Marie Curie ITN Fellowships at FORTH-ICS

RESEARCH TOPIC

The ESRs will pursue research on the general area of concurrent computing and in particular on the Theoretical Foundations of Transactional Memory.

Multicore architectures have come to stay; yet multicore is useless without concurrent programming. The current parallel programming approach of employing locks is

widely considered to be too difficult for any but a few experts. Transactional Memory (TM) is a new programming paradigm which is considered by many researchers as the future of parallel programming. To understand properly TM systems as well as be able to assess them and improve them, a rigorous theoretical study of the approach,

its challenges and its benefits is badly needed. This is the challenging research goal to be undertaken by the recruited ESRs.

The recruited ESRs will work in close collaboration with the other academic partners of the project:

- EPFL, Switzerland (Prof. Rachid Guerraoui)
- Technische Universitaet of Berlin, Germany (Prof. Anja Feldman & Dr. Petr Kuznetsov)
- Technion, Department of Computer Science, Israel (Prof. Hagit Attiya)
- University of Rennes I, France (Prof. Michel Raynal)

and under the supervision of researchers from the industry:

- Deutsche Telekom, Germany (Prof. Dr. Anja Feldman & Dr. Petr Kuznetsov)
- Microsoft Research, Cambridge, UK (Dr. Tim Harris)
- Sun Microsystems Labs, Massachusetts, USA (Dr. Victor Luchangco)
- IBM T.J. Watson Research Center, USA (Dr. Maged Michael and Dr. Eran Yahav)

ELIGIBILITY

The recruited researchers should be, at the time of selection, in the first four years of their research careers (measured from the date when they obtained the degree which would formally entitle them to embark on a doctorate). Also:

- ESRs should not already have a PhD
- ESRs should be nationals of a country other than Greece, and
- ESRs must not have resided or carried out their main activity (work, studies, etc.) in Greece for more than 12 months in the last 3 years.

(Some examples of eligible candidates are presented below.)

IMPORTANT DATES

There are two cut-off dates:

1) 1st Cut-off Date: October 20, 2009
   Starting Date: January 1, 2010
   Ending Date: December 31, 2012

2) 2nd Cut-off Date: March 20, 2010
   Starting Date: September 1, 2010
   Ending Date: August 31, 2013

Priority will be given to applicants that can join the project in January 2010. Applicants interested to join the project in September of 2010 should send an e-mail of interest to Panagiota Fatourou [faturu AT cs DOT uoi DOT gr] by October 20, 2009.

PhD students register at the Department of Computer Science twice each year, every February and September. So, applicants interested to pursue a PhD could potentially start their studies either on February 2010 or on September 2010.

FINANCIAL PROVISIONS

Marie Curie ITNs provide competitive financial support to the ESRs including:

- a fair monthly living and mobility allowance,
- a yearly travel allowance (i.e., a fixed amount of money based upon the direct distance between the location of origin of the researcher and Heraklion, Greece, where FORTH-ICS is located),
- a career exploratory allowance (i.e., a single payment for attending job interviews, additional courses, job fairs, etc.), and coverage of the expenses related to the participation of the ESRs in research and training activities (contribution to research-related costs, meetings, conference attendance, training actions, etc.).

HOW TO APPLY

The applicant must submit the following documents together with an application:

1. Curriculum Vitae
2. Statement of objectives
3. Official transcripts of diplomas and grades from all academic institutions of higher education listed in his/her application (after high-school)
4. Certified translations of diplomas and grades into English or Greek (if not originally in English or Greek)
5. Certificates showing all courses attended by the applicant with credit value (ECTS points) and grade for each course
6. Certificates proving fluency in English language
7. Copies (or electronic versions) of theses (diploma thesis, MSc thesis) and research papers published by the applicant

8. Three recommendation letters (as described in more detail below)
9. Other certificates, awards or documents that the applicant would like to submit
10. A copy of passport or official identity document showing the applicant's name in full

Each recommendation consists of two elements:

- A form to be filled out by the referee (contact Panagiota Fatourou [faturu AT csd DOT uoc DOT gr] for obtaining the required forms).
- An additional letter with the referee's comments.

Recomendations must be sent directly to the following address:

Prof. Panagiota Fatourou
Foundation for Research and Technology-Hellas
N. Plastira 100
Vassilika Vouton
GR-700 13 Heraklion
Crete Island
GREECE

Applicants that envisage a PhD will have to submit additional documents to comply with the application procedure of the Department of Computer Science of the University of Crete. In this case, please contact Panagiota Fatourou [faturu AT csd DOT uoc DOT gr] for more information.

Selected applicants will be invited to undergo a (telephone) interview (and possibly to give a presentation at FORTH ICS).

