HiDALGO

Centre of Excellence

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DON´T MISS!

ACM-SIAM Symposium on Discrete Algorithms, virtual event

9.1.-12.1.2022
https://www.siam.org/conferences/cm/conference/soda22

NEWSLETTER

January 2022 - Issue No. 4

Welcome from the Innovation Manager

Dear colleagues,

the project's final year started and a lot has happened. The pandemic still sweeps across the globe and many things taken for granted before now require an immense amount of time and effort to play out. However, despite everything the crisis proved to boost digitalization and in succession many organisations were forced to take immediate action.
With the HiDALGO project, we are starting out right during those challenging times: we support companies displaying innovative ideas and lowering barriers of digitization strategies. Benefiting partners and stakeholders not only on an EU wide scale, but globally.
The HiDALGO project develops novel methods, algorithms and software solutions for High Performance Computing (HPC) and High Performance Data Analytics (HPDA). The main focus is to accurately model and simulate complex processes that occur in the context of major global challenges. We are currently working on four different case studies gaining continuous improvement and adaptation simultaneously: migration, epidemics, social networks and pollution.
It is necessary to swiftly take on new innovative business models and integrate them into existing systems, platforms and also business cases. The COVID simulation, for instance, was able to quickly demonstrate how the pandemic's outbreak unfolded. Opportunities were identified during the crisis. The exchange among partners and technologies flexibly adapted to the circumstances and made those opportunities visible.
In recent months during WP2, we have increasingly focused on stakeholder identification. Different stakeholder groups were identified and examined more closely in order to create the appropriate connection and benefit based on our use cases. Cultivating stakeholder groups was a given in order to evaluate targeted services and suitable case studies. Due to different services vary based on complexity, it makes sense to measure their degree of maturity.
By means of online workshops, such as the WP2 (Workshop “Stakeholder”), we interactively worked together with other HiDALGO project partners in different business challenges. We are increasingly using digital flipcharts for more efficient workflows.
An additional project goal is to disseminate the results through active participation in various events, publications in top journals and collaboration with other projects. Through collaborative work, new impulses are generated and the project's scientific impact is maximised.
In the coming weeks, the focus will be on designing flyers, websites and information material. We will spread information via social media channels and mailings and coordinate any actions together with our WP2 and WP7 partners. We hope for a wide reach and welcome any support by the individual teams. Please, spread the word!
I am particularly proud of the recently established "Female Researchers Group." About 20 highly qualified women are currently working in the HiDALGO project's scientific area and are expanding the network activities to other centres of excellence, clusters and stakeholders.
For certain another exciting monthes are awaiting the entire HiDALGO project team and I look forward to a continuously successful cooperation.

Stay Healthy!
Melanie Mayr, Innovation Manager, Know-Center GmbH

Internal Community Building in HiDALGO

In the HiDALGO Centre of Excellence a number of scientists from different fields of expertise work together. One of the main challenges we were facing at the beginning of the project was to produce a working environment, in which the various disciplines interact with each other in an optimal and constructive way. Therefore, several community building activities had to be implemented.

At the beginning of the project we observed that although the main focus is in HPC and HPDA, to achieve our goals we need expertise in many different disciplines besides HPC, such as theory of computing, mathematics, physics, and social sciences. Each of these topics has its own concepts, approaches, and existing routines to perform a technological task. In addition, each of the different disciplines uses different terms, abbreviations, and a specific language. Working closely together might lead to misunderstandings and misinterpretations in other people's work.

To achieve an optimal working environment, the project leadership actively supported researchers to collaborate within the consortium, overcome disciplinary barriers, get opportunities for mutual exchange and learning, and develop own knowledge and experience. Main components consisted of dedicated sessions at the general assemblies, coupling meetings, internal surveys and reflecting on the results. The community building activities within HiDALGO experienced a time structure of three phases: “establishing”, “performing” and “promoting”.

