



INNOVATIVE ECONOMY
NATIONAL COHESION STRATEGY



EUROPEAN UNION
EUROPEAN REGIONAL
DEVELOPMENT FUND



Position: PostDoc within project “Phase microscopy and tomography – new approach to 3D measurements of biological and technological structures (3DPHASE)”.

Number of stipends: 1

Institution: Photonics Engineering Division / Institute of Micromechanics and Photonics / Warsaw University of Technology / Warsaw

Maximum period of stipend agreement: 27 months

Position starts on: 1.04.2013

Stipend’s amount: 5000 PLN + salary offered by Warsaw University of Technology (Institute of Micromechanics and Photonics)

Pension insurance: yes

Key responsibilities include:

1. Theory and simulations of a single beam phase microscope („Transport of Intensity Equation based methods”, „Gabor holography”) and optical diffraction tomography (ODT) system
2. Development of new theory and algorithms of phase recovery from single beam microscopy (problems related to wide angle field and sample properties)
3. Study of sampling issue (super resolution) of technique of phase recovery from defocused diffraction images
4. New theory and algorithms for high divergence-structured light illumination (single and multiple point sources) in single beam phase microscopy system
5. Development of theory and tomographic algorithms for ODT systems for static and dynamic samples
6. Efficient implementation of developed algorithms

Profile of candidates:

1. Strong motivation for scientific work
2. PhD degree in field of optics and physics
3. Interest in application of optics in advanced measurement methods metrology
4. Very good knowledge of wave optics
5. Confirmed level of English
6. Very good knowledge of Matlab and C++: coding of developed theoretical solutions and numerical methods
7. Very good communication and team work skills
8. Skills for management and self-contained work

Required documents (in English):

1. Motivation letter
2. CV
3. Two recommendation letters
4. List of publications
5. Copy of three most interesting publications
6. Certificate of education

For more details about the Team 3DPHASE project please visit:

<http://3dphase.mchtr.pw.edu.pl>

Principal Investigator:

prof. dr hab. Małgorzata Kujawińska

Address for applications: zif@mchtr.pw.edu.pl ("3DPhase_TEAM – PostDoc" should be given as a message subject)

Closing date: 31.01.2013

Please include in your offer:

"In accordance with the personal data protection act from 29 th August 1997, I hereby agree to process and to store my personal data by the Institution for recruitment purposes".

The granting institution may seek to contact the best candidates only.