

**InnoHPC – High-performance computing for effective innovation**

**in the Danube region**

**2nd Regional Workshop Thursday, 31st May 2018 Ljubljana**

**Place: Chamber of Commerce Slovenia (7th floor business oasis, Dimičeva ulica 13, Ljubljana (Slovenija)**

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|  | Agenda |
| *14.30-15:00* | *Registration, welcome words and networking*  *(some refreshment drinks and small bisquits)* |
| 15:00 – 15.10 | Introduction of consortium and stakeholders - tour the table |
| 15:10 – 15:50 | 1 st invited speaker : Tomas Karasek, Head of parallel algorithms research lab, IT4Innovations national supercomputing center, Ostrava, Czech Republic  Title: Application of HPC technologies for solving engineering problems  Abstract: In this presentation success stories of application of HPC technologies for solving real world problems will be showcased. Examples, how HPC technologies could help increase innovation potential of Small and Medium Enterprises through Virtual Testing and Prototyping will be presented. |
| *15:50 – 16.00* | *Coffee Break* |
| 16:00 – 16:40 | 2 nd invited speaker : Ivan Spisso, PhD, HPC consultant for academic and industrial CFD applications SuperComputing Applications and Innovation (SCAI) Department, CINECA via Magnanelli 6/3, 40133 Casalecchio di Reno, Bologna (Italy) ph  Engineering Applications and HPC a marriage of convenience  Abstract: According to the European Commission's vision, Digital Innovation Hubs (DIHs) are the real "gateway" for companies to the world of Industry 4.0 to the extent that they provide services to introduce 4.0 technologies, develop digital transformation projects and access the innovation ecosystem at regional, national and European level.  The presentation will illustrate, through success stories and a description of services, the role of Cineca in stimulating innovation 4.0 through collaboration between research and business and the training of skills for the work and factory of the future. In particular, these success stories will be presented: - Optimization of the airbox of the Lamborghini V12 engine through Radial Basis Functions applications - Combining Artificial Intelligence to classical external aerodynamics optimization DoEs to reduce costs and time-to-result - Implementing an HPC-enabled workflow for ELAPHE in-wheel electirc motors design   - Creating innovative Data Analytics services from on-board diagnostics retrieval and analysis - Reducing defects in high pressure die casting car components made in light weight alloys through multiphysics HPC simulations |
| 16:40 – 17:00 | 3 rd invited speaker: Radovan Sernec, PhD, Director of Innovation and Technology, AV Living Lab;  Title: Support of HPC in designing autonomous vehicles: Will HPC be installed in our cars in near future? |
| *17:00 – 17:10* | *Coffee Break* |
| 17:10 – 17:45 | Open discussion among HPCs and SMEs based on the presented best practices, moderated by prof. dr. Janez Povh |
| 17:45 – 18:15 | Conclusion with buffet warm food and non alcohol drinks and wines |