**Supervisor Expression of Interest**  
**MSCA-IF Marie Sklodowska Curie Action-Individual Fellowship**

<table>
<thead>
<tr>
<th><strong>Supervisor name:</strong></th>
<th>Giancarlo Ferrigno</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Email address:</strong></td>
<td><a href="mailto:giancarlo.ferrigno@polimi.it">giancarlo.ferrigno@polimi.it</a></td>
</tr>
<tr>
<td><strong>Department Name:</strong></td>
<td>Electronics, Information and Bioengineering (DEIB)</td>
</tr>
<tr>
<td><strong>Research topic:</strong></td>
<td>Bioengineering</td>
</tr>
</tbody>
</table>

**MSCA-IF Research Area Panels**

- CHE_Chemistry
- ECO_Economic Sciences
- ENG_Information Science and Engineering
- ENV_Environmental and Geosciences
- LIF_Life Sciences
- MAT_Mathematics
- PHY_Physics
- SOC_Social Sciences and Humanities

**Politecnico di Milano Areas:**

- Cultural Heritage
- Smart Cities
- Territorial Fragilities
- **Health**
- Industry 4.0

**Brief description of the Department and Research Group (including URL if applicable):**

The DEIB aims at being a world-class scientific institution committed to forefront research, education, and technology transfer in computer science and engineering, electronics, systems and control, telecommunications, and bioengineering.

Bioengineering (http://www.deib.polimi.it/eng/bioengineering) division apply Engineering methodologies and technologies to research on biological systems and health sciences. Methods, devices, and systems are developed with a multidisciplinary approach, which starts from the molecular and the cellular level and goes all the way up to complex living organism, with the purposes of improving diagnosis and therapy as well as health and daily life structures and services.
**Brief project description:**
(max 1 page)

The topic of the project is the research in the field of health and personalized medicine achieved in the phases of prevention (screening, big data, genomics), diagnosis (data, signal and image processing), treatment (modeling in surgery, robotic assisted surgery and radiotherapy) and rehabilitation (wearable systems, cognitive rehabilitation, rehabilitation and assistive robotics, neuroengineering, functional evaluation, prosthetics) of citizens.

This aim will be, according to the skills and inclination of the single candidate, actualized in the framework of one of the three main research lines of the Bioengineering Division, or a combination thereof, namely:

- **Analysis of biological systems and e-health**
- **Biological and Biomechanical Engineering**
- **Technologies for diagnosis, therapy and rehabilitation**

Research will be carried out also in one of the labs of the Bioengineering Division, the scope of which is wide and interdisciplinary, but characterized by up to date instrumentation and skills.

http://www.deib.polimi.it/eng/bioengineering

Research will also be supported by already existing collaboration of the Bioengineering division with end-users in Milano area hospitals and rehabilitation centres and with private and public health organizations, biomedical companies.

Candidates should propose innovative research projects which could be efficiently integrated in current research areas so to promote collaborations inside the groups in view of the development of the whole Division and at the same time tackling innovative research challenges.