

# National and Kapodistrian University of Athens

## Special Account of Research Grants

Athens 26/9/2012

### CALL FOR EXPRESSION OF INTEREST

### (RESEARCH FELLOW CONTRACT )

The Special Account of Research Grants of the National and Kapodistrian University of Athens, taking into account :

i) The regulations of the Π.Δ. 432/1981, of KYA 679/22.08.1996 (ΦΕΚΒ 826) ratified by the article no 36 of the law N.3794/2009 and modified by the article no 36 of the law 3848/2010,

ii) The SARG Funding and Management Guide of the National and Kapodistrian University of Athens

in order to materialize the Act «**MorphPL: «Advanced Programming Languages with Class Morphing»**, code number **1163**, in the context of the Program «TRAINING AND LIFELONG LEARNING - ARISTEIA», co-financed by Greece and the EU, with a budget of 342.008€ for 36 months starting on the 6/9/2012 and ending on the 30/9/2015 under Scientific Co-ordinator Ioannis Smaragdakis, Associate Professor, Department of Informatics and Telecommunications

decided to address an invitation for the expression of interest for one fixed-term contract governed by private law regulations, as these are outlined below:



European Union  
European Social Fund



MINISTRY OF EDUCATION & RELIGIOUS AFFAIRS, CULTURE & SPORTS  
MANAGING AUTHORITY

Co-financed by Greece and the European Union



## Brief description of the act

Morphing is a programming construct that allows a program class or module to have non-fixed contents. E.g., instead of a class declaring a specific set of methods, it may declare that its methods match one-to-one (with appropriate changes based on a fixed pattern) those of whichever class is supplied as a parameter. The interesting feature of morphing constructs is that they offer significant flexibility while maintaining full separate reasoning and type-checking. This ability can introduce the next major step in programming language evolution, with significant impact in all of computer science.

The proposed work consists of advancing this research with features that substantially increase the power of morphing. Specifically, the work will first study what late binding mechanisms are necessary for morphing to be a full substitute of object-oriented inheritance. Additionally, the work will produce language constructs that allow morphing to be used for class modification, in addition to class generation, thus supplanting emerging paradigms, such as aspect-oriented programming.

## Number of contracts:

One contract at post-doctoral level

## **Qualifications demanded from candidates are as follows:**

### **Compulsory Qualifications**

- PhD in a subject related to Programming Languages or Software Engineering
- Certified knowledge of English language

### **Desired Qualifications**

- Working experience in software development

## Research activities

Research work in all work packages, programming language implementation, software development, theoretical study and language design (semantics, type system), authoring of technical documents.

## Working time

It is a full time contract, 8 hours per day, 5 days per week. The duration of the contract will be subject to the needs of the act and cannot exceed the duration of the act. Salary will include tax and insurance fees and depend on the qualifications of the candidate.

Interested candidates can submit applications together with a CV and copies of their degrees and documentation of their previous work and experience, and any other material that would certify the content of their CV and degrees. Additional qualifications will be considered accordingly.

**Applications that fail to provide evidence of the above mentioned compulsory qualifications will be immediately excluded from the selection process.**



The Research Committee does not undertake any commitment to conclude any agreement and retains the right not only to select the co-contractor but also full discretion as for the conclusion of the relevant contracts.

Applications, CV's and accompanying material must be submitted by e-mail with the indication «*Application :MorphPL/ Smaragdakis*»(in the subject and beginning of the body sections) to the e-mail address: [papadaki@di.uoa.gr](mailto:papadaki@di.uoa.gr)

**Deadline for submission is the 15<sup>th</sup> October 2012**

For further information please contact [smaragd@di.uoa.gr](mailto:smaragd@di.uoa.gr) and [papadaki@di.uoa.gr](mailto:papadaki@di.uoa.gr) (tel.+302107275311)



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