

QUENTIN PLANTEC, Ph.D.

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POSITION

2021 – today **Toulouse School of Management (TSM)**, Université Toulouse 1 – Capitole
Researcher in the *Strategy department*

EDUCATION

2018 – 2021 **MINES-ParisTech - PSL University**, Center for Management Science (CGS).
Ph.D. Candidate, Management Science
Supervisors: Pr. Pascal Le Masson & Pr. Benoît Weil
Topic: Science and Industry interactions to foster innovation dynamics, new product development and academic research.
Ph.D. Defense (07/02/2021):

- *Jury:* Pr. Marine Agogué, Pr. Sylvain Lenfle, Pr. Nicola Mirc, Pr. Douglas K.R. Robinson, Pr. Pascal Le Masson, Pr. Benoît Weil, C. Angelier, N. Sennequier

2014 – 2015 **Ecole Polytechnique**, Centre for Research in Management (CRG)
M.S. Innovation & Technology Management
Visiting student: 1 semester at the London School of Economics
M.S. Dissertation supervisor: Pr. Hervé Dumez

2012 – 2014 **Ecole Normale Supérieure (Cachan)**, Management & Economics Dpt.
B.A. Management (*in partnership with Paris-Dauphine University*)
B.A. Economics (*in partnership with Paris-1 – Panthéon-Sorbonne University*)

2009 – 2012 **Preparatory School for French “Grandes Ecoles”**, Lycée J. Récamier Lyon
Management & Economics Dpt.

PUBLICATIONS

Q. Plantec, P. Le Masson & B. Weil, **Impact of knowledge search practices on the originality of inventions: a study in the oil & gas industry through dynamic patent analysis**. *Technological Forecasting & Social Change (FNEGE Rank 2 / CNRS Rank 2)*, vol. 168, 2021.

PUBLICATIONS UNDER REVIEW

Q. Plantec, C. Sternberger, P. Le Masson & B. Weil, **Exploring the role of industry in R&D ecosystems during pandemics. A review of coronavirus scientific publications and patents during SARS-Cov-1, MERS-Cov and Cov-19 pandemics**. *La Revue Française de Gestion (FNEGE Rank 2 / CNRS Rank 3)*.
Methodology: statistical descriptive analysis with scientific publication data.

E. Berlinski, Q. Plantec, M. Strauch, **Mythology and institution without object: the Hyperloop case.** La Revue Française de Gestion (*FNEGE Rank 2 / CNRS Rank 3*)
Methodology: qualitative document analysis – critical management studies

PRESENTATIONS

Q. Plantec, B. Cabanes, P. Le Masson & B. Weil, **Scientific discoveries, inventions and research directions in university-industry research projects: the case of the CIFRE collaborative Ph.D. program.**

- (2021, August). Academy of Management, Philadelphia, United States (*referred – online due to COVID19*)
- (2019, June). R&D Management Conference, Paris, France (*referred*)

Q. Plantec, P. Le Masson & B. Weil, **Another way to get the Nobel Prize: evidence on the emergence of new scientific discoveries in industry context.**

- (2021, July). R&D Management Conference, Glasgow, United Kingdom (*referred – online due to COVID19*)

Q. Plantec, S. Bröring, A. Waßenhoven, C. Sternberger, M. Wustmans, M. Lei, **Creative AI-based inventions: how incumbents strategically renew their invention portfolios through AI technologies in the agribusiness.**

- (2021, June). EURAM Conference, Montreal, Canada (*referred – online due to COVID19*)

Q. Plantec, C. Sternberger, P. Le Masson & B. Weil. **Exploring the role of industry in R&D ecosystems during pandemics. A review of coronavirus scientific publications and patents during SARS-Cov-1, MERS-Cov and Cov-19 pandemics.**

- (2020, September). 5th Conference on data & algorithms for science, technology and innovation studies organized by KU Leuven & European Patent Office, online (*invited*)

Q. Plantec, P. Le Masson & B. Weil, **Impact of knowledge search practices on the originality of inventions: a study in the oil & gas industry through dynamic patent analysis.**

- (2020, August). Academy of Management, Vancouver, Canada (*referred – online due to COVID19*)
- (2019, December). Institut für Lebensmittel und Ressourcenökonomik, Bonn, Germany (*invited*)
- (2019, September). 4th Conference on data & algorithms for science, technology and innovation studies organized by KU Leuven & European Patent Office, Vienna, Austria (*invited*)

Q. Plantec, P. Le Masson & B. Weil, **Inventions and scientific discoveries: impact of collaborations on creativity. The CRISPR-Cas9 case.**

- (2019, August). International Conference on Engineering Design, Delft, Netherland (*referred*)
- (2019, June). European Academy of Management Conference, Lisbon, Portugal (*referred*)

WORK IN PROGRESS

Market-pull or research push? Effects of research orientations on University-Industry collaborative Ph.D. projects' performances, with B. Cabanes, P. Le Masson & B. Weil.

