THANK YOU!

Our wonderful MC
Joséphine-Agnès Kourouma

Our amazing contestants
- Lisa d'Argenlieu
- Andrew Funck
- Safa Gharbi
- Jakob Maier
- Naija Pison
- Juan Lorenzo Santana Gonzalez
- Linnéa Strandberg

Our distinguished jury
- Jamal Atif
- John Cagnol
- Maria-Eirini Nikolintaga
- Simon Mauras
- Jennifer Timani

Our distinguished middle school jury from Collège Les Goussons and Juliette Adam, Gif-sur-Yvette
- Brian Blet
- Charlotte Cagnol
- Axel Caraty
- Lucas Dudley
- Hétran Koulouh
- Alexis Roussin
- Manech Saint Venant
- Léonardo Teutonico

Our Timerkeeper
Emelyne Duprat Courtêt

Telecom Paris FabLab Trophies
Mickael Bouhier

Telecom Paris Logistics
Joy Delpech

The amazing students at the Lycée International Palaiseau Paris Saclay!

Incredible support from IP Paris:

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President of Institut Polytechnique de Paris

Patrick Olivier
President of Telecom Paris

IP Paris Communications Team
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Jérôme Herskovitz

Adriana Tapus
Director of the Doctoral School

Hani Hamzeh
Dean of the Graduate School

Florence Besnard
Doctoral Programs Coordinator, Graduate School

Nathalie Bourdieu
Administrative Director
Graduate School

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Project Officer, PSL Doctoral College

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Francoise Dauvergne
Academic Affairs Program Manager

3-MINUTE THESIS INTERUNIVERSITY COMPETITION

JUNE 25, 2026

HOSTED BY: INSTITUT POLYTECHNIQUE DE PARIS

3MT® THREE MINUTE THESIS
FOUNDED BY THE UNIVERSITY OF QUEENSLAND

Welcome to the
2026 3-Minute Thesis
Interuniversity Competition!
hosted by Institut Polytechnique de Paris!

Thank you for being part the second annual Interuniversity Three-Minute Thesis (3MT) competition. We're thrilled to have your support for this inspiring event!

The Three-Minute Thesis competition celebrates the exciting research conducted by Doctor of Philosophy students. Developed by The University of Queensland, 3MT cultivates students' academic, presentation, and research communication skills. The competition supports their capacity to effectively explain their research in three minutes, in a language appropriate to a non-specialist audience.

We warmly welcome the contestants and supporters from Institut Polytechnique de Paris, Université Paris-Saclay, PSL, and HEC. Today's event is not only a celebration of research, but also a celebration of courage, clarity, and the power of ideas to connect us all.

Bethany Cagnol
Organizer, 3MT 2026
IP Paris ELEVATE Center Director
Telecom Paris Languages & Cultures Department

Linnéa Strandberg

Université Paris-Saclay
Doctoral School: Sciences du végétal : du gène à l'écosystème (SEVE)
Graduate school: Biosphera
Research Team: Photobiology, Photosynthesis, Photocatalysis

When Breaking the Heart of a Plant

Every breath we take and every meal we eat depends on photosynthesis. This remarkable process allows plants to capture sunlight, produce oxygen, and take up carbon dioxide from the atmosphere. But photosynthesis relies on more than just sunlight. It also depends on manganese, an element that helps keep the process running. In this presentation, I investigate what happens when plants do not have enough manganese where it is needed. I show how this shortage affects the plant's ability to use light and protect itself from damage. My research reveals how a small element can have a surprisingly large impact on plant health and performance.

Safa Gharbi

Institut Polytechnique de Paris
École Polytechnique
Laboratory: Laboratoire de Physique des Interfaces et des Couches Minces (LPICM)
Department of Physics

Development of High-Performance Solid- and Quasi-Solid-State Electrolytes Coupled with Sulfur-Infiltrated Vertically Aligned Carbon Nanotube Cathodes for Next-Generation Lithium–Sulfur Batteries

Lithium-Sulfur (Li-S) batteries have emerged as promising energy storage systems owing to their high theoretical energy density (≈2500 Wh.kg^{-1}), low cost, and sulfur abundance. However, their commercialization remains limited by challenges including the polysulfide shuttle effect, lithium metal instability, and safety concerns associated with liquid electrolytes. Through my PhD research, I focus on the development of advanced solid-state and quasi-solid-state electrolyte systems for next-generation Li-S batteries, particularly through polymer electrolyte engineering using UV-induced and thermally activated polymerization approaches. Different electrolyte are evaluated using complementary physicochemical and electrochemical characterization techniques to investigate their structural features, demonstrating high ionic conductivities in the (10-3 S.cm^{-1}) range, wide electrochemical stability (~6 V), and overall promising performance. These systems are further integrated into hybrid nanostructured, additive-free cathodes composed of vertically aligned carbon nanotubes (VACNTs) infiltrated with sulfur, providing efficient electronic transport pathways. Environmentally friendly and green solvent-based processing routes are also explored to reduce the environmental impact of battery fabrication.

