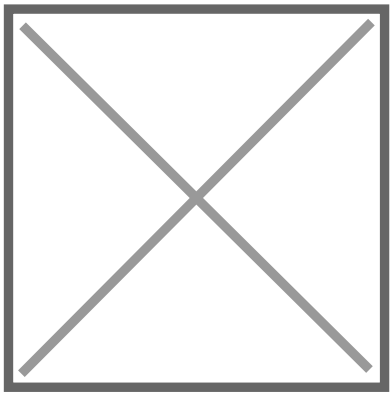

Schedule

Wednesday, 02 Oct

08:30 - 18:00
Registration

☒ Main Courtyard, d'Etigny Auditorium

☒ Please remember to present the QR code you received via email.

09:00 - 09:45
Opening ceremony

☒ Main Courtyard, d'Etigny Auditorium

09:45 - 10:45
Keynote Talk - Bernd Mohr

☒ Main Courtyard, d'Etigny Auditorium

☒ Parallel Performance Analysis at Scale: From Single Node to one Million HPC Cores
Download presentation

☒ Current high-end HPC systems consist of complex configurations of potentially heterogeneous components. In addition, the hard- and software configuration can change dynamically due to fault recovering processes or power saving efforts. Deep hierarchies of large, complex software components are needed to operate and use them. Developing efficient and high-performance application software for these systems is challenging. Therefore, sophisticated performance measurement and analysis capabilities are required.
Download presentation

Moderator: Esteban Meneses
Read more

10:45 - 11:05
Industrial Talk Diamond - Dell+AMD+NVIDIA

☒ Main Courtyard, d'Etigny Auditorium

☒ Power and Efficiency: The New Era of Technology with DELL Technologies, AMD, and NVIDIA

☒ We will explore how DELL, AMD, and NVIDIA are leading the technological transformation through solutions that combine power and efficiency. We will discuss recent innovations that are driving the performance of computational systems. Experts from the three companies will share their insights on how their technologies are being applied in sectors such as artificial intelligence, cloud computing, and advanced graphics, highlighting real use cases and tangible benefits for the entire segment. This panel will provide a comprehensive view of how the collaboration between DELL, AMD, and NVIDIA is shaping the new era of technology, focusing on superior performance and energy efficiency.
Moderator: Nicolás Wolovick Read more here

11:05 - 11:45

Coffee Break and Industrial Expo

☒

11:45 - 12:25

Invited Talk - Alberto Ros

☒ Main Courtyard, d'Etigny Auditorium

☒ Accurate Predictions for High-Performance Processors
Download presentation

☒ Prediction is a fundamental technique for designing high-performance processors. Prediction techniques are used nowadays for a large number of performance optimizations. This talk presents advanced mechanisms for (1) instruction and (2) data prefetching with a focus on timeliness and accuracy and (3) memory dependence prediction by using the same history length for each dependence.
Download presentation

Moderator: Esteban Mocskos
Read more here

12:25 - 12:45

Industrial Talk Platinum - Intel

☒ Main Courtyard, d'Etigny Auditorium

☒ Intel's Vision in High Performance Computing | Strategic Collaboration: Intel & Argentina's National Meteorological Service

☒ Intel, under the leadership of Santiago Cardona, Director of Latin America, will present the company's strategic vision in the semiconductor industry, with a focus on the High Performance Computing (HPC) segment. As an example of this vision, a successful case in Latin America will be highlighted, where Argentina's National Meteorological Service has enhanced its forecasting capabilities through advanced solutions provided by Intel. Pablo Loyber, Director of Technological Infrastructure and Data at the National Meteorological Service, will share how the integration of these technologies has transformed the meteorological operations, emphasizing the collaboration between Intel and the Argentine Meteorological Service. The strategic partnership between Intel company and Argentina´s National Meteorological Service in this ambitious joint project will also be highlighted.
Presented by Santiago Cardona and Pablo José Loyber **Moderator: Lizette Robles**

12:45 - 14:15

Lunch Time

☒ Club House, Club Hípico, Santiago.

