

## INSTITUTE FOR ARTIFICIAL INTELLIGENCE IN MANAGEMENT

The emlyon Institute for Artificial Intelligence in Management (AIM) is a multifaceted initiative focused on understanding the opportunities and implications of artificial intelligence for the management of organizations, industries, and business ecosystems. To do this, AIM initiates and sponsors:

- Pedagogical experiences that expose and prepare our students to work with and manage AI technologies.
- Enterprise and ecosystem development that supports technologists and managers in the evolution, adoption, and implementation of AI technologies.
- Research that examines how AI and related technologies are altering work and organizations but also how they are capturing value and shaping business ecosystems.

### *PEDAGOGY INITIATIVES*

Out of its collaborations and published research, AIM designs and builds innovative courses and pedagogical modules mixing technology matters and management issues in a multidisciplinary approach. This material is used as the basis of stand-alone teaching modules available through various distribution channels, integrated into existing flagship programs in order to give them a differentiating “AI focus” but also used as the root material to design new innovative certificates.

This pedagogical content will be disseminated to AIM’s main targeted audiences, namely the students and professors of Bachelor and Graduate programs looking for high quality content on the socio-economic and business impacts of AI, but also the general public with the ambition to educate broadly and demystify the implications of the technology on our life as well as international institutions in order to actively contribute to the public debate.

### *ENTERPRISE AND ECOSYSTEM DEVELOPMENT INITIATIVES*

AIM fosters Innovation through a technology transfer mechanism which goal is to value the results generated by its Research Centers. On a systematic basis, the opportunity of licensing intellectual property with corporate partners, creating applied models that could be implemented into tools and digital applications, or any kind of product development will be investigated. Those innovation actions will involve the researchers who want to value their research, but also the students as well as external managers and entrepreneurs who want to build products or incorporate startups based on the research outputs.

Close collaborations between AIM and the Innovation and IT departments will be initiated. New methodologies, new processes and new tools generated by the Institute will be tested and, when relevant, integrated in the school’s IT infrastructure to improve it,



to optimize it or to differentiate it with new services. emlyon's EdJobTech Accelerator can also help new-born startups to grow and get in touch with the school's wider ecosystem.

### *RESEARCH INITIATIVES*

AIM initiates and sponsors research via two independent research centers:

**The AIM Research Center on Artificial Intelligence in Value Creation** which investigate how AI and related emerging technologies: affect value creation in human interactions and consumer behavior, and the new way companies create and capture value doing business and shaping business ecosystems.. This center is directed by Professor Margherita Pagani.

**The AIM Research Centre for Work and Organization** which is a social science research center dedicated to understanding the implications of artificial intelligence for workers, managers, and other stakeholders. The center supports rigorous empirical research - grounded in the real-world challenges facing organizations and policymakers - to understand the implications of artificial intelligence for work, human resource management and labor markets, and governance. This center is directed by Professor Ruthanne Huising.

## FACULTY FELLOWSHIP PROGRAM

While the research centers will grow through a multi-year hiring plan, AIM encourages Professors at emlyon to consider how questions related to the rise and spread of AI and related technologies can be integrated into their research programs. To encourage this, we have developed a Faculty Fellowship Program. The Faculty Fellowship program provides both recognition and support for research related to the mandates of either research center.

We are offering up to 6 AIM Faculty Fellowships in 2019 (3 for each research center). The Fellowship are granted for a 12 months period and may be renewable, depending on the progress of the research. For Faculty Fellows whose proposals are selected, the responsibility of the research project will be valued as a 1 day/week mission during 2019/2020 academic year.

We encourage applications from all researchers. Because the AIM Research Centers are phenomenon-driven (versus field-driven), we anticipate that most Faculty Fellows will be cross-affiliated with established research centers (CBT, CEFRA, Entrepreneurship, Lifestyle, OCE, STORM, IFGE, RECENTFIN...). In other words, participation in other research centers does not preclude membership in the AIM Research Centers.

We welcome rigorous empirical research related to the mandate of either of the Research Centers (see descriptions below). Collaborative projects (with external or internal collaborators) are welcome and we are particularly supportive of (but not insistent on) interdisciplinary collaborations.

Faculty Fellows will be asked to participate in and contribute to the intellectual life of the Research Center and the Institute more generally. This includes participating in research seminars and related events. The research projects will be featured on the Center's website.

### How to Apply for a Faculty Fellowship

The application entails a research proposal of no more than 5 pages and an up-to-date CV.

The research proposal should include the following:

- A clearly articulated and motivated empirical and/or theoretical problem or question related to the mandate of the targeted research center.
- A realistic research design appropriate to addressing the problem or question. This should include a detailed, realistic plan for collecting and analyzing data.
- Expected implications for theory (scholarly significance) and contributions to practice (practical significance). The proposal should make it clear how the project work advances the state of knowledge.
- How might this project be extended or enlarged? How might this project build capacity for other research, future collaborations, etc.?



- References
- If this is a collaboration, indicate the role of each collaborator.

The applications will be reviewed by the Directors of the Research Centers in collaboration with external expert academics where deemed necessary. They will be evaluated based on the fit of the project with the mandate of the targeted research center, the importance of the problem identified (theoretical and/or empirical motivation), the proposed methodology, the practical possibility of completing the project within the stated time frame. Note that the scale of the projects can vary from early-stage pilot studies to components of a larger-scale, multi-year study.

Please indicate the Research Center to which you are submitting your proposal. Applications must be emailed to Emilie Guichard ([guichard@em-lyon.com](mailto:guichard@em-lyon.com)) before December 1<sup>st</sup> 2018. The results will be announced before January 4<sup>th</sup> 2019.

