



Centre Suisse d'Intelligence Artificielle
pour les PME – CSIA-PME

AI-DAYS @Hes·so

27-28.1.25

📍 GENÈVE

29.1.25

📍 LAUSANNE



CONFÉRENCES / WORKSHOPS / NETWORKING

Avancées de l'intelligence artificielle :
des opportunités à saisir pour
les entreprises et PME

PROGRAMME FINAL

Organisation :
swiss AI center Hes·so

et les écoles soutenant le swiss AI center :

PARTENAIRES DE L'EVENEMENT

Partenaires platine

Hes-SO la Mobilière



IICT
Institut des
Technologies de
l'information et de
la communication



Partenaires or



Institute of Artificial Intelligence
and Complex Systems



PURESTORAGE®



hepia

Haute école du paysage, d'ingénierie
et d'architecture de Genève



Partenaires argent



Partenaires presse



Merci pour leur soutien

Monday, January 27th - Pathé Balexert - Workshops

MOVIE THEATER 1			MOVIE THEATER 6			MOVIE THEATER 11		
8h30-10h30 Workshop Edge AI Tools, devices, and methods (chair: A. Upegui)	8h30 Andres Upegui, HEPIA Edge AI: an introduction		8h30-10h30 Compute Infrastructures for IA applications in the wild (chair: S. Rumley)	8h30 Sébastien Rumley, HEIA- FR & Swiss AI Center Opening remarks		8h30-10h30 Generation Augmentée par la Recherche (chair: H. Ghorbel)		
8h40 Marina Zapater, HEIG-VD Low power and low latency: How to deploy a tiny model on a microcontroller and make it fly			8h35 Fawzi Mohamed, CSCS, ETH Zurich (Keynote) The Alps research infrastructure at CSCS: enabling world-class ML research in Switzerland			8h30 Technical background		
9h10 Quentin Berthet, HEPIA When existing architectures are not enough: Custom ML Hardware architectures on FPGAs			9h05 Gilles Fourestey, EPFL SCITAS: On-premise and Cloud Infrastructure driving HPC & AI Scientific Computing at EPFL			9h00 RAG overview and Self Hosting LLM with Ollama		
9h40 Nuria Pazos, HE-ARC How to select the perfect device? Benchmarking embedding edge devices (CPUs, GPGPUs, MCUs, NPUs) remotely			9h23 Julien Rebetez, CTO @ Picterra Picterra's Infrastructure: Scaling ML for Geospatial Imagery Analysis			9h45 Hands on in Google collab - part 1		
10h10 Laurent Gantel, HEPIA Accelerating computation with neural processors. Halio-8: An AI co-processor for machine learning inference			9h41 Terry Vogelsang, Kudelski Security Securing AI Infrastructure: Strategies & Common Pitfalls			Jonathan Guerne, HE-Arc Henrique Marques Reis, HE-Arc Célien Donzé, HEIA-FR		
Break			Break			Break		
10h30-10h45 Offered by the Swiss AI Center			10h30-10h45 Offered by the Swiss AI Center			10h30-10h45 Offered by the Swiss AI Center		
10h45-12h Workshop Edge AI Tools, devices, and methods (chair: A. Upegui)	10h45 Laurent Gantel, HEPIA Hands-on tutorial: Deploying an inference model on a Halio-8 Neural co-processor		10h50-12h20 Compute Infrastructures for IA applications in the wild (chair: S. Rumley)	10h50 Martin Koch-Neyrey, HEIA-FR Enabling resources optimisation thru Monitoring of Mixed GPU Setups		10h45-12h Generation Augmentée par la Recherche (chair: H. Ghorbel)		
10h30 Davide Calvaresi Deploying an ecosystem of edge devices			11h08 Abele Mälai, Romain De Laage, UNINE Enabling headache-free heterogeneous GPU resource sharing for a small cluster			10h45-12h Hands on in Google collab - part 2		
