AgroParisTech

Talents for a sustainable planet

SUMMER PROGRAM 2026

INTERNSHIP OFFERS

Contents

1. **Modelling of ammonia emission from field crop production -** ***AgroParisTech's experimental farm – Thiverval-Grignon***

Internship Title: Modelling of ammonia emission from field crop production		
Field of study	Agronomy, environment, modelling	
For students currently in	Undergraduate Year 3 or Master	
N° of positions offered	1	
Host Research Unit/Entity	AgroParisTech's experimental farm	
Location	Thiverval-Grignon	
Supervisor	Sophie Carton	**E-mail : sophie.carton@agroparistech.fr**
Keywords	Sustainable crop production, on field experimentation	
Context	This internship is part of the Trajectoire project. The project evaluates the sustainability of different cropping systems on an agronomic platform, located on AgroParisTech's experimental farm.	
Internship objectives	The intern will work with the R&D team of the experimental farm to study ammonia volatilization associated with nitrogen fertilization across the different cropping systems of the Trajectoire platform. The intern will also collaborate with the UMR Ecosys research team, which specializes in modelling ammonia volatilization. Responsibilities: • Select relevant data from the monitoring of the Trajectoire cropping systems (meteorological variables, soil characteristics, crop management practices) • Model ammonia volatilization in selected Trajectoire cropping systems using a dedicated computer program • Analyse and synthesize the results • Contribute to field data collection activities	
Desired Profile	We are looking for a student with basic knowledge of field crop management practices and modelling principles, who enjoys working with data and calculations, and who is motivated by close interactions with farming activities and on field experimental activities.	

2. Scientific review of the plant - solar panel interactions in agrivoltaic systems – *AgroParisTech's experimental farm – Thiverval-Grignon*

Internship Title: Scientific review of the plant - solar panel interactions in agrivoltaic systems		
Field of study	Agronomy, bioenergy, agrivoltaism	
For students currently in	Undergraduate Year 3 or Master	
N° of positions offered	1	
Host Research Unit/Entity	AgroParisTech's experimental farm	
Location	Thiverval-Grignon	
Supervisor	Sophie Carton	**E-mail : sophie.carton@agroparistech.fr**
Keywords	Agrivoltaism, agronomy, bioenergy, literature review	
Context	This internship is part of the R&D activities of AgroParisTech's experimental farm. The farm's R&D team is studying the feasibility of setting up an experiment on agrivoltaism on the farm.	
Internship objectives	The intern will work with the R&D team of the experimental farm to review the scientific literature on the impact of solar panels on field crop growth in France and similar countries of Western Europe. The intern will also collaborate with the UMR Ecosys research team, which specializes in studying plant growth in different contexts. Responsibilities: • Conduct a comprehensive literature review on the effects of solar panel shading, microclimate modification, and light availability on the growth and yield of major field crops in Western Europe. • Identify, classify, and synthesize key agronomic variables (e.g., photosynthetically active radiation, soil moisture, temperature, crop physiology indicators) used in existing agrivoltaic studies, and assess their relevance for future experiments on the farm.	
Desired Profile	We are looking for a student with basic knowledge of plant physiology or agronomy and strong analytical and synthesis skills, who is familiar with scientific research methods and who is motivated by working with different groups of people, including farm workers and researchers.	

3. **Microscopy-based quantification of melanin production –**
AgroParisTech Chair of Cosmetology - Orléans

Internship Title: Microscopy-based quantification of melanin production		
Field of study	Skin Biology	
For students currently in	Undergraduate Year 3 or Master	
N° of positions offered	1	
Host Research Unit/Entity	AgroParisTech Chair of Cosmetology	
Location	Orléans Campus	
Supervisor	Mr Guillaume COLLET	**E-mail : guillaume.collet@agroparistech.fr**
Keywords	Skin pigmentation, melanins, melanocytes, keratinocytes, microscopy, images analysis.	
Context	This internship is part of a project related to skin pigmentation. The project investigates the production together with the transfer of melanin from melanocytes to keratinocytes. The purpose is to evaluate and to quantify the melanin within cells and secreted/transfered by cells	
Internship objectives	The intern will work alongside an M2 intern to study in vitro skin pigmentation. Responsabilities: • Cell culture (melanocytes and keratinocytes) • Microscopy • Images analysis	
Desired Profile	We are looking for a student with knowledge in the fields of biology and cell culture (ideally).	