We encourage anyone considering applying to this call to contact Margherita ([pagani@em-lyon.com](mailto:pagani@em-lyon.com)) or Ruthanne ([huising@em-lyon.com](mailto:huising@em-lyon.com)) to discuss potential ideas or plans. Further, please feel free to contact us with any questions. We look forward to learning about your research projects.

Come visit us at [aim.em-lyon.com](http://aim.em-lyon.com)

## AIM RESEARCH CENTER MANDATES

### AIM Research Center on Artificial Intelligence in Value Creation

Sales and marketing automation are moving towards building intelligent systems that can collaborate effectively with people (Stanford University Report, 2016). More generally, advances in autonomous technologies and robotics provide challenging prospects for integrating human-based interaction with machine-to-machine interaction or more customized and contextual forms of human-to-machine interactions.

Data driven intelligence can look at behavior on a much more granular level and predict what a user will do next, based on their past actions. AI and machine learning involve computers crunching vast quantities of data to find patterns and make predictions. It can draw conclusions between certain types of people to anticipate their next move, motivations and desires. Moreover, on the basis of these interactions, huge database of behavioral patterns and preferences can be accumulated and used to offer personalized user experiences or targeted products or services.

Arguably, all of these issues come together in the consideration of market context, especially when viewed in terms of dynamic systems, such as service ecosystems (Vargo and Lusch 2016). AI can be seen as adding new dimensions of ‘resourceness’ as it increases the complexity and thus the emergent nature of markets and changes the way value is created and captured influencing the emergence of innovative business models.

Through this Research Center we want to analyze the impact of Artificial Intelligence on a broad range of business and management subjects (ranging from Finance, Marketing, Strategy, to Innovation and Entrepreneurship and covering a multitude of different sectors such as Education, Energy, Health Care, Public Administration, Banks, Insurance, Retail, Tourism, Luxury) and offer guidance to organizations on how to best use AI for sustainable value creation.

**The Research Center on AI in Value Creation** aims to develop research and open space of debate on how AI creates new value layers affecting user behavior, information sharing, experiential engagement, marketing practices and brand equity. Goal of the research center is also to explore how AI enabled networked platforms— like the ones used by Uber, Airbnb, and eBay but also in the industrial marketing —are changing the way companies do business, develop new business models and shape new business ecosystems.

Following is a non-exhaustive and non-exclusive list of issues and questions that we address:

- What are the effects of AI and robotics on the customer experience and service satisfaction? What constructs moderate or mediate this relationship?
- How will AI shape the context for value co-creation? How will it affect resource integration and service for service exchange?

- How will machine-human interaction nudge decision-making processes with respect to individual and collective well-being?
- How is AI influencing the organization of business networks?
- How will sales, marketing, supply chain management, operations, finance and (or) communication activities benefit from AI systems?
- What ethical aspects arise from the arrival of AI?

## **AIM Research Centre for Work and Organization**

As the field of artificial intelligence continues to grow, the development and implementation of everything from learning algorithms to intelligent robots is changing how we work and organize. Understanding how this is happening is the focus of this research center. The Center supports research projects on the nature and impact of AI and related technologies in the workplace in three domains:

**Work:** As AI applications take on a variety of tasks, we aim to study the implications for work and organizational governance. Grounded research in places of work has the potential to answer these and related questions.

- How are jobs and work changing? What are the implications for coordination, expertise, and authority? How does human-machine interaction and collaboration change the workplace? How do interactions with intelligent machines change the meaning and experience of work? How do these implications vary across jobs, organizations, and industries?
- How will organizations assess and leverage complementarities between humans and machines? How will human intelligence be evaluated and valued? How will organizations make choices about what machines and humans will do?
- How are organizations adapting their strategy and structure in relation to such changes? How will the role of managers change? How is the design of authority and communication structures shifting?
- How do those who create AI and AI-related technologies – designers, data scientists, computer scientists, roboticists, and engineers – understand their role and responsibilities? How do they work together to develop, test, and implement AI technologies in work places? What roles are emerging in this space?

**Human Resources and Labor Markets:** The Human Resource function is undergoing significant change as analytics are used to assess and monitor the workforce, and inform decision-making. Rather than engage in the activities of people analytics, the goal is to understand the use and consequences of these tools through close, rigorous study. We also support studies of labor markets that examine changing job prospects and employment stability, employment relations, and opportunities for wage and career growth.

- What are the implications of people analytics tools for performance? How do workers experience and respond to intensified measurement and surveillance? Can

- these tools be used to increase productivity, reduce turn-over, and improve satisfaction? What biases and assumptions are introduced, and how are these managed?
- What are the implications for labor markets? How are institutional actors preparing for potential shifts in employment demand? How might regions and communities prepare for predictions of work without employment? How might meaningful, occupying activities replace notions of work as employment? How might labor agreements, codes, and laws change?

**Governance:** All technological change raises issues of governance, responsibility, and values. Across industries and within organizations, AI renews questions about technological choice (versus determinism), stakeholder consultation and collaboration, and ethical and normative responsibility. Going beyond questions at an abstract level, we support studies of real world efforts by organizations, unions, associations, and NGOs to address these questions.

- Who is responsible within and across organizations for generating reflection and dialogue on technological choices and consequences? How can the biases and values built into the design of technologies be made transparent and subject to monitoring within organizations?
- Should we face large-scale change in employment demands, how might wealth be redistributed? What responsibilities do firms have to stakeholders as they implement and profit from replacing human activities and tasks with machines?
- How might this technological shift be mobilized to question the dominant role of corporations and capital in society? How might different economic models be generated and tested? How might the economic benefits of AI be distributed beyond shareholders?