University Academic Curriculum Vitae

Personal information

Name: SANA NADOURI

Place of birth:

Date of birth:

Nationality:

Number of children:

Year of birth of the children:

Parental, sick or other leave period(s) (see attached list):

- Type of leave:
- from xx.xx.xxxx to xx.xx.xxxx

Address:

Telephone numbers:

- Mobile:
- Private:
- Office:

E-Mail:

Education since leaving school

2014 – Bachelor's in Computer Science, specialization in Mathematics and Computer Science, Abdelhamid Mehri University – Constantine 2, Algeria.

2016 – Master's in Computer Science, specialization in Software Engineering, Abdelhamid Mehri University – Constantine 2, Algeria.

2022 – Computer Science – "Distributed Decision-Making Support System", ISAE-ENSMA, Poitiers (France).

2025 Cisco CCNA CyberOps Associate certification (Exam 200-201), Cybersecurity training.

Present appointment

- Title of appointment Junior Researcher in Informatics (RTD)

- Start of appointment 1 December 2025

- Level of appointment (in national / international context)

  Junior Researcher (equivalent to an early-career postdoctoral research position within the European and international academic framework)

- Employer (University, research institute, status of university / institute)

  Free University of Bozen-Bolzano (unibz), Faculty of Engineering.
  A public research university consistently ranked among the leading multilingual institutions in Italy, with strong international orientation and competitive research output in Computer Science, Engineering, and Data-driven Technologies.

- Brief description of responsibilities

  As a Junior Researcher within the Informatics group, responsibilities include:

  1. Conducting research in Artificial Intelligence, Distributed Decision Support Systems, Scalable Data Management, Temporal/Time-Series Processing, and Distributed Architectures.
  2. Designing, implementing, and evaluating algorithms and computational models relevant to the department's research lines.
  3. Contributing to high-quality scientific publications in international journals and peer-reviewed conferences.
  4. Participating in collaborative research projects, laboratory activities, and cross-disciplinary initiatives within the Faculty of Engineering.
  5. Supporting academic activities when required (e.g., assisting in teaching, supervising projects, tutoring students), with primary focus on research development.
  6. Presenting research results in seminars, workshops, and scientific meetings, both internally and externally.
  7. Assisting in the preparation of research deliverables, proposals, and documentation relevant to ongoing or future projects.

Professional experience

Chronological list of all previous employments (each with job title, starting and finishing dates, level, employer, responsibilities)

From / to	Job title	Name of academic Institution	Academic level	responsibilities
2023 – 2024	R&D engineer	SquaData (DigitalSquad), Lyon, France	Industry	Development of machine learning models, real-time data analysis with Apache Flink, backend deployment with Flask, and project optimization.
2021 – 2022	ATER (Temporary Teaching and Research Associate)	Jean Moulin University Lyon 3, France	Higher Education (L2/L3)	Teaching application development, databases, information systems; course design, exams, student support.
2020 – 2021	ATER	University of Bourgogne (ESIREM), Dijon, France	Higher Education (L1)	Teaching Java, OOP, and Web Programming; preparing tutorials, labs, evaluations.
2017 – 2018	Lecturer (Vacataire)	UC2 – Constantine 2, Algeria	Higher Education (L2)	Teaching Web Application Development in the Mathematics/Computer Science core.
2016 – 2017	Lecturer (Vacataire)	UC1 – Constantine 1, Algeria	Higher Education (L2)	Teaching Algorithms and Computer Science to geology students.
2016	Master's Internship	UC2 – Constantine 2, Algeria	Postgraduate	Design and implementation of energy-saving system in Mobile Cloud Computing.
2014	Bachelor's Internship	UC2 – Constantine 2, Algeria	Undergraduate	Design of absence management app (desktop, mobile, web) for university use.

Participation in exhibitions (where applicable)

In the case of practice-related projects carried out in co-operation with studios, agencies or other people, please specify your own contribution to and role in the project.)

Where applicable: **Design competitions and awards received**

(Only list competitions that were won or those with a relevant placement and/or award, with name and date of competition)

- **2015** – *Winner* of the OOREDOO mobile app competition for autistic children, Constantine, Algeria.
- **2015** – *Finalist* in the Oobarmijoo IoT competition (connected bracelet to protect children from kidnapping), Algiers, Algeria.
- **2012** – *3rd place*, DZ WEB DAYS Startup Weekend. Proposal of a platform connecting pharmacists and suppliers, Constantine, Algeria.

List of major exhibitions, Title, date, location.

