Ali Haidar, PhD

Home: Logroño, Spain | **Nationality**: Dutch | **Phone**: +34686013641 | **Email**: ahaidar@escp.eu

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To: Kevin Bryan, Ina Ganguli, and Kyle Myers

Dear Professors Bryan, Ganguli, and Myers,

I am writing to apply to the NBER Innovation Research Boot Camp 2026. I am currently a Postdoctoral Researcher at ESCP Business School within the ESCPTech Institute. My research examines why environmentally beneficial technologies so often struggle to diffuse beyond niche settings, and why building a conducive environment for adoption is frequently more decisive than technical performance alone.

I completed my PhD in Economics and Management of Innovation at the Universidad Autónoma de Madrid (Industrial PhD mention; Cum Laude). During my doctoral period, I also worked as a Research Project Manager on Horizon Europe initiatives, which gave me direct exposure to the frictions that shape commercialization and scale-up in advanced technologies. That experience sharpened my research focus on market (trans)formation and lead markets for environmental innovation, especially the institutional and demand-side conditions that make environmental performance legible enough to influence real decisions by firms, adopters, and public actors.

At ESCP, I am extending this agenda to the digital domain by developing the AIxSustainability Index, a measurement tool designed to proxy the extent to which AI adoption delivers credible sustainability benefits. The motivation is straightforward: when environmental performance is difficult to interpret and compare, diffusion can reward visibility and short-term efficiency signals rather than durable reductions in environmental externalities. By improving legibility, the index aims to support environmental accountability and reduce ambiguity in adoption decisions.

In accordance with the application guidelines, I confirm that I have not previously attended the NBER Innovation Research Boot Camp or the NBER Entrepreneurship Boot Camp. My PhD supervisor, Professor José Guimón (Universidad Autónoma de Madrid), will submit a confidential recommendation letter directly to Brett Maranjian.

Thank you for considering my application. I would welcome the opportunity to contribute to the discussions in Cambridge in July 2026.

Sincerely,

Ali Haidar

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ACADEMIC POSITION

2024- **ESCP Business School, ESCPTech Institute**
Postdoctoral researcher

RESEARCH INTERESTS

Lead markets for environmental innovation, Market (trans)formation, Demand-side instruments and policy coordination, Multi-scalar dynamics, Economics of innovation commercialization

EDUCATION

2023 **Universidad Autónoma de Madrid**
Ph.D. Economics and Management of Innovation
Mentions: Industrial Ph.D., Cum Laude

2018 **Universidad Carlos III de Madrid**
M.S., Innovation Management

2016 **Rotterdam Business School**
B.A., Economics
University of West Florida (A one-semester exchange program)

RELEVANT PROFESSIONAL EXPERIENCE

2023- 2024 **Vall d'Hebron Research Institute, Vall d'Hebron University Hospital**
Experienced Research Project Manager

2018-2022 **Avanzare Innovación Tecnológica S.L.**
Research Project Manager

2020-2022 **Universidad Carlos III de Madrid**
Part-time EU Project Manager

PUBLICATIONS

Haidar, A., Guimón, J., & Alon, I. (2024). Can graphene fuel a transformative change in energy storage technologies? A scenario analysis for the next two decades. *Technological Forecasting and Social Change*, *202*, 123278. https://doi.org/10.1016/j.techfore.2024.123278

Haidar, A., Guimón, J., & Martínez, J. P. (2022). Mainstreaming graphene in electrochemical energy storage devices: A Delphi-based adaptive priority-setting. *Energy for Sustainable Development*, *71*, 279-290. https://doi.org/10.1016/j.esd.2022.10.004

Haidar, A., González Jiménez, H., & Fréry, F. (2025). AI and environmental accountability: A new index for real-world impact (ESCP Impact Paper No. 2025-X-X). ESCP Business School. https://dx.doi.org/10.2139/ssrn.5467626.

Under review

Haidar, A. (2024). *Innovation under constraint: Applying the TIS framework to ecological restoration in Iraq's marshlands*. In P. Mguni & W. Kanda (Eds.), *Innovation for sustainability transitions in the Global South: Towards a critical research and practice agenda*. Manuscript under review.

PRESENTATIONS

2026 **European Universities Competition on Artificial Intelligence to Promote Sustainable Development and Address Climate Change 2026**
Latent sustainability value in efficiency-driven AI adoption: a sociomaterial account of nested affordances

2025 **AIRSI Conference**
AIxSustainability Index, the sustainability value of efficiency-oriented AI adoption in organizations.