13h30 Davide Calvaresi Hands-on tutorial: Deploying an Edge service on an ecosystem on embedded devices			11h26 Dorian Gamin, HEIG-VD Efficient GPU Resource Sharing with Kubernetes and Coder			11h30 Group discussion		
13h15 Workshop Edge AI Tools, devices, and methods (chair: A. Upegui)	13h15 Antoine Coetsier, COO, Exoscale (Keynote) GPU hyperspecialisation		11h44 Jérémie Gamba, HEFR Unlocking Performance: vGPU Acceleration on Cisco UCS X-Series with VMware vSphere			Jonathan Guerne, HE-Arc Henrique Marques Reis, HE-Arc Célien Donzé, HEIA-FR		
13h15-15h Davide Calvaresi Deploying an ecosystem of edge devices			12h02 Emmanuel Jeanvoine, UNIL - Scientific Computing and Research Support unit GPU infrastructure at UNIL, an attempt at continuous adaptation					
Lunch			Lunch			Lunch		
12h-13h Offered by Exocale & PureStorage			12h20-13h15 Offered by Exocale & PureStorage			12h-13h Offered by Exocale & PureStorage		
13h15-15h Workshop Edge AI Tools, devices, and methods (chair: A. Upegui)	13h15-15h15 Compute Infrastructures for IA applications in the wild (chair: S. Rumley)		13h15-15h15 Compute Infrastructures for IA applications in the wild (chair: S. Rumley)	13h15 Antoine Coetsier, COO, Exoscale (Keynote) GPU hyperspecialisation		13h-17h Machine Learning Operations - MLOps (chair: B. Chapuis)		
13h15-15h15 Davide Calvaresi Deploying an ecosystem of edge devices			13h45 Marc Stadelman, ZHAW Building a SLURM Cluster with Existing Heterogeneous Hardware			13h Initial setup and exploration of the Jupyter Notebook		
13h30-17h30 Al for Local Energy Systems (chair: N. Abdennefader)	13h30 Nabil Abdennefader, HES-SO Mot de bienvenue		14h03 Ljiljana Dolamic, armassuse S&T, CYD Campus Slurm & heterogeneous users: avoiding main pitfalls			14h Transformation and integration of the DVC pipeline - part 1		
13h30-17h30 Nabil Abdennefader, HES-SO Mot de bienvenue			14h22 Adrien Albert, Yann Sagon, UNIGE OpenOnDemand			Bertrand Chapuis, HEIG-VD Rémmy Marquis, HEIG-VD		
13h35-17h30 Mokhtar Bozorg, HES-SO Le projet Smart Energy District			14h41 Marco Merkel, HPC-DotNow Where to ask for help when building or operating a GPU cluster?					
15h45 Olivier Cretenand, SD Energy Mutualisation et synergies: Vers une distribution énergétique locale, intelligente, et optimisée			Break			Break		
15h55 Laurent Raeber, Swiss Energy Swiss Energypark - laboratoire des flexibilités			15h-15h30 Offered by E4			15h-15h30 Offered by E4		
16h05 Antonios Papageorgiou, HSLU Le projet AISOP			15h30-17h15 Compute Infrastructures for IA applications in the wild (chair: S. Rumley)	15h30 Olivier Richard, Polytech Grenoble - INP, UGA OAR: A Versatile Resource and Job Management System to Tame Complexity		15h30-17h30 Machine Learning Operations - MLOps (chair: B. Chapuis)		
16h15 Break			15h50 Daniele Cremonini, E4 (Keynote) Private LLM for industrial users			15h30 Transformation and integration of the DVC pipeline - part 2		
16h30 Dario Poroli, Commune de Meyrin Table ronde			Break			Group discussions		
Mokhtar Bozorg, HES-SO			16h20			Bertrand Chapuis, HEIG-VD Rémmy Marquis, HEIG-VD		
Olivier Cretenand, SD Energy			16h25 Group/panel discussions					
Laurent Raeber, Swiss Energy								
Antonios Papageorgiou, HSLU								
Max Carrel, Dynao								
Apéritif networking			Apéritif networking			Apéritif networking		
17h30-19h Offered by iCoSys			17h15-19h Offered by iCoSys			17h-19h Offered by iCoSys		

