



## **Nine Doctoral positions within CINEMA project funded under the Marie Skłodowska Curie Actions (Horizon Europe)**

**Nine Doctoral positions** (PhD positions) are open within the **European MSCA Joint Doctoral Network** ([www.cinema-dn.eu](http://www.cinema-dn.eu)) funded under the Marie Skłodowska Curie Actions (Horizon Europe).

Applicants must have a BSc and MSc in Chemistry, Chemical Engineering & Materials or related disciplines, with a strong background in polymer materials, modeling, mathematical tools and/or polymer engineering. The candidate will follow the training program of CINEMA project. The expected starting date is on July 2023 (or earlier if possible). The nine doctoral positions are the following:

**DC1:** *First principles mathematical modeling radical of water-based (emulsion) polymerization.*

- **Recruiting Institution:** *UGENT – Ghent University*
- **Secondment Institution:** *Short secondments in CINEMA academic and industrial partners are expected.*

**DC2:** *Machine learning modeling as soft sensors in view of design of sustainable radical emulsion polymerization.*

- **Recruiting Institution:** *UGENT – Ghent University*
- **Secondment Institution:** *Short secondments in CINEMA academic and industrial partners are expected.*

**DC3:** *Optimization using hybrid machine learning models.*

- **Recruiting Institution:** *RWTH Aachen University*
- **Secondment Institution:** *Short secondments in CINEMA academic and industrial partners are expected.*

**DC4:** *Machine learning in model predictive control.*

- **Recruiting Institution:** *RWTH Aachen University*
- **Secondment Institution:** *Short secondments in CINEMA academic and industrial partners are expected*



**DC5:** *Structure-property correlation over multiple process steps.*

- **Recruiting Institution:** UCAM – University of Cambridge
- **Secondment Institution:** Short secondments in CINEMA academic and industrial partners are expected.

**DC6:** *Predicting mechanical properties of polymer films using machine learning.*

- **Recruiting Institution:** UPV/EHU – University of the Basque Country
- **Secondment Institution:** Short secondments in CINEMA academic and industrial partners are expected.

**DC7:** *Predicting the viscoelastic behavior of polymers using machine learning.*

- **Recruiting Institution:** UPV/EHU – University of the Basque Country
- **Secondment Institution:** Short secondments in CINEMA academic and industrial partners are expected.

**DC8:** *Developing machine learning for polymer systems.*

- **Recruiting Institution:** BCAM, Basque Center for Applied Mathematics
- **Secondment Institution:** Short secondments in CINEMA academic and industrial partners are expected.

**DC9:** *Training methods for hybrid models.*

- **Recruiting Institution:** RWTH Aachen University
- **Secondment Institution:** Short secondments in CINEMA academic and industrial partners are expected.

**Eligibility criteria:** We welcome applications until 20/02/2023 from candidates of any nationality completing the following criteria:

- Candidates **must not have resided or carried out their main activity** (work, studies, etc.) in the country of the first recruiting organisation for more than 12 months in the 3 years immediately prior to their recruitment. Date of recruitment means the first day of the employment of the researcher for the purposes of the action (i.e. the starting date indicated in the employment contract/equivalent direct contract).
- Candidates shall, at the date of recruitment by the host organisation, **be in the first four years of their research careers** and have not been awarded a doctoral degree.
- Candidates must **have a master degree or equivalent** diploma in Chemistry, Chemical Engineering & Materials or related disciplines.



- Candidates may be required to provide documentation proving their eligibility for recruitment, i.e. to provide supporting documentation proving your place(s) of residence or work during the previous 3 years.

Candidates must have a high level of proficiency in written and spoken English, which will be assessed with the motivation letter and the interview, respectively.

**Candidates must submit their applications through the project website [www.cinema-dn.eu/open-positions](http://www.cinema-dn.eu/open-positions) until February 20th 2023.** Applications must contain the ~~following~~ **following** in one single PDF file:

1. Motivation letter.
2. A 2-page statement of your previous or current research interests.
3. Curriculum vitae.
4. A digital copy with all academic certificates and academic records (in the respective official English transcription).
5. Two letters of recommendation including contact details.

All the above documents must be provided in English.

**(Each candidate can apply to a maximum of two individual PhD projects.)**