

The professional profile of PhD-holders

Mattia Tarabolo

Physicist specializing in complex systems

PhD candidate in Complex Systems skilled in stochastic modeling, Bayesian inference, and network dynamics. Strong in SDEs, message passing, and data-driven analysis for AI and quantitative sciences.

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Core business

PHASE 2 Skill development

*Takes a critical look at his skills and experience and regularly fine-tunes his career goals.
Knows how to develop new skills to keep step with changing knowledge and needs.
Relies on advice from competent professionals (coaching) or experienced staff and takes their opinions into account; uses his networks to manage his career.
Is able to evolve gradually from technical expertise to managerial expertise.
Helps his staff develop their skills and networks and assists them in achieving career development goals.*

PHASE 2 Evaluation

*Knows how to regularly evaluate the progress, impact and outcomes of his staff's activities.
Takes part in evaluating both internal and external projects.
Is able to evaluate hypotheses and concepts lying beyond his field of expertise.
Encourages his staff to take ownership of the evaluation process.*

PHASE 2 Information management

*Conducts advanced searches using a range of software solutions, resources and techniques, recognizing the advantages and limitations of each.
Masters the creation, organization, validation, sharing, storing and archiving of information and/or raw data and addresses the associated risks.
Understands the legal, ethical and security requirements of information management.
Is familiar with the value of, and uses, metadata.
Advises and assists his staff using information-gathering and management methods, critiquing sources and evaluating information and data.
Makes his staff aware of information security and legal and ethical requirements.*

PHASE 2 Expertise and methods

*Is familiar with recent progress in fields related to his own.
Is able to engage in dialogue and collaboration with experts in other disciplines or fields of activity.
Takes ownership of new research methods and techniques.
Is able to document and evaluate his activities using statistical methods where applicable.*

Personal and relational qualities

*Can formulate complex problems that correspond to new challenges.
Is able to develop arguments in support of new projects.
Knows how to adapt his arguments to his audience.
Advises and assists his staff in making appropriate use of investigative methods, improving their performance and enhancing their skills.*

PHASE 2 Communication

*Adapts his register to communicate with experts in other fields at both the national and international levels.
Masters communication techniques for various contexts and media.
Communicates effectively when addressing a diverse and lay audience.
Knows how to address a community of professionals.
Educates and trains his staff in the use of digital communication technologies.
Is able to work and lead a group in at least English and one other world language.*

PHASE 2 Analysis, synthesis and critical thinking

*Knows how to apply his analyzing and synthesizing abilities to new fields.
Takes ownership of new analytical methods.
Has a novel and independent way of thinking and makes significant contributions.
Questions "business-as-usual" scenarios in his activity.
Advises his staff to help them develop their own capacities of analysis and synthesis.
Stimulates critical thinking among his peers and his staff.*

PHASE 2 Open-mindedness and creativity

*Explores related fields.
Conceives new projects to find answers to essential questions.
Encourages his staff to seek challenge, be curious and engage in scientific questioning.
Defines and carries out innovative interdisciplinary projects with the help of contributors from various backgrounds.
Serves as a vector of innovation, a realistic visionary, a constructive agitator.
Encourages creativity and innovation among his staff.
Has acquired professional experience abroad in a culture other than his own.*

PHASE 3 Balance

*Helps to shape policies on work-life balance.
Is able to enhance the image and reputation of his entity and his staff.*

PHASE 2 Listening and empathy

*Knows how to engage in active listening in various situations.
Is careful to take his contacts' needs and frame of reference into account.
Expresses gratitude regularly.
Takes the needs of his staff into consideration, is sensitive to signs of stress and able to provide support and advice when needed.*

PHASE 2 Negotiation

*Is familiar with negotiating techniques.
Knows how to come up with win-win solutions.*

Is able to negotiate in order to obtain the resources needed for projects.

Business management and value creation

PHASE 1 Project management

*Plans projects to meet goals in accordance with strategy and priorities, and taking quality, deadline and budget constraints into account.
Knows how to write specifications.
Is accountable for resources used and for meeting the deadlines and quality requirements of the deliverable.
Reacts efficiently and appropriately to change and unforeseen events.
Conducts his project within a framework of auditing and evaluation, deploying the appropriate systems.*

PHASE 1 Managing change

*Can adapt his approach and the project organization according to imperatives.
Adapts to changes and opportunities; knows how and where to find advice.*

PHASE 1 Managing risks

*Can determine the risks related to his project and the means for controlling them.
Is aware that technological and financial risks increase during the innovation process.
Understands the concept of corporate social responsibility.*

PHASE 1 Decision-making

*Knows how to make appropriate decisions for each phase of his project.
Assists his line management in making major decisions (e.g., reporting, scenarios)*

PHASE 1 People management

*Has experience with teamwork; knows how to encourage, support and recognize the contributions of each player.
Knows how to be a team player.
Is able to win the trust of his peers and his line management.
Can report on his activities.
Supports his peers when needed and can provide assistance.
Understands human resources policies and management tools such as recruitment, evaluation, remuneration and strategic workforce planning.
Takes safety, social responsibility and labor law requirements into account.
Upholds rules on non-discrimination and equal opportunity among employees.*