4. **Formulation and characterization of cosmetics containing biobased raw materials - *AgroParisTech Chair of Cosmetology - Orléans***

Internship Title: Formulation and characterization of cosmetics containing biobased raw materials.		
Field of study	Cosmetic formulation and technology	
For students currently in	Undergraduate Year 3	
N° of positions offered	1	
Host Research Unit/Entity	AgroParisTech Chair of Cosmetology	
Location	Orléans Campus	
Supervisor	Diego RAMOS and Capucine DOUSSET	**E-mail:** (DR) **diego.ramos@agroparistech.fr** and (CD) **capucine.dousset@agroparistech.fr**
Keywords	Cosmetics, Formulation, Biobased, Emulsions, Particles, Experiments, Characterization.	
Context	This internship is part of a postdoctoral research project. Innovation of cosmetic products intends to answer to recent ecological, economical and health concerns of users. As a possible hint of innovation, the cosmetics industry encourages incorporation of "eco-friendly" ingredients into their products. Various sources of these ingredients are possible. The project investigates formulation of cosmetic products from vegetal (upcycled) ingredients. Main formulations of this project will contain wood-based particles. Characterization of obtained formulations will be an experimental challenge.	
Internship objectives	The intern will join the Formulation research team of the chair to study cosmetics elaborated with wood-based particles. Responsabilities: • Literature review • Experimental formulation • Experimental characterization • Results analysis and communication	
Desired Profile	We are looking for a student eager to learn about cosmetic formulation, and who likes team and experimental work. Knowledge in soft matter, rheology or physical chemistry would be highly appreciated. The 5 weeks of internship (8/06 – 10/07) will be carried on the chair's laboratories.	

5. Exploring Entrepreneurial Dynamics in Cosmetic Ventures - *AgroParisTech Chair of Cosmetology and Cosmet'InnLab – Orléans*

Internship Title: Exploring Entrepreneurial Dynamics in Cosmetic Ventures		
Field of study	Innovation Management, Entrepreneurship, Strategic Design	
For students currently in	Undergraduate Year 3 or Master	
N° of positions offered	1	
Host Research Unit/Entity	AgroParisTech Chair of Cosmetology and Cosmet'InnLab	
Location	Orléans Campus	
Supervisor	Jose RIVERA	**E-mail : joseluis.rivera@agroparistech.fr**
Keywords	Entrepreneurship, Innovation Ecosystems, Business Models, Start-up Strategy	
Context	This internship is part of the Cosmet'InnLab initiative, an innovation platform that supports start-ups in the cosmetic sector in developing products and business models. The Cosmet'InnLab connects academic research with entrepreneurial practice, promoting interdisciplinary collaboration to accelerate innovation in the cosmetics sector. This internship offers an immersive experience in research on entrepreneurship and innovation, focusing on how start-ups evolve and adopt sustainability-driven strategies. The intern will contribute to ongoing research exploring innovation processes, ecosystem dynamics, and strategic decision-making in emerging ventures.	
Internship objectives	The internship aims to introduce the student to applied research practices by: • Identifying and documenting innovation processes within early-stage cosmetic start-ups • Mapping key actors, resources, and support mechanisms within entrepreneurial ecosystems • Analyzing how sustainability principles are embedded in product development and business strategies • Contributing to the development of structured outputs such as innovation process sheets, strategic mapping tools, and ecosystem visualizations to support start-up evaluation and guidance	
Desired Profile	We are looking for a student who: • Has a strong interest in entrepreneurship, innovation, and sustainability • Is comfortable with qualitative research methods and strategic analysis • Is curious, autonomous, and eager to engage with real-world challenges	

	• Can adapt to interdisciplinary and multicultural environments Preferred but not mandatory student backgrounds include: • Business schools (with focus on innovation and entrepreneurship) • Engineering schools (with sustainability or industrial engineering) • Design schools (with strategic design or sustainable innovation programs) English, French or Spanish speakers are welcome.

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6. Fructose-induced gut microbiota alterations and mood disorders – *INRAE, UMR 1319 MICALIS, AMIPEM Team – Jouy-en-Josas*