Today's Program

Welcome
Patrick Olivier, President of Telecom Paris

Official Opening
Jamal Atif, President of the Jury, Vice-President Research and Innovation
Institut Polytechnique de Paris

Competition Overview, Rules, and Introduction of the Jury
3-Minute Thesis Presentations

1) **Jakob Maier**
Université PSL - École Normale Supérieure - PSL

2) **Naija Pison**
Université Paris-Saclay - Graduate School of Chemistry

3) **Lisa d'Argenlieu**
Université PSL - Université Paris Dauphine - PSL

4) **Juan Lorenzo Santana Gonzalez**
Institut Polytechnique de Paris - École Polytechnique

5) **Andrew Funck**
HEC Paris - Economics and Decision Sciences

6) **Safa Gharbi**
Institut Polytechnique de Paris - École Polytechnique

7) **Linnéa Strandberg**
Université Paris-Saclay - Graduate School Biosphera

Jury Deliberation
Audience Votes for the People's Choice Award
Audience Questions for the Contestants

Announcement of the Middle Schoolers' Choice Award
Announcement of the People's Choice Award
Announcement of the 2nd Place Winner
Announcement of the 1st Place Winner
Closing

Competition Rules

- A single static slide is permitted, presented from the beginning of the oration.
- No additional electronic media or props are permitted.
- Presentations are to be spoken word.
- Presentations have commenced when the presenter starts their presentation through movement or speech.
- Presentations are 3 minutes and competitors exceeding 3 minutes are disqualified.
- The decision of the adjudicating panel is final.

Judging Criteria

Comprehension and Content (5 points each)

- Presentation provided clear motivation, background, and significance to the research question.
- Presentation clearly described the research strategy/design and the results/ findings of the research.
- Presentation clearly described the conclusions, outcomes and impact of the research.

Engagement and Communication (5 points each)

- The oration was delivered clearly, and the language was appropriate for a non-specialist audience.
- The PowerPoint slide was well-defined and enhanced the presentation.
- The presenter conveyed enthusiasm for their research and captured and maintained the audience's attention.

Today's Jury

Jamal Atif
President of the Jury
Vice-President Research and Innovation
Institut Polytechnique de Paris

John Cagnol
Professor at Université Paris-Saclay, CentraleSupélec
Department of Mathematics

Eirini Nikolintaga
Vice-Principal, Lycée International de Palaiseau Paris Saclay

Simon Mauras
Researcher with the FairPlay team
INRIA

Jennifer Timani
HEC Paris student, elite boxer, and recipient of the Stan Schwab Scholarship

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Andrew Funck

HEC Paris
Economics and Decision Sciences

Reading Between the Lines:
AI, humans, and startup evaluation

Who should pick tomorrow's winning startups in the age of AI: seasoned experts, or machines? At a highly selective French accelerator, humans and an artificial intelligence score the very same companies, and I compare their verdicts. The result is striking: the AI predicts which ventures will survive, hire, and raise money far more accurately than the experts do. Why? It reads each company's description more closely, catching warning signs the humans miss. As machines grow better at intellectual work, we need to rethink where humans add the most in building tomorrow's companies.

HEC PARIS

Juan L. Santana González

Institut Polytechnique de Paris
École Polytechnique
Laboratory: Laboratoire des Solides Irradiés (LSI)
Department of Physics

Looking at the Quantum Ocean

What makes electrons in a material pair up and flow without any resistance, forming a perfect quantum ocean? This phenomenon - superconductivity - is behind zero-energy-loss electricity, fusion reactors and particle accelerators. It holds one of the most promising technological developments of our history. Yet its origin remains one of the greatest mysteries in physics! My research focuses on the Strange Metal, a mysterious phase of matter that sits just above the superconducting state, like a quantum beach bordering the quantum ocean. In this phase, electrons interact in ways that defy every theory we have. By measuring how these materials carry electricity and heat under the most extreme conditions of temperature and magnetic fields on Earth, I try to decode the hidden language of these interactions, and understand what drives electrons to pair and create the quantum ocean.

Jakob Maier

Université PSL
École Normale Supérieure – PSL
Laboratory: INRIA Paris
Field of study: Mathematics
Research team: ARGO

Mathemagical Translation Without a Dictionary

Can we translate entire languages without ever seeing a dictionary? In my PhD, I use the magic of mathematics to do so. First, we represent every word as a point in space. That gives us two huge point clouds: for instance one for French and one for English. If we can now superimpose the two word clouds in an optimal way, we've won! However, this optimal superposition is hard to find and may even be impossible to compute in our lifetimes...

Naija Pison

Université Paris-Saclay
Graduate school of Chemistry
Doctoral school: Molecules, Materials, Instrumentation and Biosystems (2MIB)
Field of study: Radiation Chemistry
UMR8000 Institute of Physical Chemistry
Research Team: Theory and Simulation group (TheoSim)

When Radiation Strikes

Ionizing radiations, such as gamma rays, and alpha particles, deposit large amounts of energy in the organic phase during spent nuclear fuel reprocessing, triggering electronic and atomic processes that ultimately lead to radiation-induced damages. Understanding these ultrafast processes is essential for applications ranging from medicine to nuclear energy, yet they remain extremely difficult to observe experimentally. My research uses first-principles molecular simulations to follow the motion of electrons and atoms of the plutonium extractant molecules soon after irradiation revealing how radiation damages these molecules by depositing energy, weakening chemical bonds, and initiating molecular fragmentation within the first few femtoseconds.

Lisa d'Argenlieu

Université PSL
Université Paris Dauphine - PSL
Research in Management (DRM)
ERMES team (Marketing and Strategy)

Understanding a Public Service Brand in an Informal Market: A socio-cultural analysis of middle school brands

Can public schools become brands ? I will present the central question of my PhD in marketing through an exploration of the marketing answer schools give to school competition. As families increasingly compare schools, move neighbourhoods or turn to private education, public schools develop distinctive identities to preserve their enrolment and reputation. Drawing on four years of qualitative research, I show how branding emerges as an unexpected response to educational competition, leading to three different school markets: survival, attractiveness and luxury. Beyond schools, this research explores how market logics reshape public values and offers a new perspective on public branding.