Biomedical Data Science Center

# 1ˢᵗ Symposium

## AI-Driven Advances in Clinical and Translational Medicine

CHUV
Auditoire César Roux
November 13, 2024

CHUV

UNIL | Université de Lausanne

We are pleased to invite you to the 1st Symposium on AI-Driven Advances in Clinical and Translational Medicine, organized by the Biomedical Data Science Center-CHUV (BDSC) and jointly sponsored by the Directorate of Innovation in Clinical Research-CHUV (DIRC) and the Faculty of Biology and Medicine of the University of Lausanne (FBM-UNIL). This event will feature a series of insightful presentations and dynamic discussions. The symposium will focus on the latest AI-driven innovations, with a particular emphasis on their transformative impact on clinical and translational medicine. Join us as we bring together leading experts to explore the intersection of data science and healthcare.

The symposium will cover a range of cutting-edge topics, including advancements in artificial intelligence and their emerging applications in the clinic. Presentations will highlight the use of AI in medical diagnostics, predictive modeling, personalized medicine, and its role in improving healthcare outcomes. Attendees will have the opportunity to engage in discussions about the future potential of AI technologies in medical research and practice.

This symposium is aimed at a diverse audience, including basic and data scientists, clinicians, and medical doctors. Participants from renowned research institutions such as the Lausanne University Hospital (CHUV), the University of Lausanne (UNIL), the Swiss Federal Institute of Technology (EPFL), and the Swiss Data Science Center (SDSC), as well as others in the Lausanne area and across Switzerland, are encouraged to attend. We look forward to fostering interdisciplinary collaboration and exchanging ideas on the latest innovations in AI and their application in the medical field.

Prof. Raphael Gottardo
Prof. Mauro Oddo
Prof. Jean Louis Raisaro
Prof. Marianna Rapsomaniki

# Program

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| **9:00 - 9:15** | **Welcome and introduction: A Historical Perspective**<br>Prof. Mauro Oddo (CHUV) |

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| **9:15 - 12:00** | **MORNING SESSION**<br>Moderator: Prof. Raphael Gottardo (CHUV) |

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| **09:15 - 10:00** | **AI in Medicine: Toward Biological AGI**<br>Dr Thomas Clozel (CEO & Co-Founder Owkin) |
| **10:00 - 10:45** | **Applications Navigating Tomorrow:**<br>**AI's Current Landscape and Future Horizons** |

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| | 10:00 - 10:15 | Towards Trustworthy Multilingual LLMs<br>Prof. Martin Jaggi (EPFL) |
| | 10:15 - 10:30 | Precision Oncology in the Era of AI<br>Prof. Marianna Rapsomaniki (CHUV) |
| | 10:30 - 10:45 | Q & A |

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| 10:45 - 11:15 | *Coffee break* |
| **11:15 - 12:00** | **Risks & Challenges of AI in Biomedicine** |

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| | 11:15 - 11:30 | Legal Aspects of AI in the Medical Fields: an Overview<br>Prof. Frédéric Erard (UNIL) |
| | 11:30 - 11:45 | Bringing AI from Research to the Bedside<br>in a Swiss University Hospital<br>Prof. Jean Louis Raisaro (CHUV) |
| | 11:45 - 12:00 | Q & A |

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| 12:00 - 13:15 | *Lunch break* |

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| **13:15 - 17:00** | **AFTERNOON SESSION**<br>Moderator: Prof. Marianna Rapsomaniki (CHUV) |
| **13:15 - 14:15** | **Clinical AI Ecosystem in Lausanne** |

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| | 13:15 - 13:30 | Generative AI for Reconstructing Complex<br>Tissue Structures<br>Prof. Maria Brbic (EPFL) |
| | 13:30 - 13:45 | Building the Missing Pieces in Machine Learning<br>for Radiology<br>Dr Jonas Richiardi (CHUV) |
| | 13:45 - 14:00 | AI for Epileptic Seizure Detection<br>Prof. Philippe Ryvlin (CHUV) |
| | 14:00 - 14:15 | Q & A |

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| **14:15 - 15:15** | **Lightning Talks by Students and Postdocs**<br>10 selected 5 min presentations |
| 15:15 - 15:45 | *Coffee break* |
| **15:45 - 16:30** | **Multimodal Data Integration: From Biomarkers to Mechanisms**<br>Prof. Caroline Uhler (Broad Institute, MIT) |
| **16:30 - 16:45** | **Students Award** |
| **16:45 - 17:00** | **Closing Remarks**<br>Prof. Raphael Gottardo (CHUV) |
| 17:00 - 18:00 | *Aperitif* |

# Abstract Submission

Are you an early-career researcher (Bachelor, Master, PhD or Postdoc) working on AI for health? Share your work with us and get selected for a lightning talk!
Best presentations will win a price.

**Submit your abstract (200 words max.) by November 1st, 2024 at bdsc.info@chuv.ch**

# Venue

CHUV
Centre hospitalier universitaire vaudois
Auditoire César Roux
Rue du Bugnon 46
1005 Lausanne

# Registration

**Registration required by November 4, 2024**

Fees
Regular: CHF 50.00
Student (Bachelor, Master, PhD and Postdoc): Free

Lunch and aperitif included
Contact: bdsc.info@chuv.ch