Status: first version presented at R&D Management conference 2019 with c. 100 projects analyzed. Second version: data analysis completed (c. 1,000 projects), quantitative analysis completed and presented at Academy of Management 2021. Under preparation for submission to journal Q3-Q4 2021. Methodology: regression analysis with questionnaires and manually coded data.

Another way to get the Nobel Prize: evidence on the emergence of new scientific discoveries in industry context, with P. Le Masson & B. Weil.

Status: Submitted at R&D Management conference 2020¹ and DRUID 2020², R&D Management conference 2021. In progress for an updated version and submission to journal Q2 2022.

Methodology: regression analysis with scientific publication and patent data.

Creative AI-based inventions: how incumbents strategically renew their invention portfolios through AI technologies in the agribusiness, Collaborative project co-managed with Michael Wustmans.

Status: quantitative analysis completed, manuscript submitted to EURAM 2021 and Academy of Management 2021. Other authors includes: S. Bröring, A. Waßenhoven, C. Sternberger. To be submitted in journal in Q4 2021.

Methodology: regression analysis with patent data.

Cycles of simultaneous inventions and discoveries: CRISPR-Cas9 in the cheese & yogurt industry.

Status: ongoing field study with DUPONT (US & France). First draft based on archival data submitted to EURAM 2019. Semi-structured interviews ongoing. Preparation for submission to conference Q1 2022.

Methodology: qualitative case study analysis.

A review of University-Industry collaborative projects: the CIFRE program case, with B. Cabanes, P.

Le Masson & B. Weil. *Status: quantitative analysis completed. Manuscript in preparation for submission to journal Q4 2021 (paper in French).*

Methodology: statistical descriptive analysis with questionnaires and manually coded data.

COLLABORATIVE RESEARCH PROJECTS WITH PRIVATE THIRD-PARTIES

Research projects with MINES-ParisTech – PSL:

- *Institut National de la Propriété Industrielle (INPI), France. 3-year research project with the Board of Directors on University-Industry research dynamics. 2018-2021 (ongoing).*
- *National Association for Research & Technology (ANRT), France. 3-year research project with the General Secretary on the University – Industry Collaborative doctoral programme. 2018-2021 (ongoing).*
- *TOTAL S.A., France. 1-year research project with the Global R&D technological intelligence team, patent and IP department and skills division on the knowledge search practices. 2019.*

ARTICLES IN PRESS

“Science & industry dynamics and the COVID-19 pandemic”, Xerfi Canal (2020/06/26)

“La these CIFRE, couteau suisse des relations entre science et industrie”, NewsTank Education& Recherche (2021/03/25)

¹ Postponed to 2021 due to Cov-19 pandemic

² Cancelled due to Cov-19 outbreak

PROJECTS TO BE LAUNCHED / INITIALIZATION PHASE

Area N°1: Science & New Product Development interactions: the role of the industry

- **How PRO & Universities are doing science differently: evidence from twin discoveries.** *Status: ongoing data analysis, currently identifying potential co-authors.*
- **Industry breakthrough discoveries & impactful patents: evidence from SNPL.** *Status: to be launched, currently identifying potential co-authors.*

Area N°2: Invention dynamics in large firms or ecosystems & knowledge base

- **Large company inventors' performances when exploring new fields.** *Status: Initialization – Visiting Project Paper at KU Leuven University (accepted for a 3-month visiting, but cancelled due to Covid-19) – Dpt. Strategy, Innovation & Management.*
- **At the end of innovation: a critical management perspective on a R&D hub closure.** *Status: To be launched.*

REVIEW SERVICES

Technological Forecasting & Social Change, La Revue Française de Gestion, Design Science.

R&D Management Conference (2019 Paris edition, 2021 Glasgow edition), Academy of Management Conference (2020 Vancouver edition, 2021 Philadelphia edition), EURAM Conference (2021 online edition).

RESEARCH INTERESTS

- Innovation & Technology Management in large firms.
- Patent analytics, scientific paper analytics.
- University – Industry interactions.
- Knowledge search practices.

RESEARCH GRANTS, SCHOLARSHIPS & AWARDS

Funding

- **French Patent Office** (*Institut National de la Propriété Industrielle*). 3-year competitive research grant for the completion of the Ph.D. project (CIFRE scheme), 2018-2021. 82,000 €.
- **MINES-ParisTech - PSL**. Study on the industrial Ph.D. in France. Research grant, 2018. 3,400 €.
- **Ecole Normale Supérieure de Cachan**. *Competitive scholarship* 2012-2015. 56,000 €.

