

Organisation / Company: Jožef Stefan Institute

Department: Materials Synthesis

Research Field: Materials Science, Chemistry

Researcher profile: Doctoral candidate

Country: Slovenia

Application deadline: 12<sup>th</sup> May 2024 – 23:59 (Europe/CET)

Type of contract: Temporary

Job status: Full-time

Hours Per Week: 40

Offer starting date: 01 September 2024

Offer description: The Marie Skłodowska-Curie Actions Doctoral Network (MSCA-DN) “Magnetic Soft Matter for Robotics” (MAESTRI, Grant ID 101119614) is an interdisciplinary research training network of seven universities and two companies from five countries. It is founded under “the first pillar” of the Horizon Europe program called “Excellent Science”. MSCA-DN MAESTRI reflects the demand for training a new kind of experts in the emerging application field of magnetic soft robotics that we believe will yield groundbreaking technologies in the near future. It is an interdisciplinary collaboration of specialists from different fields of Materials Science, Biology, Physics, and Engineering Science.

#### Roles and Responsibilities:

The main part of your work will be carried out at the Jožef Stefan Institute (Ljubljana, Slovenia, <https://ijs.si/ijsw>) at the Department for Materials Synthesis (<https://www.ferrites.si/>) and will be combined with a PhD study at the Jožef Stefan International Postgraduate School. The secondment placements will take place at the Christian-Albrechts University of Kiel (Kiel, Germany, 3 months), the Scuola Superiore Sant’Anna (Pisa, Italy, 3 months) and the Prensilia SRL (Pontedera, Italy, 3 months).

The doctoral project is funded for three years and would start by 1<sup>st</sup> September 2024 or later.

Your doctoral degree will be awarded based on the successful completion of the research work and the PhD study requirements (<https://www.mps.si/en/studij/bolonjski-studij-tretje-stopnje/>). You will be also required to participate in the training activities and workshops organized by the MSCA-DN MAESTRI. As a Marie Skłodowska-Curie Actions Fellow, you are also expected to contribute to the dissemination of your project’s results through public engagement and various scientific platforms.

#### **Topic: Incorporation of magnetic nano- and microparticles into soft matter for robotic applications**

This PhD research will focus on:

- Development of efficient chemical processes for the synthesis of magnetoactive elastomers and magnetic liquids for robotic applications.
- Investigation of the effects of particle functionalization on (micro-) structural characteristics of the developed materials.

#### **The ideal candidate**

- The applicant should have completed at least four- or five years education with a Master's degree or its equivalent in Chemistry, Materials Science, Chemical Engineering, or a related field from a recognized university and should be eligible as a doctoral candidate at the Jožef Stefan International Postgraduate School.  
<https://www.mps.si/en/studij/bolonjski-studij-tretje-stopnje/>
- The applicant should show interest in conducting a research project independently and at the same time enjoy the work in an international, interdisciplinary environment.
- At the time of recruitment, the applicant must not have resided (or carried out her/his main activity, e.g., work, studies, etc.) in Slovenia, for more than 12 months in the last 3 years immediately before the reference recruitment date.
- The applicant should have a solid foundation in chemistry and/or materials science. Experience with chemical laboratory work is welcome.
- The applicant should have an excellent command of the English language at a proficient level (spoken and written).

We offer a gross annual salary of around 34.000 € for three years, plus a mobility allowance in the sum of 600 € per month and, in case the recruited researcher has a family ('Family' means "persons linked to the researcher by marriage (or a relationship with equivalent status to a marriage recognised by the legislation of the country where this relationship was formalised) or dependent children who are actually being maintained by the researcher.") we offer a family allowance in the sum of 495 € per month.

Jožef Stefan Institute honors and respects the diversity of our staff and provides equal opportunities to all employees and qualified applicants regardless of sex and/or gender, nationality, race or ethnicity, health condition, disability, religion or faith, age, social status, sexual orientation, gender identity or gender expression, family status or any other personal circumstance.

The Doctoral Network MAESTRI aspires to be an equitable and inclusive community. We nurture an open culture, where everyone is supported to fulfill their potential. We see inclusivity of talent as the basis of our successes, and the diversity of perspectives and people as a highly valued outcome. We look forward to welcoming you to our community.

#### **Application procedure:**

To apply for this position, kindly provide: i) a letter of motivation including a 1-page statement of your research interests, relevant skills and experience; (ii) a CV ([Europass](#) model mandatory) including a publication list (if relevant); (iii) copies of relevant certificates and (iv) names and contact details of at least two referees willing to write confidential letters of recommendation. All materials should be attached as a single PDF file (max. size 5 MB).

Interested applicants should send complete documents as a single PDF file (max. size 5 MB) to [application.maestri.physik@univie.ac.at](mailto:application.maestri.physik@univie.ac.at) using exclusively the combination **DC2** in the subject line.

#### **Deadline:**

The closing date for all applications is May 12<sup>th</sup>, 2024, 23:59 h.

#### **Enquiries:**

For additional general information about MAESTRI and the Doctoral Candidate positions, you may visit the MAESTRI webpage at <https://maestri-project.eu/>.

For additional specialist information regarding this position, you may contact Prof. Dr. Darja Lisjak at Jožef Stefan Institute, [darja.lisjak@ijs.si](mailto:darja.lisjak@ijs.si)

### **Additional Information:**

#### **Eligibility criteria**

- Supported researchers must be doctoral candidates, i.e. not already in possession of a doctoral degree at the date of the recruitment. Researchers who have successfully defended their doctoral thesis but who have not yet formally been awarded the doctoral degree will not be considered eligible.
- The applicant should have completed at least four- or five years of education with a Master's degree or its equivalent in Chemistry, Materials Science, Chemical Engineering, or a related field from a recognized university and should be eligible as a doctoral candidate at the Jožef Stefan International Postgraduate School.
- At the time of recruitment, the applicant must not have resided (or carried out her/his main activity, e.g. work, studies, etc.) in Slovenia, for more than 12 months in the last 3 years immediately before the reference recruitment date.
- Additional information provided by the European Commission on terms and conditions related to MSCA doctoral networks can be found in the MSCA document library: [https://marie-sklodowska-curie-actions.ec.europa.eu/document-library?facets\\_field\\_eac\\_audience=274](https://marie-sklodowska-curie-actions.ec.europa.eu/document-library?facets_field_eac_audience=274)

#### **Selection process**

- 1<sup>st</sup> stage: Review of application documents to verify the applicant's eligibility and if the work and/or educational experiences would fit the position requirements,
- 2<sup>nd</sup> stage: Panel interview,
- 3<sup>rd</sup> stage: Internal deliberation and ranking of candidates. This will be based on the conducted interview, work/educational experiences, and letter of recommendation from your referees.