☒ Av. Almte. Blanco Encalada 2540, Santiago, Región Metropolitana

14:15 - 15:15

Keynote Talk - Mateo Valero

☒ Main Courtyard, d'Etigny Auditorium

☒ Latest Trends in High Performance Computer Architectures
Download presentation

☒ In 1956, the term Artificial Intelligence was coined. From then on, research began that was thought to yield tangible results in a very short time. This was not the case and AI entered what was called its polar winter. In recent years, the existence of a lot of data with which to train neural networks and high-speed computers that execute the enormous number of associated operations in a reasonable time, has made AI present in any human activity.
Download presentation

Moderator: Philippe Navaux
Read more here...

15:15 - 16:15

Panel - Government and Public Relations

☒ Main Courtyard, d'Etigny Auditorium

☒ The main objective of the panel is to understand the strategies and plans of different governments in the region regarding the development of supercomputing and artificial intelligence, assess the contribution of these technologies...
Moderator: Luis Eliecer Cadenas and Paola Arellano Read more here

16:15 - 16:45
Poster Session - Opening

☒

16:15 - 16:45
Coffee break, Posters and Expo

☒

16:45 - 18:45
HPC Track

☒ Main Courtyard, d'Etigny Auditorium

16:45-17:05	A Comprehensive Analysis of Process Energy Consumption on Multi-Socket Systems with GPUs *Luis G. León-Vega, Niccolò Tosato, Stefano Cozzini* Descargar presentación
17:05-17:25	Enhancing Reverse Time Migration Simulations in HPC Systems through I/O and Computation Overlapping *Cristiano A. Künas, Gabriel Freytag, Philippe Navaux* Descargar presentación
17:25-17:45	Evaluation of Computational and Power Performance in Matrix Multiplication Libraries - MKL Vs cuBLAS *Luis Alejandro Torres Niño, Carlos J. Barrios H., Yves Denneulin* Descargar presentación
17:45-18:05	A User-centric Evaluation Methodology for Informed Provisioning of High Performance Computing Resources in Academic Institutions *Johansell Villalobos, Esteban Meneses, Christian Asch, Edward Soto* Descargar presentación
18:05-18:25	EfiMon: A Process Analyser for Granular Power Consumption Prediction *Luis G. León-Vega, Niccolò Tosato, Stefano Cozzini* Descargar presentación
18:25-18:45	Leveraging CPU-FPGA Co-design for Matrix Profile Computation *Fariz Huseynli, Amir Raoofy, Martin Schulz* Descargar presentación

16:45 - 18:45
HPC-IA Track

☒ North Building, 7th Floor, John Von Neumann Room

16:45-17:05	Web system for recognizing actions of physical violence in urban spaces using CNN with Transfer Learning *José Edgar García Díaz, Wilder Suarez Romero, Ciro Rodriguez, Jorge Puga de la Cruz, Victor Manuel Cabrejos Yalan, sis Ayme Moran Temoche, Jhon Charlie Martínez Carranza* Descargar presentación
17:05-17:25	Quantized SG-MCMC for Bayesian Deep Posterior Compression *Sergio Hernández, Xaviera López-Cortes*
17:25-17:45	No Plankton Left Behind: Preliminary results on massive plankton image recognition *Sofía Callejas, Hernan Lira, Luis Martí, Nayat Sanchez-Pi, Andrew Berry* Descargar presentación
17:45-18:05	Machine Learning Regression-based Prediction for Improving Performance and Energy Consumption in HPC platforms *Micaella Coelho, Kary Ocaña, André Pereira, Alexandre Porto, Douglas O. Cardoso, Arthur Lorenzon, Rui Oliveira, Philippe O. A. Navaux, Carla Osthoff* Descargar presentación
18:05-18:25	A computational framework for crop yield estimation *Francisco Altimiras, Sofia Callejas, Rayner de Ruyt, Natalia Vidal, Astrid Reyes, Mia Elbo, Luis Martí, and Nayat Sánchez-Pi* Descargar presentación
18:25-18:45	Histopathology Image Augmentation through StyleGAN2-ADA *Branndon Felipe Muñoz Pinto, Raquel Pezoa, Helen Gutierrez* Descargar presentación

16:45 - 18:45

HPC-Aplications Track

North Building, 3rd Floor, Picarte Auditorium

16:45-17:05 Strategies to Reduce Memory Consumption in Software Quantum Computing Simulators
Gilberto Díaz, Luiz Steffenel, Carlos J. Barrios H., Jean Couturier
Descargar presentación

17:05-17:25 Adaptive Edge-Based AIoT Architecture for Efficient Retraining and Sustainable Monitoring of Ephemeral Streams
Benjamín Arratia, Pietro Manzoni, Daniel Hernández, Marco Zennaro, José M. Cecilia
Descargar presentación

