OUSSAMA ABDERRAHMANE DAMBRI

PhD | Research Programs • AI & Automation • Research Intelligence

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PROFESSIONAL PROFILE

Programs Officer and PhD-trained engineer with a multidisciplinary background in research funding, peer review, scientific research, and applied AI automation. Develops practical workflows that support administrative screening, reviewer discovery, research intelligence, and evidence-based program operations. Experienced in transforming complex processes into documented, testable solutions while retaining human oversight for assessment and conflict-of-interest decisions.

CORE EXPERTISE

Research funding & peer review • AI-assisted process design • Microsoft Power Automate & Copilot Studio • Reviewer identification & scholarly data • Responsible AI & human oversight • Data quality & dashboards • Technical documentation & staff training • Cross-disciplinary research

PROFESSIONAL EXPERIENCE

Programs Officer | Aug 2025–Present

Canada Foundation for Innovation (CFI) • Ottawa, Canada

- Support research funding and peer-review operations, including proposal-related administration, reviewer recruitment activities, documentation, and coordination across stakeholders.
- Design and test AI-assisted workflows for notices-of-intent screening; extract structured information from PDF submissions, identify review indicators, and consolidate outputs into traceable tables and monitoring dashboards.
- Develop a modular reviewer-intelligence workflow combining publication-based expertise analysis, targeted expert profiles, rules-based discovery, and conflict-of-interest screening support; preserve final reviewer selection and COI determinations for staff.
- Integrate public scholarly metadata from OpenAlex and ORCID to support reviewer identification and exploration of expertise; develop approaches for record enrichment, identifier matching, and duplicate prevention.
- Prototype bilingual AI-assisted tools for proposal validation and reviewer-report summarization, with structured outputs and attention to evidence, accuracy, and user review.
- Create PRMS reviewer-recruitment training materials, including practical guides, lesson checklists, process walkthroughs, and short instructional scripts.
- Contribute to internal conversations on responsible AI use, including meaningful human oversight, error handling, information protection, and the assessment of AI use cases.
- Analyze automation consumption and potential operational value to inform proportionate adoption within available technology resources.

Postdoctoral Research Fellow & Researcher | Jan 2021–Aug 2025

School of Electrical Engineering and Computer Science, University of Ottawa • Ottawa, Canada

- Led and contributed to interdisciplinary research involving nanocommunications, biomedical sensing, bio-inspired energy systems, and optogenetic interfaces.
- Coordinated research activities across engineering and biological disciplines; supported project planning, scientific writing, and funding proposals.
- Mentored undergraduate and graduate researchers in modelling, simulation, and scientific communication; contributed to peer-reviewed publications.

Teaching Assistant / Academic Instructor | 2017–2019; 2023

Université de Sherbrooke • Sherbrooke, Canada; Algonquin College • Ottawa, Canada

- Supported engineering instruction and assessment in networks, protocols, operating systems, and programmable logic; delivered a guest lecture on biomedical imaging and biosensors.

Microbiologist | Nov 2013–Mar 2017

Clinique Les Rosiers • Batna, Algeria

- Performed microbiological testing and laboratory data reporting; supported sample integrity, quality assurance, and operational procedures.

SELECTED AI AND DIGITAL-TRANSFORMATION INITIATIVES

Administrative-screening automation | PDF extraction • AI prompts • Quality assurance

Designed an end-to-end approach to extract structured research-submission information and flag selected administrative review indicators; incorporated review tiers, error handling, and dashboard-style monitoring.

Reviewer intelligence and COI support | OpenAlex • ORCID • Workflow orchestration

Developed connected stages for research-expertise interpretation, reviewer searches, duplicate management, and conflict-of-interest screening support; separated rules-based checks from narrowly scoped AI checks.

Scholarly-profile enrichment | Research identifiers • Data matching

Developing a reusable approach to match reviewer records with persistent identifiers and refresh expertise information while avoiding reprocessing previously handled records.

AI-assisted document analysis | Bilingual prompts • Evidence-oriented outputs

Prototyped structured checks and summaries for proposal and assessment documents, emphasizing reviewer verification and clearly documented limitations.

EDUCATION

PhD, Electrical Engineering | Université de Sherbrooke, Canada • 2020

Dissertation: Design and Evaluation of New Methods to Enhance the Performance of Nano-Communication Networks.

MEng, Biomedical Electronics | Université de Batna 2, Algeria • 2016

Graduated with highest distinction (valedictorian).

BSc, Medical Instrumentation | Université de Batna 2, Algeria • 2014

Ranked first in cohort (1/65).

BSc, Microbiology | Université de Batna 2, Algeria • 2011

TECHNOLOGY & METHODS

AI & workflow tools: Microsoft Power Automate, Copilot Studio, AI Builder, structured prompting, JSON, SharePoint, Excel, PRMS.

Programming & analysis: Python, SQL, MATLAB, C/C++, Bash; Power BI, Tableau, pandas, NumPy, MySQL.

Research data: OpenAlex, ORCID, bibliographic metadata, scholarly identifier matching, evidence tracking, data validation.

Platforms & delivery: Azure, AWS, GitHub, Microsoft 365, Microsoft Project, Azure DevOps; process documentation and training.

SELECTED SCIENTIFIC PUBLICATIONS

Shahsavari, Y., Baseri, Y., Hafid, A., Dambri, O. A., & Makrakis, D. (2026). Integration of Federated Learning and Blockchain in Health Care: Tutorial on Medical Data, Architectures, Privacy, Security, and Regulatory Compliance. Journal of Medical Internet Research, 28, e80178. https://doi.org/10.2196/80178.

Dambri, O. A., & Cherkaoui, S. (2020). Performance Enhancement of Diffusion-Based Molecular Communication. IEEE Transactions on NanoBioscience, 19(1), 48–58.

Dambri, O. A., Cherkaoui, S., & Makrakis, D. (2023). Design and Evaluation of a Receiver for Wired Nano-Communication Networks. IEEE Transactions on NanoBioscience, 22(2), 223–236.

Languages: Arabic (native), English (fluent), French (fluent), Italian (intermediate).