



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)	Andres Upegui, HEPIA	Edge AI: an introduction	8h30 - 10h30 Compute Infrastructures for IA applications in the wild (chair: S. Rumley)	Sebastien 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		
Break			10h Jean-Baptiste Thomas, Principal Field Solutions Architect - Pure Storage EMEA	(Keynote) Is your infrastructure ready for AI workloads ?		Henrique Marques Reis, HE-Arc		
10h30 - 10h45 Offered by the Swiss AI Center			Break			Célien Donzé, HEIA-FR		
10h45 - 12h Workshop Edge AI Tools, devices, and methods (chair: A. Upegui)	Laurent Gantel, HEPIA	Hands-on tutorial: Deploying an inference model on a Halio-8 Neural co-processor	10h30 - 10h45 Offered by the Swiss AI Center			10h30 - 10h45 Offered by the Swiss AI Center		
12h Lunch	 <b>EXOSCALE</b> PURE STORAGE®		10h45 - 12h Compute Infrastructures for IA applications in the wild (chair: S. Rumley)	Martin Koch-Neyrey, HEIA-FR	Enabling resources optimisation thru Monitoring of Mixed GPU Setups	10h45 - 12h Generation Augmentée par la Recherche (chair: H. Ghorbel)		
12h - 13h Offered by Exocale & PureStorage	 <b>EXOSCALE</b> PURE STORAGE®		11h08 Abele Mälén, Romain De Laage, UNINE	Enabling headache-free heterogeneous GPU resource sharing for a small cluster		10h45 - 12h Hands on in Google collab - part 2		
13h - 15h Workshop Edge AI Tools, devices, and methods (chair: A. Upegui)	Davide Calvaresi	Deploying an ecosystem of edge devices	11h26 Dorian Gamin, HEIG-VD	Efficient GPU Resource Sharing with Kubernetes and Coder		11h30 Group discussion		
13h - 15h Davide Calvaresi	 <b>EXOSCALE</b> PURE STORAGE®		11h44 Jérémie Gamba, HEFR	Unlocking Performance: vGPU Acceleration on Cisco UCS X-Series with VMware vSphere		Jonathan Guerne, HE-Arc		
13h30 Davide Calvaresi	 <b>EXOSCALE</b> PURE STORAGE®		12h02 Emmanuel Jeannoine, UNIL - Scientific Computing and Research Support unit	GPU infrastructure at UNIL, an attempt at continuous adaptation		Henrique Marques Reis, HE-Arc		
13h15 - 15h Lunch	 <b>EXOSCALE</b> PURE STORAGE®		13h15 - 15h Compute Infrastructures for IA applications in the wild (chair: S. Rumley)	Antoine Coetsier, COO, Exoscale	(Keynote) GPU hyperspecialisation	Célien Donzé, HEIA-FR		
13h15 - 15h Antoine Coetsier, COO, Exoscale	 <b>EXOSCALE</b> PURE STORAGE®		13h45 Marc Stadelman, ZHAW	Building a SLURM Cluster with Existing Heterogeneous Hardware		13h15 - 17h Machine Learning Operations - MLOps (chair: B. Chapuis)		
13h45 - 15h30 Mot de bienvenue HES-SO	 <b>E4</b> COMPUTER ENGINEERING		14h03 Ljiljana Dolamic, armassus S&T, CYD Campus	Slurm & heterogeneous users: avoiding main pitfalls		13h Initial setup and exploration of the Jupyter Notebook		
15h30 - 17h30 Le projet Smart Energy District	 <b>E4</b> COMPUTER ENGINEERING		14h22 Adrien Albert, Yann Sagon, UNIGE	OpenOnDemand		14h Transformation and integration of the DVC pipeline - part 1		
15h45 Olivier Cretenand, SD Energy	 <b>E4</b> COMPUTER ENGINEERING		14h41 Marco Merkel, HPC-DotNow	Where to ask for help when building or operating a GPU cluster?		Bertrand Chapuis, HEIG-VD Rémie Marquis, HEIG-VD		
15h45 - 15h55 Mutualisation et synergies: Vers une distribution énergétique locale, intelligente, et optimisée	 <b>E4</b> COMPUTER ENGINEERING		15h30 - 17h15 Break	 <b>E4</b> COMPUTER ENGINEERING		15h30 - 17h30 Machine Learning Operations - MLOps (chair: B. Chapuis)		
15h55 Laurent Raeber, Swiss Energy Park Antonios Papageorgiou, HSLU	 <b>E4</b> COMPUTER ENGINEERING		16h20 Group/panel discussions	 <b>E4</b> COMPUTER ENGINEERING		15h30 Transformation and integration of the DVC pipeline - part 2		