17:25-17:45 Multi-GPU Tomographic Reconstructions of Large Volumes in the Frequency Domain
Paola Ferraz, Otavio Paiano, Eduardo Miqueles
Descargar presentación

17:45-18:05 Accelerating tomographic artifact removal using a multi-GPU system
Macul Moreno, Eduardo Miqueles
Descargar presentación

18:05-18:25 A parallel multi-threading global energy balance for a room thermal analysis in an unsteady state
Carlos Torres-Aguilar, Pedro Moreno-Bernal, Sergio Nesmachnow, Diego Rossit
Descargar presentación

18:25-18:45 Parallel Computing Strategies in WRF: The Role of MPI, OpenMP, & NUMA Affinity
Diego A Roa Perdomo, Esteban Hernandez, Kevin A Brown, Xiaoming Li
Descargar presentación

Thursday, 03 Oct

08:30 - 18:00
Registration

☒ Main Courtyard, d'Etigny Auditorium

☒ Please remember to present the QR code you received via email.

08:45 - 09:45
Panel - Industry Snapshots: Sponsor Perspectives in HPC

☒ Main Courtyard, d'Etigny Auditorium

☒ Download presentation

☒ This panel provides an exclusive platform for our Gold and Silver sponsors to share their key insights and contributions to the field of High-Performance Computing (HPC). In a dynamic and concise format, each sponsor will have five minutes...
Download presentation

Moderator: Luis Marti
Read more here

09:45 - 10:45
Keynote Talk - Marta Mattoso

☒ Main Courtyard, d'Etigny Auditorium

☒ Trusting data science workflows in HPC
Download presentation

☒ Trusting outcomes from scientific workflows is related to the reproducibility and traceability of the execution. Despite the progress in containers to support reproducibility for workflows, and advances in provenance data capture for traceability, executing in HPC is challenging.
Download presentation

Moderator: Carla Osthoff
Read more here

10:45 - 11:05
Industrial Talk Diamond - Lenovo

☒ Main Courtyard, d'Etigny Auditorium

☒ Lenovo Neptune Liquid Cooling

☒ Present the 6th generation of Lenovo Neptune Liquid Cooling technology as the sustainability option for HPC and green datacenters.
Presented by Rafaela Reis and Ulysses Galasso
Moderator: Nicolás Wolovick

11:05 - 11:45
Coffee break, Posters and Expo

☒ Main Courtyard, d'Etigny Auditorium

11:45 - 12:25
Invited Talk - José María Cecilia

☒ Main Courtyard, d'Etigny Auditorium

☒ HPC and Data analytics to solve socio-ambiental issues
Download presentation

☒ Coastal lagoons are ecosystems with important environmental and socioeconomic value. However, these natural systems are particularly vulnerable to climatic and anthropogenic pressures, such as intensive agriculture and extensive urbanization as a consequence of tourism development.

Download presentation

Moderator: Antônio Tadeu Azevedo Gomes
Read more here

12:25 - 12:45
Industrial Talk Platinum - VersatusHPC+BeeGFS

☒ Main Courtyard, d'Etigny Auditorium

☒ How HPC empowers Science and how BeeGFS empowers HPC
Download Versatus presentation
Download BeeGFS presentation

☒ Eiji Kawahira is the Product and Customer Development Manager at Versatus HPC, a company specializing in high-performance computing, where he has been contributing for over 10 years. At Versatus, Eiji is responsible for two key areas: product development and customer support. He is consistently focused on developing innovative solutions that streamline our clients' workflows, enabling them to dedicate more time to their research...

Presented by Eiji Kawahira and Frank Herold
Moderator: Lizette Robles
Download Versatus presentation
Download BeeGFS presentation

12:45 - 14:30
Lunch Time

☒ Club House, Club Hípico, Santiago.

