaction between the garment and the body, as proposed recently in [7].

Second, we will use the resulting representation to synthesize new animations and deformations of dense correspondences between clothed body parts, as proposed recently in [7]. This strategy allows modeling the deformation of the person wearing the garment, e.g. [4]. This strategy allows modeling detailed complex wide and multi-layered garments, and can be used to synthesize realistic dynamic videos [5].

This Ph.D. is concerned with learning efficient garment representations from a given input video. In particular, the work will focus on two aspects: First, we will study how to combine advantages of existing lines of work to learn a garment representation that allows for wide and multi-layered clothing without the need for a detailed garment template at inference time. The resulting representation should generalize to a large set of different garment styles and materials, and may hence benefit from physics-inspired methods to model the interaction between the garment and the body, e.g. [4].

This strategy allows modeling detailed complex wide and multi-layered garments, and can be used to synthesize realistic dynamic videos [5].

References:
2. ICON: Implicit Clothed humans. Obtained from Normalis. Xu, Yang, Tosin, Black. CVPR, 2022 (https://icon.is.tue.mpg.de/).
Consignes pour postuler

Applications must be submitted online on the Inria website. Processing of applications sent by other channels is not guaranteed.

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.

Principales activités
See "Assignments".

Compétences
Candidate profile
- Master in Computer Science or Applied Mathematics.
- Solid programming skills, e.g. python and/or C++.
- Solid mathematical knowledge in geometry, linear algebra and statistics.
- Experience with computer vision, deep learning and shape modeling is a plus.
- Experience with physics-based simulation is a plus.
- Good English level. French is not required.

Avantages
- Subsidized meals
- Partial reimbursement of public transport costs
- Leave: 7 weeks of annual leave + 10 extra days off due to RTT (statutory reduction in working hours) + possibility of exceptional leave (sick children, moving home, etc.)
- Possibility of teleworking (90 days / year) and flexible organization of working hours
- Professional equipment available (videoconferencing, loan of computer equipment, etc.)
- Social, cultural and sports events and activities
- Access to vocational training
- Social security coverage under conditions

Rémunération
1st and 2nd year: 1 982 euros gross salary /month
3rd year: 2 085 euros gross salary /month

The full job offer is available [here](https://nsarafianos.github.io/bodymap).