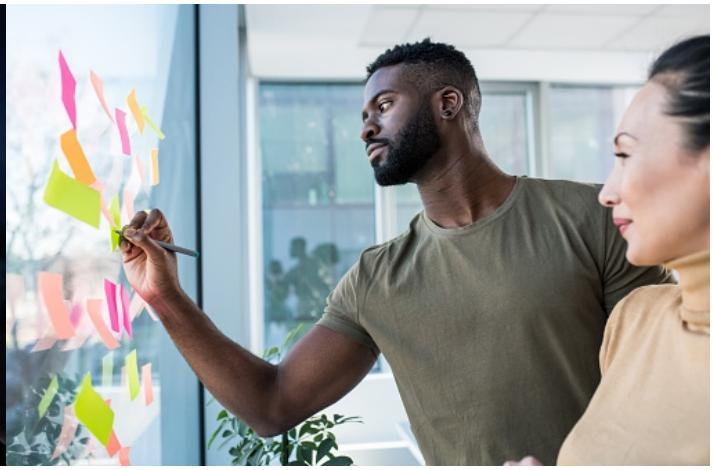
In the first year of the project, we mainly focused on internal community building sessions at the (physical) general assemblies as well as on so called coupling meetings. Internal surveys - issued before and after the technical meetings and General assemblies - helped the organizers to identify the strong and weak points of internal collaborations, and to improve the working conditions. At the beginning of the second year of the project, interviews with the WP-leaders have been conducted, and we collected ideas for an improved collaboration among selected work packages.

We also implemented supplementary elements to improve internal collaboration. These were internal and external training for HPC, an internal newsletter to disseminate information tailored to the needs of the project researchers, actions to support the group of female researchers and a specific internal Wiki, which lists typical terms and abbreviations together with corresponding explanations.

The specific actions listed above led to an excellent environment for researchers with different expertise working successfully together. The software and tools we developed integrate various disciplines and resulted in a number of joint interdisciplinary publications. Without significantly improving mutual understanding and internal collaboration from the beginning on, the ambitious goals of the project could not have been achieved.

Ludger Benighaus
Robert Elsässer

Recent Developments in WP2



Since its start in December 2018, a number of significant developments have emerged within the HiDALGO project. In each of the pilot applications, a mature parallel software simulating the complex processes within the corresponding use case has been developed and optimized. Early 2021 we began to develop a strategy on how to make our achievements publicly available. Within the frame of Work Package 2, five different task forces have been established. The first task force focused on added value services and its main goal was to promote the products of the project to possible stakeholders. The second task force concentrated on our stakeholders and its main objective was to define possible target groups for our services. The third task force had the goal to identify our success stories. The fourth task force was on promotional campaign, while the goal of the fifth one was to develop a new brand as a Centre of Excellence.

Although we had separate meetings dedicated to each of the task forces, a close and intensive interaction was crucial for a successful work. As an example, we mention here the interplay between the task forces on promotional campaign and branding. While the promotion of our services is one of the key elements of HiDALGO, this is performed using the well defined brand of our project. On the other side, one of the major ingredients of the new brand lies in the promotional activities we are going to run.

All the task forces led to a number of specific results on sustainability and awareness creation. The collaboration between the first two task forces resulted in a stakeholder matrix, which contains the assignment of different services to possible stakeholders. Additionally, a stakeholder survey has been developed. Within the task force “Global Challenges” the interviews with possible users of our services have already been started. The third task force identified two main success stories: the use of our simulation and predictions in the Covid'19 pandemic and for refugee migration. The task force “Promotional Campaign” initiated a number of actions dedicated to promote our services, as well as the results and products to the scientific community and the general public. Finally, in the last task force a new brand has emerged, which takes into account that our project constitutes a Centre of Excellence.

Although the task forces achieved several results in their areas, the endeavor continues. In the last phase of the project, our services are finalized and, if needed, slight adaptions of the stakeholder matrix might be performed. Further success stories will be published and the promotional activities will further be intensified. These are the main objectives of these task forces for the next few months.

Ludger Benighaus
Robert Elsässer
Elena González
Rene Kaiser

Partner Institutions

Associate Partners

Events HiDALGO participated in

16 - 18/06/2021 Virtual conference ICCS, Workshop "**Multiscale Modelling, Uncertainty Quantification and the Reliability of Computer Simulations**"	04 - 08/10/2021 Hybrid event **"25th International Symposium on Distributed Computing (DISC'21)"** Freiburg, Germany
22 -24/06/2021 Virtual **event** **Forum Teratec 2021**	25 - 29/10/2021 Virtual event **EU Sustainable Energy Week (EUSEW'21)**
07 - 09/07/2021 Virtual workshop **"Tackling Global Challenges with HPC, HPDA an Simulations"**	15 - 18/11/2021 Virtual booth **The International Conference for High Performance Computing, Network, Storage, and Analysis (SC'21)**

Project #824115 funded by the Horizon 2020 Framework Programme of the European Union