Making the AI-days at Pathé Balexert has been made possible with the support of
la Mobilière

Tuesday, January 28th - Morning - Pathé Balexert

MOVIE THEATER 10			MOVIE THEATER 11		
8h45 - 9h30	Plenary session				
8h45	Welcome address swiss ai center	Welcome address Sébastien Rumley Swiss IA Center, HES-SO			
9h00	Keynote presentation Hes-SO	L'intelligence artificielle : un enjeu sociétal et technologique Olivier Naef Dean of Engineering, HES-SO	Making the AI-days at Pathé Balexert has been made possible with the support of la Mobilière		
9h30 - 9h50	Coffee Break offered by HES-SO	Hes-SO			
9h50 - 10h50	Session: Industrial applications (chair: Bertil Chapuis)				
9h50	Research paper iCoSys Institute of Artificial Intelligence and Complex Systems	Benchmarking zero-shot foundation time series forecasting models for industrial applications Frédéric Montet, Benjamin Pasquier, Beat Wolf iCoSys Institute, HEIA-FR, HES-SO, Switzerland	9h50 - 10h50 Session: Swiss AI Center sprint projects (chair: Francesco Carrino)		
10h10	Research paper Hes-SO VALAIS WALLIS School of Engineering	Multi-algorithms approach for the Container Loading Problem with road transportation constraints Darko Petrovic, Francesco Carrino, Silvan Zahno HEI-VS, HES-SO, Switzerland	9h50 Sprint presentations	Presentations of the most recent research collaborations between the Swiss AI Center and companies and institutions	swiss ai center
10h30	Invited presentation	The Future of Knowledge Assistants Sacha Bron, Pierre-Loïc Doulcet LlamalIndex, United States			
10h50 - 11h10	Coffee Break offered by HES-SO	Hes-SO	10h50 - 11h10 Coffee Break offered by HES-SO	Hes-SO	
11h10 - 12h30	Session: Industry 4.0 & AI (chair: Pamela Delgado)		11h10 - 12h30 Session : Posters (chair: Valérie Schurch-Todeschini)		
11h10	Research paper hepia Haute école du paysage, d'ingénierie et d'architecture de Genève	Automated image-based detection of surface porosity defects in metals Antoine Ottiger, Hannes Freisse, Irena Milosevic, Jérôme Extermann, Enrico Pomarico HEPIA, HES-SO, Switzerland	11h10 Poster teasers	Authors of accepted posters are given a few minutes to pitch their ideas	
11h30	Research paper Hes-SO VALAIS WALLIS School of Engineering	Anomaly Detection Platform for Biomanufacturing Darko Petrovic, Francesco Carrino, Pamela Delgado HEI-VS, HES-SO, Switzerland	11h30 Poster iCoSys Institute of Artificial Intelligence and Complex Systems	DigiRENT-AI – Solution innovante de location de biens immobiliers utilisant l'IA Jean Hennebert, Christophe Gisler, Thomas Dagier Joncour, et al. iCoSys Institute, HEIA-FR, HES-SO, Switzerland	
11h50	Research paper arc ingénierie	Geometry Optimisation Algorithm for machining Tools Jonathan Guerne, Hatem Ghorbel, Célien Donzé Valérie Briquez, Damien Lüthi, Pierre Falbriard, Thibaut Nicoulin HE-ARC, HES-SO, Switzerland	11h30 Poster	Retrieval-Augmented Generation (RAG): A Risk & Mitigation Landscape Sara Ott, Lukas Ammann, Christoph R. Landolt, Marco Lehmann Ostschweizer Fachhochschule, Switzerland	
12h10	Research paper iCoSys Institute of Artificial Intelligence and Complex Systems	Truck Classification on Swiss Highways Using Vision and Weigh-In-Motion Systems Oussama Zayene, Mael Vial, Marc-Antoine Fénart, Beat Wolf iCoSys Institute, HEIA-FR, HES-SO, Switzerland	11h30 Poster iCoSys Institute of Artificial Intelligence and Complex Systems	Assessment Tool for Trustworthy AI Systems: Operational Workflows for Compliance Carmen Mei-Ling Frischknecht-Gruber, Philipp Denzel, Oliver Forster, Yann Billeter, Stefan Brunner, Arman Iranfar, Marco Repetto Monika Reif, Frank-Peter Schilling, Joanna Weng, Ricardo Chavarriaga Zurich University of Applied Sciences, Switzerland	
12h30 - 13h20	Lunch Offered by AlpiCT & Office de Promotion des Industries et des Technologies		11h30 Poster hepia Haute école du paysage, d'ingénierie et d'architecture de Genève	AD-DITION Eden Brenot, Célien Donzé iCoSys Institute, HEIA-FR, HES-SO, Switzerland	
			11h30 Poster hepia Haute école du paysage, d'ingénierie et d'architecture de Genève	Real-Time Data Processing for Cherenkov Telescopes Using FPGA-Accelerated 3D Convolution Tanguy Dietrich, Andres Upegui, Quentin Berthet, Matthieu Heller, Leonid Burmistrov HEPIA, HES-SO, Switzerland	
			11h30 Poster hepia Haute école du paysage, d'ingénierie et d'architecture de Genève	High-Throughput FPGA Implementation of Deep Sets Neural Networks Using hls4ml Quentin Berthet, Claire Antel, Anna Sfyrla HEPIA, HES-SO, Switzerland	
			11h30 Poster	Machine Translation: Are LLMs all you need ? Eloi Eynard Neur.on	
				OPI >> Institut für Produktionstechnologie Switzerland	alpiCT Switzerland Office of Promotions of Industries and Technologies