Internship Title: Fructose-induced gut microbiota alterations and mood disorders		
Field of study	Neurophysiology	
For students currently in	Undergraduate Year 3 or Master	
N° of positions offered	1	
Host Research Unit/Entity	INRAE, UMR 1319 MICALIS, AMIPEM team	
Location	JOUY-EN-JOSAS (78)	
Supervisors	Véronique DOUARD & Elise MAXIMIN	**E-mail : veronique.douard@inrae.fr ; elise.maximin@inrae.fr**
Keywords	Gut-brain axis, fructose, microbiota	
Context	This internship is part of ANR project, Micro²Sweet that is starting in 2026. The project investigates the mechanisms by which excessive fructose intake induces mood disorders (anxiety and depression) in mouse models and in humans. It specifically explores the role of fructose-induced alterations in gut microbiota composition in this process. We have previously shown that excessive fructose intake leads to fructose malabsorption, which alters gut microbiota composition in both mice and humans. Importantly, fructose malabsorption is also associated with anxiety- and depression-like behaviors in mice, as well as with anxiety and depression in humans (doi: 10.1016/j.bbi.2025.106221). We hypothesize that excessive fructose intake induces fructose malabsorption that disrupts the gut microbiota, which in turn contributes to the development of mood disorders via the gut-brain axis.	
Internship objectives	During this five-week internship, the intern will work alongside a Master's (M1) student under the supervision of an engineer and a researcher. The intern will take part in the following activities: • Participation in behavioral experiments designed to assess stress and anxiety • Processing and analysis of behavioral data using Animaze software • Microbial DNA extraction, PCR experiments, and basic data analysis	
Desired Profile	We are looking for a student student with a strong interest in in vivo experimental approaches and behavioral neuroscience. The student should be enthusiastic about behavioral testing and willing to develop skills in microbiota-related techniques. Background knowledge in microbiology or neurobiology would be advantageous but is not required.	

7. Numerical simulation of granular media – *UMR SAYFOOD - Paris-Saclay*

Internship Title: Numerical simulation of granular media		
Field of study	Engineering (Chemical, Physical, Food, Environmental)	
For students currently in	Undergraduate Year 3 or Master	
N° of positions offered	1	
Host Research Unit/Entity	UMR SAYFOOD	
Location	Paris-Saclay Campus	
Supervisor	Artemio PLANA-FATTORI	**E-mail :** **artemio.planafattori@agroparistech.fr**
Keywords	Granular media, Discrete Element Method, Rotary drum	
Context	At the SayFood Joint Research Unit, particularly within the ModIC team, we implement mechanistic modeling tools to understand phenomena relevant to granular media (grains, powders). Experimental activity is being developped in parallel, in collaboration with partners in France and abroad.	
Internship objectives	The intern will be responsible for conducting numerical simulations, using an open-source tool, in order to study the flow of a granular medium inside a rotating drum. The intern will need to familiarize themselves with the physics involved (friction, etc.) and evaluate the influence of physical parameters on the mixing of two particle populations over time.	
Desired Profile	We are looking for a student with knowledge of Physics (good High School level) and basic skills in Python language.	

8. Formulation of food spreads out of vegetal shells – investigating the impact of particle size & volume fractions – *UMR SAYFOOD - Palaiseau*

Internship Title: Formulation of food spreads out of vegetal shells – investigating theimpact of particle size & volume fractions		
Field of study	Physico-Chemistry, Material Science	
For students currently in	Undergraduate Year 3 or Master	
N° of positions offered	1	
Host Research Unit/Entity	UMR SayFood	
Location	Palaiseau Campus	
Supervisor	PR Delphine HUC-MATHIS	**E-mail :** delphine.huc@agroparistech.fr
Keywords	Emulsions, formulation, multi-scale characterization, spreads, by-products, clean-label	
Context	This internship is part of COCO project. The project investigates the integral valorization of food by-products coming from shells and pods and their use within food and cosmetic products. It considers a continuum from formulation to consumer acceptance, based on a reverse engineering approach.	
Internship objectives	The intern will work alongside a PhD student to study the integral valorization of food by-products within food products. Responsabilities: 1) to study the intrinsic properties of the vegetal powders (size, morphology, water binding capacity, surface activity, chemical composition…) and of their various fractions; 2) to characterize the emulsions formulated from the powders and the underlying stabilizing mechanisms (rheological properties, microstructure, physical stability, droplet size…). The conception of visual and written deliverables destined to various publics will be the final mission. The results of the internship will available for publication in a peer-review journal.	
Desired Profile	We are looking for a student with a background in Chemistry or Physico-Chemistry and a good knowledge of emulsions. Curiosity, autonomy and interest for experimental work will be expected.	

