



PRESS RELEASE – SEPTEMBER 5<sup>TH</sup>, 2024

## SNCF Group and École Polytechnique create the Chair “Artificial Intelligence and Optimisation for Mobility”



**FRANCE - SNCF Group, École Polytechnique and École Polytechnique Foundation are pleased to announce the launch of the “*Chair in education and research on artificial intelligence and optimisation for mobility*”, with the aim of developing approaches combining operational research and AI, for the benefit of public transport and its users. This Chair is a strategic project for both partners, and will also help to mobilise engineering students at École Polytechnique around the challenges of sustainable mobility.**

The new Chair was inaugurated on September 4<sup>th</sup>, 2024 by Laura Chaubard, President and Director General of École Polytechnique, Jean-Pierre Farandou, Chairman of SNCF Group, and Jean-Paul Cottet, Managing Director of École Polytechnique Foundation.

Headed by Sonia Vanier, a professor in the Computer Science Department (DIX) at École Polytechnique and a researcher at the Computer Science Laboratory (LIX<sup>1</sup>), the Chair will fund the recruitment and training of researchers, doctoral students, post-doctoral students and engineers whose work will focus on two main areas: artificial intelligence and the optimisation of transport networks.

The objective is to develop innovative AI-based technologies to enhance the quality of public transport services, optimize freight transport, and promote more sustainable mobility. This involves optimizing the management of transport infrastructures, ensuring the reliability of rolling stock through predictive maintenance, planning maintenance tasks for roads and vehicles, and predicting delays to improve passenger communication. Additionally, the launch of this Chair will offer engineering students the opportunity to explore the challenges of mobility and the rail sector's efforts to combat climate change.

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<sup>1</sup> LIX: a joint research unit CNRS, École Polytechnique - Institut Polytechnique de Paris

*“This partnership between our two institutions will harness the expertise of a multidisciplinary team, bringing together researchers from École Polytechnique and engineers from SNCF to advance public transportation. Through this collaboration, we will drive innovative projects that combine the transformative potential of artificial intelligence with the proven rigor of Operation Research. Moreover, we are dedicated to embedding the outcomes of this collaboration into our educational programs, fostering the development of tomorrow's talent.”* says **Sonia Vanier, the Chair's scientific leader.**

**Jean-Pierre Farandou, Chairman of SNCF Group:** *“We are proud a centre of excellence such as École Polytechnique has chosen SNCF as a partner for applying its research. This partnership is a real opportunity for us to strengthen our position as a key player in the transport tech sector and to deepen our understanding of artificial intelligence. At SNCF, we anticipate the technological innovations that have led to major advances in services for our customers, including the launch of the TGV in 1981. Technology and science at the service of public utility, sustainable mobility and our country's sovereignty - that's what this strategic partnership is all about.”*

**Laura Chaubard, President and Director General of École Polytechnique:** *“We are very pleased with this ambitious collaboration with SNCF group. It reaffirms École Polytechnique's desire to contribute to the country's future technological revolutions, particularly in the essential sector of mobility. École Polytechnique is immensely proud to be working with a major public company like SNCF, whose exemplary commitment to the environmental transition is perfectly in line with the Institution's ambition to put science and technology at the service of the general interest.”*



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**ABOUT ÉCOLE POLYTECHNIQUE** / As a widely internationalized university (41% of its students and 40% of its faculty members), École Polytechnique, also known as L’X, is the leading French institution combining top-level research, academics, and innovation at the cutting-edge of science and technology. Through its range of programs – Bachelor of Science, Ingénieur Polytechnicien (Master’s level program), Master’s, and PhD, Executive Masters - École Polytechnique promotes a culture of excellence, with a strong emphasis on science anchored in humanist traditions, and trains decision-makers by exposing them to both the world of research and the world of business. With its 23 laboratories, 22 of which are joint research units with the French National Center for Scientific Research (CNRS), École Polytechnique Research Center explores the frontiers of interdisciplinary knowledge to provide major contributions to science, technology, and society. École Polytechnique is a founding member of Institut Polytechnique de Paris.

[www.polytechnique.edu](http://www.polytechnique.edu)

**ABOUT SNCF GROUP** / SNCF Group is a global leader in passenger and freight logistics services, including management of the French rail network, with revenue of €41.8 billion in 2023, of which one-third on international markets. The Group covers 170 countries and has 283,000 employees, with over half in its core rail business and nearly 212,000 working in France. The Group consists of a parent (SNCF) and five subsidiaries: SNCF RESEAU (management, operation and maintenance of the French rail network, plus railway engineering) with its own subsidiary SNCF GARES & CONNEXIONS (station design, management and development); SNCF VOYAGEURS and its subsidiaries Transilien (mass transit in the Paris region), TER (regional rail) and Intercités, TGV INOUI, OUIGO (long-distance rail), Eurostar-Thalys, Aléo and Lyria (international rail), and SNCF Connect (distribution); KEOLIS (a global operator of urban, suburban and regional mass transit systems); RAIL LOGISTICS EUROPE (rail freight); and GEODIS (freight transport and logistics solutions). SNCF Group works closely with customers—passengers, local authorities, shippers and railway operators using SNCF RÉSEAU services—and with local communities, building on its expertise in all aspects of rail and all types of transport, and working towards a dynamic, caring, sustainable society.

[sncf.com](http://sncf.com)

**ABOUT ÉCOLE POLYTECHNIQUE FOUNDATION** / Created in 1987 by twenty leading French companies at the request of Bernard Esambert (Class X1954), the Chairman of École Polytechnique Board of Directors at the time, and with the support of the Alumni Association, École Polytechnique Foundation builds bridges between the business world and École Polytechnique, including its students and research professors. The Foundation is a recognized public-benefit organization that works to promote École Polytechnique. This status entitles it to receive gifts and bequests from both individuals and companies. The funds raised are directed to École Polytechnique research, facilities, students and faculty.

[www.fondationx.org](http://www.fondationx.org)