GENDER EQUALITY

FORTH is an equal opportunity employer. Female candidates are particularly encouraged to apply. Panagiota Fatourou (the coordinator of TransForm) is a woman,

and the same is true for half of the rest of the project researchers. This identifies the extra sensitivity of TransForm to gender equality issues; all possible efforts will be made to increase participation of women researchers in the project.

THE TRAINING PROCESS

TransForm aims at improving the career perspectives of researchers by offering structured training in the challenging research area of Transactional Memory, as well as providing complementary skills and exposing the researchers to other sectors including private companies. More specifically, the ESRs will work in close collaboration with leading researchers in the field of concurrent computing over Europe; five well-known universities and research institutes (listed below) participate in the project:

1. Foundation of Research and Technology-Hellas, Institute of Computer Science, Greece (Prof. Panagiota Fatourou)
2. EPFL, Switzerland (Prof. Rachid Guerraoui)

3. Technische Universitaet of Berlin (Prof. Dr. Anja Feldman and Dr. Petr Kuznetsov)
4. Technion, Department of Computer Science (Prof. Hagit Attiya)
5. University of Rennes I, France (Prof. Michel Raynal)

Strong collaboration among the research teams is a must for Marie-Curie Initial Training Netowrks and the ESRs will have the opportunity of visits and secondments to the institutions of the other partners of the network.

Additionally, the ESRs will be given the opportunity to come in touch with strong industrial partners since researchers from well-known companies, like Deutsche Telekom (Germany), Microsoft Research, Cambridge (UK), the Sun Microsystems Labs, and the IBM T.J. Watson Research Center in the US, stand at the supervisory board of the project.

Training also includes network-wide training activities with the long-term goal of providing a full-power training to the ESRs. Examples of such activities are the attendance of workshops and summer schools, courses that provide complementary

training (such as project management, presentation skills, language courses, ethics, IPR, communication, etc.), involvement in the organisation of network activities,

and other aspects such as proposal writing, task co-ordination, etc.

THE BEAUTIFUL ISLAND OF CRETE

Living in Crete, the biggest (and one of the most beautiful) island in Greece, can become an exciting experience. Crete is a multicoloured mosaic of mythology, history, culture, friendly and proud people, rough and stony mountains, gorges, the always bright Cretan sun and the deep sea that surrounds the island. In addition to

the facilities offered by its big cities, one can really enjoy the beauty of the landscape and the mountains.

The island offers a wide range of outdoor activities, from mountaineering to all kind of water-sports, to tennis, basketball and football. Rock climbing, paragliding, parapente, parachute, hiking (i.e., through the spectacular Europe's longest Samaria Gorge as well as through many other smaller but well-known gorgeous gorges of the island), mountain bike, all kind of sea sports (from swimming to diving at a wonderful undersea world, to sailing, etc.), cave exploration, as well as a plethora of other activities (like horse riding, participation in local feasts, etc.) are only some of the adventurous choices offered on the island.

Other attractions are in plentiful supply and include the remains of the Minoan civilisation at Knossos as well as a wide collection of other archaeological sites

of interest, the astonishing Archaeological Museum in Heraklion, picturesque villages spread all around the island, the well-known traditional Cretan food, and the wonderful beaches on the southern side of Crete.

Several beautiful small islands (like Gavdos, Chrissi, etc.) are very close to Crete and are popular destinations for one day cruises. Moreover, Crete is just two hours sailing away from the magnificent island of Santorini (Thira) in Cyclades from which most of the Cyclades islands can be reached.

Any discussion of Crete without mentioning its people would not be complete. Cretans are a proud and independent people and their behaviour reflects their long history and their struggles against occupying forces:

"They are a truly admirable people who learnt to hold on stubbornly throughout the tumultuous events of forty centuries to their native character and local speech. Courage, mingled with an independent spirit that is often close to downright disobedience, a lively wit, vivid imagination, and a language full of images, spontaneous and unaffected, love for every kind of adventure, an indefatigable urge for freedom, that goes hand in hand with an insatiable desire for bravado... A fertile land that has always given birth to the worthiest of men both ..., in science and letters, in the economy and in war..." ("History of Crete" by Theoharis Theotokis).

ELIGIBILITY EXAMPLES

Example A:

A researcher has already been working as a researcher in industry for two years since graduating with his/her first degree in computer science. S/he would be able to benefit from participation in an ITN as an ESR even without pursuing a Ph.D. degree.

Example B:

A researcher has graduated with his/her MSc degree in computer science in 2007 and would like to start his/her Ph.D. studies in 2010. S/he is eligible as an ESR within the ITN as s/he has less than 4 years of research experience and no PhD.

Example C:

A researcher obtained his/her PhD after 3 ½ years. S/he is NOT eligible as an ESR within an ITN even though s/he has less than 4 years of research experience.