

# Research Partners Instructions

## ***1. List of research participants***

The GRIFFE consortium has reached a critical mass in terms of aims to achieve, people involved, and clarity of structure; we are therefore in good position to kick start closer participation from all of you as we continue to refine/write the project proposal. We are also waiting for a few other research institutes to answer. The list of confirmed research institutes at the moment is the following:

Adam Vile of Excelian;  
Cesare Reina of SISSA / Assicurazioni Generali;  
Esteban Moro of Carlos III de Madrid University;  
Giulia Iori of City University;  
Matteo Marsili of ICTP;  
Rosario Mantegna of Palermo University;  
Spyros Skouras of Athens University;  
Thomas Lux of Kiel University;

## ***2. Objectives***

The aim of our project is to build an Econophysics, Econometrics and Finance research community on top of the existing scientific European computing grid EGEE, since these areas of research share not only the same fundamental scientific interest but also have big computational needs. So we will share access to computing resources with other scientific communities already present in EGEE.

EGEE is designed for generic scientific communities. In its current form it may not fit well the research needs of our community. We therefore contacted you to be pilot users: we ask you to carry out your research using this infrastructure so that we can adapt it according to your direction. All the project is centred/organised around you, since you will be the main driver. Clearly, during the lifetime of the project it's mandatory to expand the community and ensure it will become self sustainable at project expiry.

## ***3. Structure of proposal***

The overall structure of the I3 proposal (as you can see from the attached guide) should combine Networking Activities (NA), Service Activities (SA) and Joint Research Activities (JRA).

Our first rough idea is to have the following structure:

One Service Activity - SA1:

For setting up, integrating and supporting core computing resources for our community, into EGEE. It includes absorption of our Italian EGRID project.

Three different Joint Research Activities:

- JRA1: Econophysics, Econometrics and Finance research driver for adapting/tailoring the EGEE scientific grid. Emphasis is given to the applications that will drive the changes.
- JRA2: Utility Compute Model for Econophysics, Econometrics and Finance research: enabling a full utility compute model, with data and algorithm sharing, security and partitioning.
- JRA3: tailoring EGEE's middleware to the needs of Econophysics, Econometrics and Finance research community.

A quite large Networking Activity - NA:

To foster ties and expand the community; to network and co-operate with international grid initiatives especially focused on our community; to manage the consortium; to assess progress and results.

Within this generic NA we envision training and assistance to research partners. There will be periodic general meetings, and free and open exchanges/contacts will be encouraged.

As you can see the research activities you will perform within the project will be framed in JRA with probably some extension in dedicated working package within the NA.

## **4. Your research plan**

We therefore ask you to start organizing a rough plan on the topics you'd like to investigate. We are aware that research cannot be planned precisely as interests may change along the way but it's however important to have it, even if quite general in order to easily accommodate changes.

Please keep in mind the computational power you will have: 700 CPUs from EGRID at least for the initial year, for the moment at least 250 CPUs from consortium partners, between 1000 and 2000 CPUs from EGEE. These CPUs are all best effort: we share our consortium idle CPUs time with the rest of the scientific community, and we get the idle time from the rest of the scientific community. Still, there is a lot of firing potential.

## **5. Planned interaction**

We envision the following approach to ease the interaction among the scientific community formed by you and the services provided by the consortium:

(1) A specific researcher of each team must be dedicated to grid porting: for the purpose of this document it will be called grid-enabler. This user will be the central point for the transfer of grid knowledge to the research team. We expect this person to be an important focus point for the team in help and assistance; this user will have the knowledge of the specific research domain and so will speak the same language and share the same worries, visions and needs of the team. This user should be motivated to make the grid integration possible.

(2) You will be assigned a specific person from the Service Activity dedicated to your team; for the purpose of this document this service person will be called contact-person. The contact-person will work very closely with the grid-enabler.

(3) Researchers are expected during the lifetime of the project to identify and supply what Europe calls "commonalities".

This refers to those parts of the software applications you will be developing that can be used as tools for other researcher to use in grid based finance research. Intellectual property issues will be addressed.

Examples include: routine libraries you may develop that leverage grid potential, full applications/tools that use the grid and that you wish to contribute to the community, frameworks, etc. If MATLAB is needed in the grid by you, MATLAB grid integration counts as a commonality.

The role of the grid-enabler and of the contact-person will be essential for this, and through this interaction we expect to spot the commonalities within your research activity, and together with you to build a repository.

(4) There will be periodic meetings in person with all researchers and service people. There will be periodic meetings in person that will include all grid-enablers and contact-people. Collaborative technology will ensure contacts will be maintained throughout the project lifetime. From these meetings we aim to always keep aligned with you, and also to spot commonalities between the different research teams. These activities will be of course within the more general Network Activity.

(5) Finally, during the lifetime of the project it is important to understand and study how to possibly share some of your computing centre resources with the rest of the community. We are aware that the last thing a researcher wants is to deal with the SysAdmin at the Institute's computing centre, but it must be fathomed, because Europe expects resource sharing.

## **6. Proposed calendar of activity**

It is important we organise a meeting in person between all of us to acquaint and discuss the budget. **Please provide us with your availability for a meeting within this month.** We could arrange for Video Conferencing, but it would be better to be in person. The action plan is fairly intense, and tentatively set as follows:

by the end of this week: 24/03:

consortium finalized and general agreement on the overall structure of the project

by the end of this month: 31/03

-first version of the budget

-rough draft of all the working packages and responsibilities associated

-contributions from all the partner collected.

before easter: 07/04

-first draft of partB of proposal (90% of the sections completed)

week after easter: 14/04

-second draft of partB of proposal (100% of the sections completed)

-budget defined

by 25/04

-final version of partB of proposal

-partA completed (via electronic submission)

by 02/5:

-cleaning of the proposal

## **7. Action plan for the following days**

- We are working hard to send by the end of this week a reasonable draft of the most important document that we must submit. It will explain the objectives, organisation, work plan, partners involved, etc.
- We are attaching a copy of the Guide for Applicants, which is important for every member to read.
- Provide us with your availability within this month and for April as well.
- We ask you to supply a brief description of you: it is part of the official documentation we must supply. The section of the form to fill in says the following:

### *2.2 Individual participants*

*For each participant in the proposed project, provide a brief description of the organisation, the main tasks they have been attributed, and the previous experience relevant to those tasks. Provide also a short profile of the staff members who will be undertaking the work. (Maximum length for Section 2.2: one page per participant)*