16h05 Le projet AISOP	 <b>E4</b> COMPUTER ENGINEERING		16h25 Group/panel discussions	 <b>E4</b> COMPUTER ENGINEERING		Group discussions		
16h15 Break	 <b>E4</b> COMPUTER ENGINEERING			 <b>E4</b> COMPUTER ENGINEERING		Bertrand Chapuis, HEIG-VD Rémie Marquis, HEIG-VD		
16h30 Table ronde	 <b>iCoSys</b> Institute of Artificial Intelligence and Complex Systems			 <b>iCoSys</b> Institute of Artificial Intelligence and Complex Systems		Making the AI-days at Pathé Balexert has been made possible with the support of	 <b>la Mobilière</b>	
16h30 - 17h30 Mot de bienvenue HES-SO	 <b>iCoSys</b> Institute of Artificial Intelligence and Complex Systems			 <b>iCoSys</b> Institute of Artificial Intelligence and Complex Systems			 <b>iCoSys</b> Institute of Artificial Intelligence and Complex Systems	
17h15 - 19h Apéritif networking	 <b>iCoSys</b> Institute of Artificial Intelligence and Complex Systems			 <b>iCoSys</b> Institute of Artificial Intelligence and Complex Systems			 <b>iCoSys</b> Institute of Artificial Intelligence and Complex Systems	
17h15 - 19h Offered by iCoSys	 <b>iCoSys</b> Institute of Artificial Intelligence and Complex Systems			 <b>iCoSys</b> Institute of Artificial Intelligence and Complex Systems			 <b>iCoSys</b> Institute of Artificial Intelligence and Complex Systems	

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Tuesday, January 28th - Morning - Pathé Balexert

MOVIE THEATER 10			MOVIE THEATER 11		
8h45 - 9h30	Plenary session				
8h45	Welcome address <b>swiss ai center</b>	Sébastien Rumley Swiss IA Center, HES-SO			
9h00	Keynote presentation <b>Hes-SO</b>	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 <b>la Mobilière</b>		
9h30 - 9h50	Coffee Break offered by HES-SO	<b>Hes-SO</b>			
9h50 - 10h50	Session: Industrial applications (chair: Bertil Chapuis)				
9h50	Research paper <b>iCoSys</b> 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 <b>Hes-SO</b> <b>VALAIS WALLIS</b> School of Engineering	Multi-algorithms approach for the Container Loading Problem with road transportation constraints Darko Petrovic, Francesco Carrino, Pamela Delgado HEI-VS, HES-SO, Switzerland	9h50 Sprint presentations		
10h30	Invited presentation	The Future of Knowledge Assistants Sacha Bron, Pierre-Loic Doulcet LlamalIndex, United States	Presentations of the most recent research collaborations between the Swiss AI Center and companies and institutions		
10h50 - 11h10	Coffee Break offered by HES-SO	<b>Hes-SO</b>	<b>swiss ai center</b>		
11h10 - 12h30	Session: Industry 4.0 & AI (chair: Pamela Delgado)				
11h10	Research paper <b>hepia</b> 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 - 12h30 Session : Posters (chair: Valérie Schurch-Todeschini)		
11h30	Research paper <b>Hes-SO</b> <b>VALAIS WALLIS</b> School of Engineering	Anomaly Detection Platform for Biomanufacturing Darko Petrovic, Francesco Carrino, Silvan Zahno HEI-VS, HES-SO, Switzerland	11h10 Poster teasers		
11h50	Research paper <b>arc</b> <b>ingénierie</b>	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		
12h10	Research paper <b>iCoSys</b> 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		
12h30 - 13h20	Lunch Offered by AlpiCT & Office de Promotion des Industries et des Technologies		11h30 AD-DITION		
			11h30 Poster		
			11h30 Real-Time Data Processing for Cherenkov Telescopes Using FPGA-Accelerated 3D Convolution		
			11h30 Poster		
			11h30 Machine Translation: Are LLMs all you need ?		