- **2013** – RIF Day (Research in Computing at Feminine): *Presentation – "Success Story of a Start-Up"*, March 8, Constantine, Algeria.
- **2018** – Participation in the organization of the 70th anniversary of ENSMA, Poitiers, France (robot demos and lab presentations).
- **2018** – Organizer, *26th RTNS Conference*, October 10–12, Poitiers/Futuroscope, France.

Experience in academic teaching

· title of courses given last 5 years, name of University/Institute, subject area, academic level (under-/post-graduate/ PhD), results of evaluations (please attach all external student evaluations, you do not need to attach unibz student evaluations)

Over the past five years, I have delivered a total of **921 teaching hours** (lectures, tutorials, and practical sessions) primarily in **undergraduate programs** in France and Algeria. My teaching experience spans four universities and includes students from diverse academic backgrounds, such as Computer Science, Mathematics, Management, and Geology. The primary language of instruction was **French**, with some course content and student projects conducted in **English**. My work has been consistently praised for its clarity, rigor, and adaptability.

Courses Taught (Last 5 Years)

Academic Year	Institution	Courses Taught	Level	Students per Group
2021-2022	Jean Moulin University Lyon 3 (UL3), France	Application Development for Management, Information Systems & Databases 1 and 2, Digital Culture	Undergraduate (L2–L3)	120
2020-2021	University of Bourgogne (UB), France	Object-Oriented Programming, Algorithms and Programming, Web Programming	Undergraduate (L1)	30-134
2017-2018	UC2 – Abdelhamid Mehri University, Algeria	Web Application Development	Undergraduate (L2)	74
2016-2017	UC1 – Mentouri University, Algeria	Computer Science and Algorithms	Undergraduate (L2)	200

Total hours taught: 921
Teaching languages: French (primary), English (partial use)
Student evaluations: Available upon request (from French institutions)

· Summary of significant personal achievements in teaching

Key Achievements in Teaching

- Designed and delivered complete course modules, including lectures, tutorials, lab sessions, assessments, and projects.
- Developed tailored pedagogical materials adapted to various student profiles (traditional undergraduates, professionals in continuing education, and international students).
- Introduced real-world projects and problem-solving activities to reinforce applied knowledge and student engagement.
- Actively participated in pedagogical committees, curriculum planning, exam juries, and student follow-up sessions.
- Ensured inclusive and accessible teaching methods, particularly during the COVID-19 period (online classes, flexible assessments).
- Maintained strong communication with students (primarily via email), ensuring responsiveness and academic support.
- Taught interdisciplinary modules that integrated programming, databases, and business/management concepts.

· Undergraduate supervision (Bachelor + Master level) + Postgraduate supervision (PhD level): number of students supervised in the last five years with subject areas

Supervision of Student Projects and Internships

- **Bachelor level**: Supervised **5 undergraduate students** during professional internships (IAE, Lyon 3) in 2022.
  Topics included web development, application design, and database systems.
- **Master level**: Participated in the collective supervision of Master's student projects during my ATER roles (2020–2022).
- **PhD level**: Not yet involved in direct PhD supervision, but actively contributed to thesis seminars, doctoral discussions, and peer mentoring within research labs.

My experience demonstrates my versatility and dedication as a university-level educator. I am confident in my ability to teach a wide range of computer science subjects, including **Software Engineering**, **Web Technologies**, **Programming Languages**, **Databases**, and **Information Systems**, and I am equally prepared to contribute to courses in **Artificial Intelligence**, **Machine Learning**, or **Theoretical Computer Science**, based on my academic and professional background.

Other academic responsibilities

- Participation in curriculum design meetings and pedagogical councils during my teaching contracts in France.
- Organization of oral exams, juries, and student assessments at both undergraduate and professional degree levels.
- Active support in promoting academic programs during university open days and departmental visits.
- Participation in the preparation and delivery of training materials for inclusive and adaptive pedagogy during the COVID-19 period.
- Frequent involvement in seminars and interdisciplinary workshops at research laboratories (e.g., LIAS, LIB).
- Support and mentoring of undergraduate students during internships and final projects.

· internal appointments to faculty and university boards

- Regular participation in faculty meetings and departmental planning at Jean Moulin University Lyon 3 and University of Bourgogne during my ATER positions (2020–2022).

· external appointments at national and international level

- **Organizer** – *26th International Conference on Real-Time Networks and Systems (RTNS)*, October 2018, Poitiers, France.
- **Organizer** – *70th Anniversary of ISAE-ENSMA* (student events, robotics demos, lab visits), 2018, Poitiers, France.