2022 **Graphene Week, Munich**
Social and technical challenges influencing the mainstreaming of graphene for sustainable development.

Ph.D. COURSEWORK

2019 - 2020 **Universidad Autónoma de Madrid**
Econometrics I & II, Mathematical Methods in Economics.
Advanced Microeconomics, Macroeconomic Modeling.
Economics of Innovation

SPECIALIZED Ph.D. TRAINING COURSES

2022 **Ca' Foscari University of Venice**
Nanosafety Training: Towards by Design Advanced materials

2022 **Lund University**
Eu-SPRI, Early Career Researcher, Winter School on the Geography of Innovation at CIRCLE

2021 **Manchester Institute of Innovation Research**
Science, Technology and Innovation Policy Evaluation Course

2021 **Manchester Institute of Innovation Research**
Foresight methods

2021 **Stockholm University**
Academic Writing for International Publication

2020 **Manchester Institute of Innovation Research**
Foresight in Action

2020 **Erasmus University Rotterdam**
Advanced Specialization in Doing Qualitative Research

2020 **INGENIO, Polytechnic University of Valencia**
Innovation and research agendas: between policy priorities, societal challenges and academic autonomy

TEACHING EXPERIENCE

2024 **ESCP Business School**
Graduate-level course on Robots and AI in Business and Society
Sessions include economic impact, ethical, business, and policy implications

LANGUAGES

Arabic	Fluent, bilingual
English	Fluent, bilingual
Dutch	Fluent, bilingual
Spanish	Fluent

Essay research statement

My current research interests focus on why environmentally beneficial innovations often struggle to diffuse and scale, even when their technical promise is clear. I study how lead markets can emerge for environmental innovation and how market formation processes shape the conditions under which new technologies become adoptable, investable, and replicable. A central part of this agenda examines demand-side instruments and policy coordination, understood as ways of shaping the environment in which firms and adopters make decisions under uncertainty. I also focus on multi-scalar dynamics, meaning how local, regional, national, and supranational settings interact to either reinforce diffusion pathways or create fragmentation. Above all, these interests converge on the economics of innovation commercialization, with an emphasis on the practical and institutional factors that determine whether innovations move from experimentation into durable, real-world adoption.

My future research treats the difficulty of innovation diffusion as the central puzzle. Many technologies show promise yet fail to scale because the surrounding environment does not support adoption, investment, and learning amid uncertainty. I want to build a stronger case for studying how conducive environments for diffusion are assembled, maintained, and transferred across contexts. This includes the role of lead markets in concentrating learning and reducing uncertainty, the way demand-side policy coordination can stabilize expectations for both adopters and innovators, and the multi-scalar dynamics through which local capabilities and higher-level governance arrangements either reinforce coherence or generate fragmentation. A further focus is environmental legibility. Overall, my aim is to explain why diffusion is difficult and to identify what makes diffusion feasible, durable, and environmentally accountable.

I want to attend the NBER Innovation Research Boot Camp because it addresses the three constraints that currently limit how I can scale my research agenda within the economics of innovation. First, it will deepen my exposure to the field's foundational ideas, institutions, and frontier questions. My training and experience have given me a close view of industrial R&D, diffusion bottlenecks, and commercialization constraints through innovation management and Horizon Europe project work. However, I want to engage more systematically with the economics of innovation as a field, including the conceptual foundations that connect diffusion, firm behavior, and innovation policy to growth, inequality, and labor market outcomes. The boot camp is an efficient entry point into that intellectual core. Second, it will strengthen my command of the shared empirical evidence base and the research designs that structure credible innovation work. The next step in my program is to improve the causal and structural rigor of my study of diffusion trajectories, firm dynamics, and policy effects, particularly in relation to my AIxSustainability Index and my planned evaluation of demand-side policy instruments. The boot camp's emphasis on technology diffusion and firm dynamics aligns closely with the empirical demands of this work and will help me stress-test my questions and identification strategies against frontier economic theory and evidence. Third, it will provide direct access to the innovation research community that sets standards and accelerates productivity. The opportunity to participate in the Innovation Policy meeting matters because it brings my work into conversation with scholars actively shaping how public finance, institutional design, and policy evaluation intersect with innovation-driven growth. Being embedded in that community will sharpen my research positioning, improve feedback cycles, and make my work more cumulative across projects.