9. Extraction and purification of bioactive compounds from agricultural by-products – *URD ABI – Reims-Pomacle*

Internship Title: Extraction and purification of bioactive compounds from agricultural by-products		
Field of study	Process engineering	
For students currently in	Undergraduate Year 3 or Master	
N° of positions offered	1	
Host Research Unit/Entity	URD ABI	
Location	Reims-Pomacle	
Supervisor	Morad CHADNI	**E-mail : morad.chadni@agroparistech.fr**
Keywords	Extraction, purification, biomass, by-products, upcycling, phenolic compounds	
Context	This internship is part of an internal research project. The project investigates the valorization of two agricultural or food processing by-products, which will be defined at a later stage, through the development and optimization of extraction and purification processes for bioactive compounds.	
Internship objectives	The intern will work alongside an engineer and the head of the process engineering team to valorize agricultural and food processing by-products. Responsabilities: • Perform extraction experiments under different operating conditions (temperature, solvent, time, solid/liquid ratio…). • Identify and characterize bioactive compounds using chromatographic analysis.	
Desired Profile	We are looking for a student with knowledge of process engineering, extraction and purification techniques, and basic analytical methods, with an interest in the valorization of agricultural and food processing by-products	

10. Contribution of plant N metabolism during maize - arbuscular mycorrhizal symbiosis – *Institut Jean-Pierre Bourgin for plant Sciences - Versailles*

Internship Title: Contribution of plant N metabolism during maize - arbuscular mycorrhizal symbiosis		
Field of study	Plant-microbe interactions, plant physiology	
For students currently in	Undergraduate Year 3 or Master	
N° of positions offered	2	
Host Research Unit/Entity	Institut Jean-Pierre Bourgin for plant Sciences, INRAE, AgroParisTech, Université Paris-Saclay 78000, Versailles, France	
Location	Versailles	
Supervisor	-Alia DELLAGI -Benoît Alunni -Eoghan King -Damien Fuster	**E-mail : alia.dellagi@agroparistech.fr**
Keywords	Nitrogen metabolism, Arbuscular Mycorrhizal Symbiosis, Zea mays, Rhizophagus irregularis, Microbiota, Agroecology	
Context	The functions carried by the root microbiota can play an essential role in agroecology. Arbuscular mycorrhizal symbiosis (AMS) is a widespread mutualistic association involving arbuscular mycorrhizal fungi (AMF) and 80% of land plants. AMS is well known for improving plant phosphorus (P) and nitrogen (N) nutrition. However, little is known about the plant N metabolism remodeling and functioning during AMS. Maize is the most productive crop in the world and requires high N input to reach the expected yields. Transcriptomic and metabolomic analyses, combined with mathematical metabolic modeling unveiled the activation of N metabolism-related genes metabolisms during AMS in maize. Additionally, the role of bacteria associated to AMS in the benefits provided to the plant is largely unknown. The construction of a representative Synthetic Community to study the role of the AMS-associated microbiota will help unravel new mechanisms in the plant-mycorrhiza-microbiota systems.	
Internship objectives	The intern will work alongside a PhD student (Damien Fuster) Responsabilities: • Monitoring maize gene expression related to symbiosis • Monitoring N content in symbiotic and non-symbiotic plants • Characterization of AMS helper bacteria isolated from maize roots	
Desired Profile	We are looking for students with knowledge of plant molecular biology and / or microbiology knowledge and highly motivated to implement sustainable agriculture and agroecology.	

11. The Economics of land-sparing/land-sharing debate – *UMR Paris-Saclay Applied Economics - Palaiseau*

Internship Title: The Economics of land-sparing/land-sharing debate		
Field of study	Ecological Economics ; Environmental Economics	
For students currently in	Undergraduate Year 3 or Master	
N° of positions offered	1	
Host Research Unit/Entity	UMR Paris-Saclay Applied Economics	
Location	Palaiseau Campus	
Supervisor	Vincent Martinet	**E-mail : vincent.martinet@inrae.fr**
Keywords	Biodiversity, food production, land-sparing/sharing, public policies, agricultural land-use	
Context	This internship is part of a project studying the trade-off between agricultural production and biodiversity conservation in agricultural landscapes. In ecology, the Land-sparing versus Land-sharing debate discusses two opposite options to farming: producing on a limited area with high intensity (to maximize the land spared for biodiversity on natural land) vs producing on a larger area with limited environmental impact (the sharing option, which limits the impact on biodiversity on agricultural land). But this debate overlooks the economics dimensions of this trade-off.	
Internship objectives	The intern will work alongside a researcher and a PhD student to study the economics dimensions of the sparing/sharing debate. Responsabilities: • Up-date a literature review on the topic (identify and synthetize relevant publications over the last 10 years) • Create a map of the key research groups on the topic in Europe, to identify potential networking	
Desired Profile	We are looking for a student with basic knowledge in ecology and economics, and a real capacity to read and synthetize academic research articles mixing ecology and economics.	