

## Job Posting

<b>Job ID:</b>	13476737	<b>Job Duration:</b>	1-2 Years
<b>Position Title:</b>	Postdoctoral researcher	<b>Min Education:</b>	Ph.D.
<b>Company Name:</b>	Czech Technical University in Prague	<b>Min Experience:</b>	0-1 Years
<b>Economic Sector:</b>	University/College	<b>Required Travel:</b>	10-25%
<b>Job Function:</b>	Applied Mathematics	<b>Salary:</b>	34000.00
<b>Entry Level:</b>	No	<b>Salary - High:</b>	34000.00
<b>Job Type:</b>	Contract	<b>Salary - Type:</b>	Yearly Salary
		<b>Location(s):</b>	Kladno, Other / Non-US, Czech Republic

### CONTACT INFORMATION

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**Apply URL:** [http://mech.fsv.cvut.cz/wiki/index.php/Department\\_of\\_Mechanics](http://mech.fsv.cvut.cz/wiki/index.php/Department_of_Mechanics); [Vacancies: UCEEB Postdocs](#)

### Job Description

The [Czech Technical University in Prague - University Center for Energy Efficient Buildings](#) offers a post-doctoral position in the field of development

of efficient solvers for homogenization of periodic media utilizing Fast Fourier Transforms.

The Fellow will work on the development of efficient homogenization algorithms for periodic media utilizing the Fast Fourier Transform. This method was proposed by [Moulinec and Suquet in 1994](#), as an alternative to traditional finite element methods for pixel- and voxel-based media, and found numerous applications later on. The research activities in this topic will be based on recent results obtained by [Jan Zeman](#) and [Jaroslav Vondřejc](#) during his Ph.D. studies, which show that the original Moulinec-Suquet scheme is equivalent to the finite element method with a specific choice of basis functions. This opens interesting research directions in the fields of numerical mathematics (related to theoretical aspects) or/and in computational mechanics (with emphasis on applications).

The project is supported by the European Union, through the Operational Program Research and Development for Innovations, project No. [CZ.1.07/2.3.00/30.0034](#).

### Job Requirements

We are looking for candidates who

- hold a Ph.D. degree (or equivalent) in the research area related to the selected topic issued from 29 March 2008 until 17 June 2013,
- have an ability to perform independent research with a strong emphasis on publications in refereed journals,
- possess excellent communication skills and written/verbal knowledge of the English language.

We offer

- the possibility to work in a newly established dynamic and ambitious research center with the state-of-the-art equipment,
- a contract with a duration until 30 June 2015, with a critical evaluation after the first year,
- a gross salary of 56,000 CZK per month (approximately 2,200 Euro or 2,800 USD),
- a partial coverage of the mandatory social and medical insurance by the employer (the employee has to

contribute 6.5% of the gross salary to pension insurance, 4.5% to health insurance and, according to the currently valid legislation, approximately 16.5% is deducted as income tax),

- the coverage of travel expenses of up to 55,000 CZK per year,
- the coverage of operating costs of up to 40,000 CZK per year,
- a three-month internship at a foreign university or a company.

Additional details are available [here](#).

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