We are currently seeking a highly motivated **PhD candidate researcher (f/m)**

**We offer**
a PhD candidate researcher position to support our team in the “Bioinspired Legged Robot Locomotion” project.

This position will focus on the **electrical design, development and testing of electromagnetically actuated legged robots for dynamic locomotion.**

Understanding legged locomotion in Biology/Biomechanics is traditionally bound to characterizing animals, i.e. through biomechanical locomotion and perturbation studies, anatomical studies, and dissections of the locomotion apparatus and neuromuscular components of animals.

With this research we aim to apply computational and physical robot models instead. This will allow us to gain insights into components of dynamic locomotion: high level motion planning and learning, intermediate and low level locomotion pattern generation, novel actuator and sensor design and control, and biomechanically relevant design of the locomotion apparatus of novel legged machines.

Further we expect that robotic legged machines are going to play an important role in future human-robot interactions for applications, i.e. search and rescue scenarios.

**About us**
The Dynamic Locomotion Group is a young and highly motivated independent research group at the Max Planck Institute for Intelligent Systems (MPI IS) on the campus Stuttgart in Germany. We offer an excellent research infrastructure, national (i.e. MPI IS campus Tübingen) and international interdisciplinary cooperation possibilities also with experts from Biology and Biomechanics.

Salaries will be based on previous experience according to TVöD guidelines. An initial PhD contract will be offered for 3 years. The Max Planck Society is committed to employing more handicapped individuals and especially encourages them to apply.
Requirements
The ideal candidate should have:

- A background in Electrical, Micro electrical, Mechatronic Engineering, Micro engineering, or closely related;
- A Masters (or equivalent) degree from a recognized university;
- Excellent grades and analytical skills;
- Strong interest in bioinspired legged locomotion in robots and animals;
- Must have hands-on experience or participation in hardware projects, i.e. design and or control of actuator systems i.e. brushless motors, actuator design, real-time systems, sensor design and fusion, firmware implementation, sensor networks, control and communication networks, power systems;
- Prior knowledge in learning, optimization, multi body dynamics modeling can be a plus;
- Proficient oral and written English skills;
- Ideally prior scientific publications.

Inquiries can be sent to Alexander Spröwitz sprowitz@is.mpg.de.

To apply
Applicants should send the following documents as pdf files (compact size) by email to Alexander Spröwitz sprowitz@is.mpg.de stating reference “Position-A-2017mar” in the email subject:

1. Cover letter with research statement and motivation, around 1 page long. Include a concise and clear motivation of yours for this research position.
2. Short CV including publication list, if existing.
3. Transcripts of relevant degrees in English.
4. Contact information of three references.
5. If existing: selected publications (file or accessible online link), or project report of hands-on/hardware projects with reference to this position, i.e. Masters project.

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