☒ Av. Almte. Blanco Encalada 2540, Santiago, Región Metropolitana

14:30 - 15:00
Special Talk - Ulises Cortés

☒ Main Courtyard, d'Etigny Auditorium

☒ When Sally Met Harry or When AI Met HPC
Download presentation

☒ We will discuss the complementary nature of AI and HPC, illustrating how the combination enhances computational capabilities and enables more efficient data processing. This synergy is crucial for tackling complex scientific problems that are relevant for society and respect the environment.
Download presentation

Moderator: Carlos Jaime Barrios Hernández
Read more here

15:00 - 16:00
Panel - Leadership Perspectives: The Role of HPC in Transforming LATAM

☒ Main Courtyard, d'Etigny Auditorium

☒ This unprecedented panel brings together top executives from AMD, Intel, and NVIDIA, marking a historic moment in Latin America as these globally influential industry leaders share a common platform to discuss the transformative impact of High-Performance Computing (HPC) and Artificial Intelligence (AI)

Moderator: Luis Marti
Read more here

16:00 - 16:30
Coffee break, Posters and Expo

☒ Main Courtyard, d'Etigny Auditorium

16:30 - 17:30
HPC Track

☒ Main Courtyard, d'Etigny Auditorium

16:30-16:50	Impact of job scheduling policy changes on user behaviour and system response: The case of the Santos Dumont supercomputer in Brazil *João Pedro M. N. dos Santos, Antônio Tadeu Gomes* Descargar presentación
16:50-17:10	A Study of Performance Portability in Plasma Physics Simulations. *Josef Ruzicka, Christian Asch, Esteban Meneses, Markus Rampp, Erwin Laure* Descargar presentación
17:10-17:30	High performance computing for auto supervised machine learning training: parallel-distributed implementation of the Word2Vec algorithm for training word embeddings *Viscardi, Castelli Ottati, Sergio Nesmachnow*

17:30 - 18:00

Mateo Valero Award Ceremony

☒ Main Courtyard, d'Etigny Auditorium

19:30 - 22:00

Special Event and Gala Dinner

☒ Salón Pedro de Valdivia, Hotel Sheraton, Providencia.

☒ Av. Sta. María 1742, Providencia, Región Metropolitana

Friday, 04 Oct

09:00 - 09:40
Invited Keynote - Edson Borin

☒ Main Courtyard, d'Etigny Auditorium

☒ Training AI Models on Massive Datasets with DASF
Download presentation

☒ The exponential growth of data in the modern era presents significant challenges in training artificial intelligence (AI) models, particularly when dealing with massive datasets.
Download presentation

Moderator: Carla Osthoff
Read more here

09:40 - 10:00
Industrial Talk Platinum - Eviden+DDN

☒ Main Courtyard, d'Etigny Auditorium

☒ About the exascale HPCs and its AI workloads
Download presentation

☒ The exascale barrier has been surpassed. The Top500 now lists two machines with this level of performance, and more are expected soon. Most of these machines are designed to target AI workloads. On the positive side, AI workloads have driven the recognition of the value of larger machines, increasing the demand for enhanced network connectivity and storage capacity. However, significant challenges remain, not only in silicon design but also in cooling efficiency and overall system organization. In this talk, we will present the latest technologies in HPC components for AI and discuss their potential future developments.

Download presentation

Presented by Genaro Costa
Moderator: Silvio Rizzi

10:00 - 11:20
Panel - Financing Opportunities for Collaborative High-Performance Computing (HPC) Infrastructure in Latin America and the Caribbean

☒ Main Courtyard, d'Etigny Auditorium

☒ Download presentation

☒ This panel focuses on fostering collaboration and advancing High-Performance Computing (HPC) infrastructure in Latin America and the Caribbean through the identification and exploration of various funding sources. With a goal to highlight key financial opportunities, the session will address national, regional, and international funding options for HPC projects.
Download presentation

Moderator: Salma Jalife and José Palacios
Read more here

11:20 - 12:00
Coffee break, Posters and Expo

☒

12:00 - 12:45
Special Talk - Carlos Jaime and Philippe Navaux

☒ Main Courtyard, d'Etigny Auditorium

☒ Towards Large Scale and Robust Cyberinfrastructures for Science and Technology in Latin America and the Caribbean

☒ SCALAC is the Advanced Computing System for Latin America and the Caribbean, an alliance of infrastructures, knowledge, and people, allowing the development of the region from shared interests and concerns. The push towards robust cyberinfrastructures in Latin America and the Caribbean represents a significant step forward for the region's scientific and technological landscape, with an essential impact on productive activities and quality of life...

Philippe Navaux
Carlos Jaime barrios

Moderator: Esteban Meneses

12:45 - 13:15

Poster Prize – Closure

☒ Main Courtyard, d'Etigny Auditorium