# Besma Ben Amara

**Assistant Professor in Computer Science** at the *Faculté des Sciences Économiques et de Gestion de Tunis*, University of Tunis El-Manar (fsegt.rnu.tn).
**Researcher** at SMART Lab, Higher Institute of Management of Tunis (ISG Tunis), University of Tunis. (www.smart.isg.rnu.tn)

Born on: 15 Avril 1967 à Soliman | Married, two children.
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## Education

**Ph.D. in Business Computing,**
Higher Institute of Management of Tunis (ISG Tunis), University of Tunis, 2019–2023
**Thesis**: Approach for Serious Games Design: A Case Study in Health, Safety and Environment Training
**Distinction**: Highest Honors (Très honorable)

**Research Master's Degree in Business Intelligence Computing and Multimedia,**
Higher Institute of Arts and Multimedia of Manouba (ISAMM), University of La Manouba, 2013–2015
**Thesis**: A New Approach to Query Enrichment Based on Extraction and Aggregation of Maximal Frequent Item sets

**Specialized Master's in Multimedia and Visual Arts,** ISAMM, University of La Manouba, 2006
**Project**: Multi-Service Platform for Tourism in Tunisia

**Bachelor's Degree in Computer Science,** Higher Institute of Management of Tunis (ISG Tunis), University of Tunis, 1994
**Thesis**: Statistical Data Analysis and Mapping System for the Tunisian Ministry of Justice

**Baccalaureate in Mathematics and Science**
Secondary School of Soliman, 1988.

## Professional Experience

**2024 – Present**
**Assistant Professor in Computer Science**,
Department of *Méthodes Quantitatives*, *Faculté des Sciences Économiques et de Gestion de Tunis* (FSEGT), University of Tunis El-Manar
- Teaching responsibilities:
  - *Object-Oriented Software Design*, 2nd year Bachelor's in Business Intelligence (BI)
  - *Enterprise Resource Planning (ERP)*, 2nd year Master's in Enterprise Management Project (EMP)
  - *Big Data*, 1st year Master's in Data Science and Master's in EGRFA
  - *Business Intelligence*, 1st year Master's in Digital Management.

**2004 – 2023**
**Senior Lecturer in Computer Science**, FSEGT
Permanent university lecturer, responsible for a wide range of undergraduate and graduate courses including:
- Multimedia, Project Management, Big Data, Relational Databases, PL/SQL/Oracle
- UML / Object-Oriented Design, Software Engineering Workshops, Distributed Databases
- C Programming, Digital Competency, Database Design, ICT Skills, Business Applications

**Pedagogical and Academic Activities**
- Pedagogic Coordinator (2024 – Present): Core curriculum of Business Intelligence (BI).
- Academic Program Coordinator (2012–2022): Led coordination of transversal computer science modules across several curriculum.
- Member of the FSEGT Scientific Council (2012–2014)
- Supervision of Graduation Project: Supervised undergraduate projects (2006–2018); Co-supervised research Master's thesis at ISG Tunis (2023).

**Training Participant**:
- C2i Trainer Program, UVT (2008)
- Oracle 11g Administration Training (2012)
- JAVA OCJP Training, TAQ (2014)
- Online Learning Engineering Workshops (UVT, 2015)
- Android Development Training (2016)
- IBM/UVT Business Analytics Certification Preparation (2017)
- Certified Business Intelligence Analyst – Mastery Award (IBM, 2017)

**Scientific Publication**
- Ben Amara, B., Mhiri Sellami, H., and Ben Said, L. (2022). The Principal Characteristics of a Serious Game to Ensure Its Effective Design. Proceedings of the 2022 DiGRA International Conference, https://dl.digra.org/index.php/dl/article/view/1365.
- Ben Amara, B., Mhiri Sellami, H., and Ben Said, L. (2023). An Approach for Serious Games Requirements Specification based on Design Challenges and Characteristics Taxonomy. Multi- Conference OCTA'2022, page 24.
- Ben Amara, B., Mhiri Sellami, H., and Ben Said, . (2024). An Approach for Serious Game Design and Development based on Iterative Evaluation. Journal of Software: Evolution and Process. https://doi.org/10.1002/smr.2680
- Ben Amara, B., Mhiri Sellami, H., and Ben Said, L. (2024). An Approach to Design Serious Games: a Case Study in Health, Safety, and Environment Training. International Conference on Game and Entertainment Technologies.
- Besma Ben Amara, Hedia Mhiri Sellami, Lamjed Ben Said. (2025). A Framework for Designing Serious Games with Extended Reality Integration for Enhanced Learning. International Conference on Control, Decision and Information Technologies (CoDIT 2025).
- Kalthoum Rezgui, Besma Ben Amara, Hedia Mhiri Sellami . Towards a Cross-Domain Ontology for Serious Games. International Conference on Control, Decision and Information Technologies (CoDIT 2025).

**2000 – 2004**
**Lecturer in Computer Science**
*Department of Computer Science, Higher School of Commerce of Tunis (ESC Tunis), University of La Manouba.*
**Courses & Labs Taught:**
- General Computing and Office Tools – 2nd year SCG
- Applied Computing (Databases with Microsoft Access) – 3rd year GIF
- New Information and Communication Technologies – 3rd year ESC
- Business Programming (File Processing) – 2nd year MIAG
- Database Systems (Oracle & SQL Server) – 3rd year MIAG

## Affiliation

President of the FSEGT "SMART BI" computer science club (since 2024)
Member, Tunisian Association of Women Engineers (ATFI), 2021–2024.
Languages: Arabic, French, English – Written and spoken
Interests: Cinema, theater, music, painting, sports, travel