Postdoc in Bioinformatics

3D genome organization

Paulsen group at University of Oslo, Norway

Fully funded 3 year Scientia Fellows Postdoc

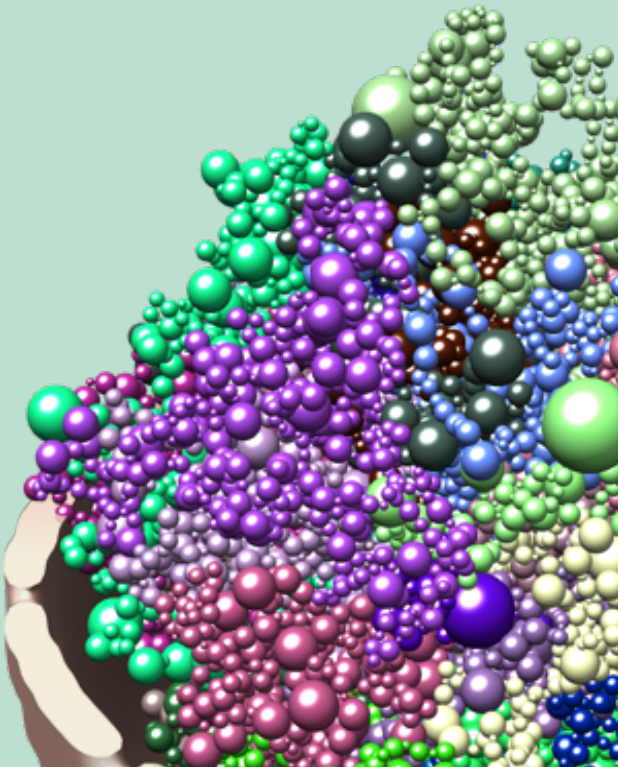
- Open/independent project related to 3D/4D genome organization. Project description defined and written together with host Jonas Paulsen
- Skills required: Bioinformatics / Computational Biology / Programming / Physics / Modeling / or similar
- Salary offered: min. ~49,000 EUR/year (min. 523,200 NOK/year)
- Earliest starting date: Feb/Mar 2021
- Latest starting date: Nov 2021
- Apply: contact jonaspau@ibv.uio.no with your CV before **20. Oct 2020**

Recent advances in high-throughput sequencing technologies allow for unprecedented characterization of the genome. Yet, most genomic studies ignore how DNA is dynamically organized in 3D space inside the nucleus. Such information is, however, crucial to understand gene (dys)-regulation in healthy and pathological states. Computational modelling and simulation have proven extremely fruitful to characterize 3D genome dynamics at multiple levels. Dynamic structural 3D models of whole genomes have revealed spatial and temporal regulation of Topologically Associated Domain (TAD) positioning during cell differentiation. At more local scales, loop-extrusion modelling can predict with high accuracy the effect of mutational alterations of boundaries between TADs. The research focus for this area will be to develop new computational methodology to explore the dynamics of 3D genomes in time – in essence providing a four-dimensional (4D) view of the genome. The research will synergize with existing efforts to explore how the 3D genome relates to cancer development and immune regulation.

About the Scientia Fellows program:
https://www.med.uio.no/english/research/scientia-fellows/apply/

About the host environment:
https://www.mn.uio.no/sbi/english/groups/paulsen-group/

Questions:
jonas.paulsen@ibv.uio.no



UiO : University of Oslo