

## Application Deadline 15.05.2018

# Zero and Ultra-Low Fields NMR Innovative Training Network

## ZULF-02 Fundamental and Practical Applications of ZULF NMR

Early Stage Researcher Marie Curie Fellow (PhD)  
at the Jagiellonian University in Kraków, Poland

- Cutting-edge research at the border between fundamental and applied atomic physics and nuclear magnetic resonance (NMR).
- Three-year full-time employment at up to 3 500 EUR/month for a PhD candidate.
- Participation in a unique PhD programme – a Jagiellonian University on-site PhD programme enrolment combined with network-wide training activities (hard and soft skills development).
- Secondments at one of the leading NMR institutions in the world (Johannes Gutenberg University in Mainz) and a rapidly developing commercial IT company (Future Processing).
- Direct collaboration with the world's leading NMR/atomic physics institutions.
- Research funding.

### The Network

The position is offered within an interdisciplinary project entitled Zero- and Ultra-Low-Field (ZULF) Nuclear Magnetic Resonance realized within the European Union Innovative Training Network.

### The Goal

The project is dedicated to training young researchers capable of addressing the foreseen challenges in NMR, particularly under the conditions of ultra-low or truly zero magnetic fields. The position is focused on development of schemes for chemical fingerprinting but also means of experimental constraining parameter space of theoretically hypothesised exotic spin interactions with ZULF NMR. Therefore, it is aimed at experimentally biased candidates.

### Benefits

The standard ITN rates include a personal mobility allowance for relocation, and a family allowance for those candidates that have families at the time of recruitment. The employment is combined with participation in an enhanced PhD programme unavailable at any university course that includes secondments at the Johannes Gutenberg University in Mainz (prof. Dmitry Budker) and Future Processing Ltd. (software development company).

### Eligibility

On Oct 1<sup>st</sup>, 2018 you have to have a M.Sc./B.Sc. but no Ph.D. and:

1. have less than 4 years of research work experience (be an *Early Stage Researcher*);
2. less than 12 months spent in Poland since Oct. 1<sup>st</sup>, 2015 (the *mobility rule*).

### How to apply

Visit [www.zulf.eu](http://www.zulf.eu) for up to date information. Applicants fulfilling the eligibility criteria should provide their academic resume, reference letter from 2 academics/NMR professionals, and a cover letter to prof. Szymon Pustelny at [pustelny@uj.edu.pl](mailto:pustelny@uj.edu.pl). In addition to applying to us, be sure to also send your CV and cover letter to [office@zulf.eu](mailto:office@zulf.eu).

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## Zero and Ultra-Low Fields NMR Innovative Training Network

### ZULF-03 Portable ZULF NMR Spectrometer

Early Stage Researcher Marie Curie Fellow (PhD)  
at the Jagiellonian University in Kraków, Poland

- Cutting-edge research at the border between fundamental and applied atomic physics and nuclear magnetic resonance (NMR).
- Three-year full-time employment at up to 3 500 EUR/month for a PhD candidate.
- Participation in a unique PhD programme – a Jagiellonian University on-site PhD programme enrolment combined with network-wide training activities (hard and soft skills development).
- Secondments at leading NMR institutions in the world (University of Cambridge and University of York)
- Collaboration with the world's leading NMR/atomic physics institutions.
- Research funding.

#### The Network

The position is offered within an interdisciplinary project entitled Zero- and Ultra-Low-Field (ZULF) Nuclear Magnetic Resonance realized within the European Union Innovative Training Network.

#### The Goal

The project is dedicated to training young researchers capable of addressing the foreseen challenges in NMR, particularly under the conditions of ultra-low or truly zero magnetic fields. The advertised position is aimed at the development of a portable ZULF NMR spectrometer. The research includes development of new type of optical magnetometer dedicated to measurement of ZULF NMR, implementation in hyperpolarization techniques in ZULF NMR, and development of multi-dimensional pulse sequence. For this reason, the position is offered to strongly experimentally biased candidates.

#### Benefits

The standard ITN rates include a personal mobility allowance for relocation, and a family allowance for those candidates that have families at the time of recruitment. The employment is combined with participation in an enhanced PhD programme unavailable at any university course that includes secondments at the University of Cambridge (prof. Lynn Gladden) and the University of York (prof. Simon Duckett).

#### Eligibility

On Oct 1<sup>st</sup>, 2018 you have to have a M.Sc./B.Sc. but no Ph.D. and:

1. have less than 4 years of research work experience (be an *Early Stage Researcher*);
2. less than 12 months spent in Poland since Oct. 1<sup>st</sup>, 2015 (the *mobility rule*).

#### How to apply

Visit [www.zulf.eu](http://www.zulf.eu) for up to date information. Applicants fulfilling the eligibility criteria should provide their academic resume, reference letter from 2 academics/NMR professionals, and a cover letter to prof. Szymon Pustelny at [pustelny@uj.edu.pl](mailto:pustelny@uj.edu.pl). In addition to applying to us, be sure to also send your CV and cover letter to [office@zulf.eu](mailto:office@zulf.eu). In addition to applying to us, be sure to also send your CV and cover letter to [office@zulf.eu](mailto:office@zulf.eu).