PhD student position in clinical gait analysis (University of Geneva)

The Kinesiology laboratory at University of Geneva (Geneva, Switzerland) has one open PhD studentship to define the intrinsic and extrinsic variability of pathological gait. The general goal of the project is to develop a neuromechanical models of human locomotion, together with Auke Ijspeert (Biorobotics laboratory, EPFL, BIOROB) and Alexandros Kalousis (machine learning, http://cui.unige.ch/~kalousis/) from the University of Geneva, in the framework of a collaborative Sinergia project funded by the Swiss National Science Foundation. The neuromechanical models will include numerical models of spinal cord circuits coupled to biomechanical simulations of the body. The purpose of the project is (1) to model pathological gait resulting from motor impairments such as cerebral palsy, and (2) to compare and combine neuromechanical simulation and machine learning approaches for gait analysis.

The position is funded by SNSF for four years. The successful candidate will work in collaboration with 3 post-docs and 3 PhD Students that will be involved in the project (see open-positions https://biorob.epfl.ch/cms/site/biorob/lang/en/openings.
http://cui.unige.ch/~kalousis/htmlStaff/job-SIMGAIT-PhD.htm,
http://cui.unige.ch/~kalousis/htmlStaff/job-SIMGAIT-PostDoc.htm).

The specific tasks of the successful candidate will be:
- To define intrinsic and extrinsic variability of pathological gait,
- To find solutions to decrease extrinsic variability of clinical gait analysis,
- To establish a large and clean database of pathological gait,
- To define metrics to compare models and simulations of pathological gait,
- To establish relationships between motor impairments and gait deviations.

Requirements:
Candidates need to have a Master degree in a field related to biomechanics/human movement science. The ideal candidate for this position should have a strong background in biomechanics, good programming skills (matlab, python), and interest/expertise in clinical gait analysis

Candidates should send to stephane.armand@unige.ch:
1. A two page CV.
2. A one page motivation letter explaining why their skills, knowledge and experience make them a particularly suitable candidate for the given position.
3. A 500 words research proposal on the problematic described above.

The **contact details** of three referees; do **not** send reference letters.

Deadline and starting date:
Applications will be considered starting from February 15th 2018, and then continuously until the position is filled. The starting date is September 2018. The position status will be indicated here