

Employer Service Traitement des Eaux et Pollution - Faculté des Sciences Appliquées
ULB - Dept Water Pollution Control

Fonction Research assistant (M/F)

Description

- In water science and technology, there are many applications where the improved optical imaging of microscopic particles in solution is required: floc aggregates, sediment grains, solid contaminants, oil droplets, pathogenic microorganisms, spores, cysts, planktonic organisms, gas bubbles.... Examples include drinking water quality assurance, wastewater treatment optimization, or monitoring of harmful algal blooms. As a result, diagnostic technologies that enable high-throughput particle imaging constitute an active field of investigation with significant market potential and health impacts. This ambitious inter-University R/D project, supported by the Brussels Institute for Scientific Research and Innovation, targets the development of dedicated instrumentation and applications within the field of environmental sciences, in particular to monitor water quality on-line and *in situ*, based on a novel digital holography microscope (DHM) technology recently developed and patented at MRC-ULB. These new sensors can detect, visualize and quantify particles in continuous fluid flow for laboratory benchtop, on-line industrial processes and in undisturbed natural conditions for *in situ* applications. Comparatively to existing microscopy visualization methods, the great advantage of the novel imagery device is that the depth-of-focus is considerably magnified (typically by a factor 100). Manual intervention by the operator is minimal, opening large opportunities for implementation of automated water surveillance schemes
- Within this context, we are looking for an enthusiastic, junior researcher to explore, design and implement (initially at lab-scale) applications of the new imagery technology responding to the demands of the water & wastewater treatment industry. The research assistant will join a group of 5 persons (among which 2 PostDoc) also developing DHM applications within the ULB-VUB consortium
- The research will be conducted in French or in English (if the fluency of the candidate in the French language is initially insufficient).

Profile

- Master degree in exact sciences, with good mathematical orientation, such as a bioengineer or a civil engineer (chemistry / environment / water & geosciences). Considering the multi-disciplinary nature of water issues, applications from candidates having another degree in the exact sciences (such as Master degree in Physics, in Biomedical engineering, in Biochemistry or in Pharmaceuticals) will also be taken into consideration.
- Preference will be given to applicants who:
 - - are fluent in English (with ability to write science communications) and/or Dutch (at least passive reading of technical documents),
 - - can demonstrate strong organizational skills,
 - - can demonstrate a keen personal interest for environmental management issues.
- A limited professional experience in the water & wastewater industry (such as graduation thesis, internship) would evidently constitute an asset, but is not at all compulsory to apply for the job.

Type of contract fixed term contract for two years (with possibility of extension 1 year)

Statute employee

Work regime full-time

Application review begins Sept 1, 2009 and will continue until the position is filled.

Work location Campus de la Plaine, Ixelles, 1050 Bruxelles

Contact Send your application, preferably by e-mail, to :

Faculty of Applied Sciences - ULB
Prof. Michel Verbanck
Dept Water Pollution Control
Boulevard du Triomphe CP 208
B-1050 Brussels, Belgium
Tel.: +32-2-6505198
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Email: mikeverb@ulb.ac.be
Web: <http://www.ulb.ac.be/polytech/stepfree>

Or to :

Email: stepfree@ulb.ac.be

Informal enquiries about the post & salary conditions can also be made through phone contact :

Michèle Loijens
Tel.: +32-2-6505212 / 5213

Job ref. STEP09-201