

Hidalgo

Centre of Excellence

CONTENTS

Welcome from the	2
Communication	
Manager	

3

Dissemination & Communication

Associated Partnership 4 Program

Partner Institutions/ Events with HiDALGO 5 presentations in 2022



Welcome from the Communication Manager



Dear colleagues,

In February 2022 the HiDALGO project has been completed. After more than three years of hard work and innovations, we look at our results and achievements. The vision of the Centre of Excellence HiDALGO is "We advance technology to master global challenges".

Indeed, our global society is facing a multitude of challenges, which have to be addressed and solutions must be provided. In our work package 4, we focused on four dedicated societal challenges: the simulation of migration flows from conflict areas, the evolution of pollutants emitted by cars in urban areas, the spread of messages in large social networks, and the evolution of the number of infected individuals due to COVID-19. For all these global challenges, we developed efficient simulations to model the underlying dynamic processes. The corresponding software products are highly scalable and efficiently use High Performance Computing, High Performance Data Analytics and partly Artificial Intelligence.

As one of our major success stories, I would like to highlight our results with respect to the COVID-19 simulations. While COVID-19 was probably the biggest global challenge in the past two years, it was unknown at the beginning of HiDALGO. However, as a Centre of Excellence for Global Challenges, we were convinced that by using our know-how and resources, we must provide a response to the immense threat of SARS CoV2. Within a short time period we developed a code, which is able to simulate and predict the evolution of newly infected individuals in certain local areas.

Besides the global challenges we have focussed on, in the Centre of Excellence HiDALGO we also developed several highly optimized methods and software to advance HPC in a more general manner. In particular, we concentrated on the interplay between hard- and software to make our codes more efficient. Our approaches have been implemented and tested on different architectures, providing evidence for significant improvements in running time and storage requirements.

In this final Newsletter we report on the general dissemination activities within the HiDALGO project. We summarize the impact achieved through our major dissemination channels as well as some dedicated actions such as the Associate Partnership Program.

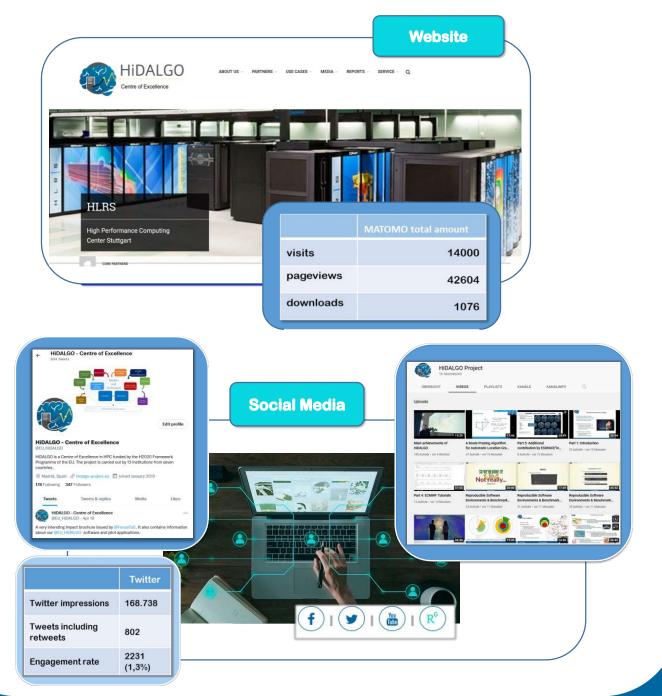
At this point, I would like to cordially thank all members of the project for their efforts and hard work, which led to the success of the Centre of Excellence HiDALGO!

Robert Elsässer



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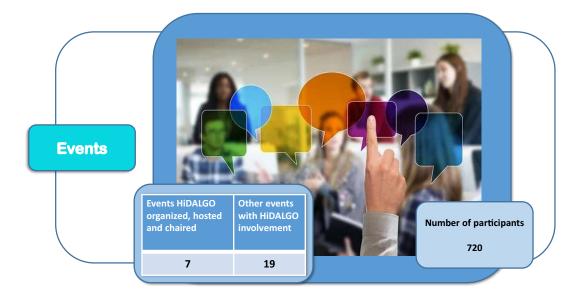
Dissemination & Communication





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Associated Partnership Program





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Partner Institutions



Events with HiDALGO presentations in 2022

ACM-SIAM Symposiumon Discrete Algorithms	The 37th ACM/SIGAPP Symposium on
(SODA)	Applied Computing
Virtual Conference	Virtual Conference
January 9-12, 2022	April 25-29, 2022
The EuroHPC Summit Week 2022	ISC High Performance 2022
Paris, France	Hamburg, Germany
March 22-24, 2022	May 29 - June 2, 2022
The Web Conference 2022 (WWW) Online April 25-29, 2022	International Conference on Computational Science (ICCS) London, UK June 21-23, 2022

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