Tuesday, January 28th - Afternoon - Pathé Balexert

MOVIE THEATER 10

13h20 - 13h50 Plenary session

13h20 Keynote presentation **La Mobilière ou La MobiliAire ? L'IA démocratisée sans complexe.**
Jérôme Koller
la Mobilière
La Mobilière, Switzerland

13h50 - 14h Break

14h - 15h Industrial presentations session (chair: Beat Wolf)

14h Industrial presentation **Optimizing Air Cargo Operations with Artificial Intelligence: A Predictive Approach to Route Occupancy Forecasting**
Sami Ferchiou
IATA, Switzerland

14h20 Industrial presentation **IdeaHor™: Une intelligence augmentée au service de l'innovation et de la propriété intellectuelle**

Arnaud Belladon, Quentin Leblanc, Guido Bologna, Guillaume Chanel
TIPM, Switzerland

14h40 Industrial presentation **Machine Learning for Rooftop Analysis: A Combined Approach for Object Detection and Solar Potential Assessment**

hepia
Haute école du paysage, d'ingénierie et d'architecture de Genève
Denis Iglesias, Gilles Desthieux, Andres Upegui Posada, Basile Grandjean, Clémence Herny
HEPIA, HES-SO, Switzerland

15h - 15h30 Coffee Break
Offered by Dina



15h30 - 17h Session : AI & Energy (chair: Valérie Schurch-Todeschini)

15h30 Keynote presentation **L'intelligence artificielle sauvera-t-elle la planète ou l'épuisera-t-elle ?**
Giorgio Pauletto
SIG, Switzerland

16h Panel discussion **IA & Energy**

Modérateur : Manuel Kugler, Swiss Academy of Engineering Sciences (SATW)
Participants :
Laurent Raeber, Swiss Energy Park
David Wannier, HES-SO
Pierre-Jean Alet, CSEM
Marine Cauz, planair

17h - 19h Session : l'IA au service des artistes et artisans

17h Performance artistique **Tête-à-tête**
Eksperiens 25
Eksperiens 25

Poursuite de l'Eksperiens sensorielle avec un cocktail dinatoire

Offert par Eksperiens 25

MOVIE THEATER 11

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14h - 15h15 Atelier d'accompagnement des PMEs vers l'IA

14h Atelier **Comment réussir une intégration de l'IA dans une entreprise ? Quels sont les défis ? Les obstacles ? Chacun est le bienvenu pour en discuter dans cet atelier participatif**
la Mobilière
Animateurs : Jérôme Koller, La Mobilière, Sébastien Rumley, Swiss AI Center

swiss ai center

15h15 - 15h30 Coffee Break offered by Dina



16h05- 16h50 Industrial presentations session (chair: Andres Upegui)

16h05 Industrial presentation **LLM Finetuning with specialized legal and financial data for quality translation**
Eloi Eynard, Paula Reichenberg
Neur.on

16h20 Industrial presentation **Hacking RAG: Understanding Risks and implementing Mitigations**

Sara Ott, Lukas Ammann, Christoph R. Landolt, Marco Lehmann
Ostschweizer Fachhochschule, Switzerland



Wednesday, January 29th - Morning - EHL

ROOM 1			ROOM 2		
8h45 - 9h45	Plenary session				
8h45	Welcome address 	Welcome address Markus Venzin, CEO, EHL Group Sébastien Rumley, Swiss AI Center			
9h15	Keynote presentation INNOVAUD	Présentation d'INNOVAUD Patrick Barbey, Directeur Général <i>Innovaud, Switzerland</i>			
9h25	Keynote presentation INNOVAUD	L'intelligence artificielle dans le Canton de Vaud Jan Kerschgens, AI Initiative Lead <i>Innovaud, Switzerland</i>			
9h45 - 10h	Coffee Break offered by the IICT institute				
10h- 11h	Presentation session (chair: Sébastien Rumley)				
10h	Innovation Booster	AI Booster presentation  Nabil Abdennadher <i>HEPIA, HES-SO, Switzerland</i>			
10h30	Invited presentation	Retour d'expérience sur la mesure d'empreinte environnementale du cloud interne et externe à l'EPFL Manuel Cubero-Castan <i>VPS, EPFL, Switzerland</i>			
11h - 11h10	Coffee Break offered by the IICT institute				
11h10 -12h30	Session Responsabilité sociale des entreprises				
11h10	Panel discussion	IA & Responsabilité sociale des entreprises Modératrice : Delphine Seitié, AlpICT Participants : Ewen Nedelec, Wise4Future Isabelle Hering, Etude Hering Jean-Gabriel Piguet, Service éthique, HEVS Gilles Bersier, Banque Cantonale de Fribourg			
12h30 - 13h30	Lunch Offered by the IICT institute				