Awards

- **Best reviewer award**, Technology & Innovation Management (TIM) division, Academy of Management Conference 2020 (Vancouver).

TEACHING & UNIVERSITY SERVICES

Courses Taught

PARIS DAUPHINE UNIVERSITY – PSL:

- **Business Model** (Elective for M.S. Marketing & Strategy for Fashion & Luxury):

- 18 hours, in **English**. 2021 (online).
- 18 hours, in **English**. 2020.
- **Innovation methods** (PSL - innovation programme) – 6 hours, in French. 2021.
- **Creativity workshops** (M.S. Marketing & Strategy for Fashion & Luxury) – 9 hours, in French. 2020.

ECOLE NATIONALE SUPÉRIEURE DES ARTS & MÉTIERS (ENSAM):

- **Entrepreneurship & Innovation** (M.S. Entrepreneurship & Technological Innovation Program) – 33 hours, in French. 2021.

MINES-PARISTECH – PSL:

- **Design & Innovation Management workshop** (specialization for M.S. Grande Ecole) – 3 hours, in French. 2021
- **Science & Innovation workshop** (specialization for MS Grande Ecole) – 6 hours, in French. 2021
- **Science & Innovation seminar** – 2 hours, in French. 2020 (with invited speaker)
- **Patent strategy seminars** – 5 hours, in French. 2018, 2020 (with invited speaker)
- **Creativity workshop** (M.S.c Circular Economy & Management) – 4 hours, in French. 2019.
- **Corporate Finance Seminar** (Elective for M.S. Grande Ecole) – 3 hours, in French. 2020.

ECOLE POLYTECHNIQUE / MINES-PARISTECH – PSL / PARIS DAUPHINE UNIVERSITY - PSL:

- **Science & Innovation workshop** (Master Projet Innovation Conception / Management de la Technologie et de l'Innovation) – 3 hours, in French. 2021

EM LYON BUSINESS SCHOOL:

- **Creativity workshop** (M.S. Business Mediation) – 3 hours, in French. 2021
- **Business Model & Innovation** (M.S. Business Mediation) – 6 hours, in French. 2021
Supervision of Students

MINES-ParisTech – PSL

- **Master dissertation & Industrial placement** (M.S. Grande Ecole, specialization in Innovation Management) – 6 months projects (40h direct supervision / per project):
 - Decathlon S.A. – 2 students. 2018-2019.
 - Essilor-Luxottica – 2 students. 2019-2020.

University services

MINES-ParisTech – PSL

- **Ph.D. staff representative**, Centre for Management Science (CGS), MINES-Paristech – PSL. 2019-2020.

PRACTITIONERS' PRESENTATIONS

Practitioners' private meetings:

- DUPONT SA – *Scientific R&D leaders – Nutrition & Health Dpt.* (2020)
- Commissariat à l'Energie Atomique (CEA) – *Innovation head* (2020)
- French Patent Office (INPI) – *Director* (2019, 2020, 2021)
- Association Nationale de la Recherche & de la Technologie (ANRT) – *Director* (2019, 2020)
- Total SA – *HR Expert Committee, IP dpt. head* (2019, 2020)
- French Ministry of Higher Education & Innovation (2019)

- OECD – *Science, Technology & Innovation dpt. head* (2019)
- *Chaire of Design Theory & Innovation Management - SNCF, Airbus, Thalès, etc.* (2019, 2020)

Practitioners' public presentations:

- “*The CIFRE program: the Swiss knife of university – industry research collaborations*” at Collège de France, for the 40 years anniversary of the CIFRE program (March 2021), with F. Vidal.

OTHER WORK EXPERIENCE

SNCF (*French Railway Company*), Consultant (2016 – 2017) & Senior Consultant (2017 – 2018) mainly for Research & Development Dpt. and Innovation Dpt. Key projects include: SNCF – Hyperloop One partnership, coaching of innovation managers of Engineering Dpt., design and implementation of innovative projects portfolio management tools.

OC&C Strategy (*Strategy consulting company, Paris office*), Intern (2015). Key projects include: strategic vendor / buyer due diligence for large investment funds or companies in various industries (nuclear energy, retail, company services, etc.).

AECOM (*Engineering consulting company, London & Paris offices*), Industrial Placement (2014-2015). Key projects include lender technical advisory missions for construction projects such as Marseille corridor highway, Aix-Marseille University refurbishment, Croatian Highway refurbishment.

REFERENCES

Pr. Pascal LE MASSON

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Pr. Benoît WEIL

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