			<b>OPI</b> <b>industrie technologies</b>		
			<b>alpiCT</b> <b>Swiss standard digital cluster</b>		

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 <b>INNOVAUD</b>	Présentation d'INNOVAUD Patrick Barbey, Directeur Général <i>Innovaud, Switzerland</i>			
9h25	Keynote presentation <b>INNOVAUD</b>	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 <b>Keynote presentation</b> <b>L'IA pour les PME - Comment démarrer et surmonter les principaux défis ?</b> Sandro Saitta <i>viadata, Switzerland</i></p>	<p><b>14h - 15h10 Research and industrial paper session (chair: Reza Etemad)</b></p> <p>14h <b>Research paper</b> <b>ParlementAire</b>  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 <b>Industrial presentation</b> <b>Outil de matching optimisé par l'IA</b> Benjamin Décailliet  <i>Synchrotech, Switzerland</i></p> <p>14h35 <b>Industrial presentation</b> <b>PICC-AI Using OPRO to improve llm tasks</b>  Guy-Raphaël Stauffer, Edouard Goffinet, Jonathan Guerne, Hatem Ghorbel  <i>HE-Arc, HES-SO, Switzerland</i></p> <p>14h50 <b>Industrial presentation</b> <b>AI and Police</b> Jérôme Berthier <i>Deeplink, Switzerland</i></p> <p>15h10 - 15h30 Coffee Break offered by the IICT institute </p> <p><b>15h30 - 17h Session IA dans les PMEs</b></p> <p>15h30 <b>Panel discussion</b> <b>Intégration de l'IA dans les PMEs</b>  Modérateur : Luc Olivier Erard, ArclInfo  Participants : Silvia Quarteroni, SDSC Robert Van Kommer, Innosuisse, Jérôme Berthier, Deeplink Xavier Comtesse, Manufacture Thinking</p>	<p><b>14h - 15h00 Session : Vision and Responsible IA (chair: Jean-Luc Robyr)</b></p> <p>14h <b>Research paper</b> <b>Breaking ground: Examining the social dimensions of AI development and trials in automated mobility</b> Jakub Mlynář, Benjamin Nanchen, Luisa Ehrenzeller  <i>Institute of Informatics, School of Management, HEVS, HES-SO, Switzerland</i></p> <p>14h20 <b>Research paper</b> <b>HES-XPLAIN - An open platform for accelerating the development of eXplainable AI systems</b>  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 <b>Research paper</b> <b>Are VLMs Ready for Critical Use Cases? Evaluating Zero-Shot Performance with Contextual Prompts</b>  Institute of Artificial Intelligence and Complex Systems 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> <p><b>15h30 - 17h Session : Posters (chair: Valérie Schurch-Todeschini)</b></p> <p>15h30 <b>Poster teasers</b> Authors of accepted posters are given the opportunity to pitch their ideas in a few minutes</p> <p>15h50 <b>Poster</b> <b>Identification of eye motion in raw MRI data using machine learning techniques</b>  Elena Najdenovska, Cédric Campos Carvalho, Jaime Barranco Hernandez, Yiwel Jia, Mauro Leidi, Benedetta Franceschiello, Laura Elena HEIG-VD, HES-SO, Switzerland</p> <p>15h50 <b>Poster</b> <b>Automated Photonic-Pulses Processing for Thin Solar Energy</b>  Institute of Artificial Intelligence and Complex Systems Ornella Vaccarelli, Jean Hennebert, Christophe Gisler <i>iCoSys Institute, HEIA-FR, HES-SO, Switzerland</i></p> <p>15h50 <b>Poster</b> <b>AI4Drones: Rapid Identification of Drone Design Elements Using AI</b>  Institute of Artificial Intelligence and Complex Systems Alexis Stella, Ornella Vaccarelli, Aixu An, Jean Hennebert <i>iCoSys Institute, HEIA-FR, HES-SO, Switzerland</i></p> <p>15h50 <b>Poster</b> <b>IA générative pour les systèmes embarqués</b> Fabien Vannel</p> <p>15h50 <b>Poster</b> <b>Responsible AI in Action with watsonx.governance</b> Mohamed Ali Dhraief <i>IBM, Lausanne, Switzerland</i></p> <p>15h50 <b>Poster</b> <b>Maintenance prédictive basée sur des jumeaux numériques hybrides entraînés sur des simulations mécaniques.</b> Jean Luc Robyr <i>SeSi institute, HEIA-FR, HES-SO, Switzerland</i></p>
Cocktail reception offered by INNOVAUD		
17h - 19h		