Wednesday, January 29th - Afternoon - EHL

ROOM 1

ROOM 2

Wednesday, January 29th - Afternoon - EHL		
ROOM 1		ROOM 2
13h30 - 14h Plenary session		
<p>13h30 Keynote presentation L'IA pour les PME - Comment démarrer et surmonter les principaux défis ? Sandro Saitta <i>viadata, Switzerland</i></p>	<p>14h - 15h10 Research and industrial paper session (chair: Reza Etemad)</p> <p>14h Research paper ParlementAire Ornella Vaccarelli, Eden Brenot, Emmanuel De Salis, Henrique Marques Reis, Jacqueline Kucera, Philippe Meyer, Hatem Ghorbel, Jean Hennebert <i>iCoSys Institute, HEIA-FR, HES-SO, Switzerland</i></p> <p>14h20 Industrial presentation Outil de matching optimisé par l'IA Benjamin Décailliet <i>Synchrotech, Switzerland</i></p> <p>14h35 Industrial presentation PICC-AI Using OPRO to improve llm tasks  Guy-Raphaël Stauffer, Edouard Goffinet, Jonathan Guerne, Hatem Ghorbel <i>HE-Arc, HES-SO, Switzerland</i></p> <p>14h50 Industrial presentation AI and Police Jérôme Berthier <i>Deeplink, Switzerland</i></p> <p>15h10 - 15h30 Coffee Break offered by the IICT institute </p>	<p>14h - 15h00 Session : Vision and Responsible IA (chair: Jean-Luc Robyr)</p> <p>14h Research paper Breaking ground: Examining the social dimensions of AI development and trials in automated mobility Jakub Mlynář, Benjamin Nanchen, Luisa Ehrenzeller <i>Institute of Informatics, School of Management, HEVS, HES-SO, Switzerland</i></p> <p>14h20 Research paper HES-XPLAIN - An open platform for accelerating the development of eXplainable AI systems  Arthur Babey, Jean-Marc Boutay, Rémy Marquis, Damian Boquete Costa, Guido Bologna, Marcel Graf, Xavier Brochet, Carlos A. Peña-Reyes <i>HEIG-VD, HES-SO, Switzerland</i></p> <p>14h40 Research paper Are VLMs Ready for Critical Use Cases? Evaluating Zero-Shot Performance with Contextual Prompts  Oussama Zayene, Vincent Audergon, Jean Hennebert, Houda Chabbi, Benoît de Raemy <i>iCoSys Institute, HEIA-FR, HES-SO, Switzerland</i></p> <p>15h - 15h30 Coffee Break offered by the IICT institute </p>
15h30 -17h Session IA dans les PMEs		
<p>15h30 Panel discussion Intégration de l'IA dans les PMEs  Modérateur : Luc Olivier Erard, ArclInfo Participants : Silvia Quarteroni, SDSC Robert Van Kommer, Innosuisse, Jérôme Berthier, Deeplink Xavier Comtesse, Manufacture Thinking</p>	<p>15h30 - 17h Session : Posters (chair: Valérie Schurch-Todeschini)</p> <p>15h30 Poster teasers Authors of accepted posters are given the opportunity to pitch their ideas in a few minutes</p> <p>15h50 Poster Identification of eye motion in raw MRI data using machine learning techniques  Elena Najdenovska, Cédric Campos Carvalho, Jaime Barranco Hernandez, Yiwel Jia, Mauro Leidi, Benedetta Franceschiello, Laura Elena HEIG-VD, HES-SO, Switzerland</p> <p>15h50 Poster Automated Photonic-Pulses Processing for Thin Solar Energy  Ornela Vaccarelli, Jean Hennebert, Christophe Gisler <i>iCoSys Institute, HEIA-FR, HES-SO, Switzerland</i></p> <p>15h50 Poster AI4Drones: Rapid Identification of Drone Design Elements Using AI  Alexis Stella, Ornella Vaccarelli, Aixu An, Jean Hennebert <i>iCoSys Institute, HEIA-FR, HES-SO, Switzerland</i></p> <p>15h50 Poster IA générative pour les systèmes embarqués Fabien Vannel</p> <p>15h50 Poster Responsible AI in Action with watsonx.governance Mohamed Ali Dhraief <i>IBM, Lausanne, Switzerland</i></p> <p>15h50 Poster Maintenance prédictive basée sur des jumeaux numériques hybrides entraînés sur des simulations mécaniques. Jean Luc Robyr <i>SeSi institute, HEIA-FR, HES-SO, Switzerland</i></p>	
Cocktail reception offered by INNOVAUD		
17h - 19h		