· responsibilities for organizing conferences/seminars/exhibitions (place, duration, institute)

Organizer – *26th International Conference on Real-Time Networks and Systems (RTNS)*, October 10–12, 2018, organized by LIAS / ISAE-ENSMA, Poitiers, France.

→ Assisted with logistics, speaker support, registration, and local coordination.

Event Coordinator – *70th Anniversary of ISAE-ENSMA*, 2018, Poitiers, France.
→ Responsible for student-led robotics demonstrations, machine learning showcases, laboratory visits, and public outreach.

Speaker & Participant – Seminar on *Group Skyline and Collective Decision-Making Systems*, University of Burgundy (LIB), 2020.
→ Presented PhD work and led technical discussion with research teams.

Active contributor – Doctoral days and seminars at LIRE (UC2), LIAS (ENSMA), and LIB (Dijon), 2017–2022.
→ Presented research advances, participated in internal evaluation and feedback sessions.

Memberships

Membership of academic or professional bodies (including membership of Editorial Boards of scientific publications; membership of scientific committees for international conferences)

Membership in Academic and Professional Bodies

- **Google Developer Group** – Member since 2013.
- **SETIT Conference Committee** – Member since 2019.

Scientific Committees and Reviewing Activities

Regular reviewer for **international conferences and peer-reviewed journals** in the fields of **Artificial Intelligence**, **Information Systems**, and **Software Engineering**:

Journals:

- *Information Sciences* (2023–2024)
- *Robotics and Autonomous Systems* (2021)

Conferences (Selected):

- WISE'23, TACC'23, ICTAI'23, SAC'22, EGC'22, ICWS'22, DEXA'21/20, ICAASE'20/18, ICSOC'19, FQAS'19, COSI'18, and many others.

Total: Reviewed **over 25 papers** across **15+ international venues**.

Research and scholarships

· Summary of current research and scholarship

My current research focuses on **artificial intelligence for distributed decision support systems**, with specific interest in **group-based decision-making**, **Skyline operators**, and **machine learning techniques** for data filtering and user behavior prediction. I am particularly exploring applications in real-world systems (e.g., recommender systems, behavioral analytics, real-time predictive systems).

In parallel, I am integrating **AI techniques in industrial contexts**, notably through the use of **Apache Flink**, **Python**, and **Flask** for real-time data processing and prediction models. I also stay actively involved in reviewing scientific publications and contributing to conference committees.

· Summary of research and scholarship during the previous five years

Between 2017 and 2022, during my PhD, I developed a **distributed and intelligent architecture for decision-making** in collaborative environments, based on the Skyline paradigm. This included theoretical modeling, system implementation, and experimental validation using **multi-agent systems**, **fuzzy logic**, and **group decision-making models**.

My research led to:

- **1 peer-reviewed journal article** in a **Rank A journal**
- **6 international conference papers**
- **Participation in multiple research seminars and doctoral events**
- **Eiffel & PROFAS B+ scholarships** enabling research stays in France.

Since 2023, I have applied my academic work to industrial R&D in predictive marketing and behavioral modeling.

· Summary of significant achievements in research and scholarship

- Development of a **meta-model** and **prototype** for distributed decision support systems.
- Formalization of **group Skyline relaxation** for collaborative decision-making.
- Publication in *Computer Science and Information Systems* (DOI-indexed, Scopus & Web of Science).

- Awarded multiple **prestigious scholarships**: Eiffel Excellence, PROFAS B+, GDR MADICS EGC scholarship (ranked 1st place).
- Reviewer for leading journals (*Information Sciences*, *Robotics and Autonomous Systems*) and numerous international conferences (WISE, ICTAI, ICWS, SAC, EGC...).
- Participation in interdisciplinary projects and seminars across Algeria and France.

- Industrial contribution: Developed and deployed machine learning models in production environments using real-time data pipelines.

· Research grants and contracts

Date Granted	Award Holder(s)	Funding Body / Organizer	Title / Project Description	Amount Received
2019	Sana NADOUR I	GDR MADICS / EGC School	Mobility scholarship to attend EGC doctoral school and workshops; awarded 1st place in ranking for best research project presentation	Covered expenses
2019	Sana NADOUR I	French Ministry (Eiffel)	Research mobility grant for thesis in AI and Distributed Systems	Full funding (9 months)
2018	Sana NADOURi	PROFAS B+	Research stay at ISAE-ENSMA (France) – thesis collaboration	Full funding (7 months)
2017	Sana NADOUR I	PROFAS B+	First research stay at ISAE-ENSMA	Full funding (7 months)

Publications

Publications over the last 15 years in chronological order within each category following the International Standard for bibliographic references with DOI whenever possible. With multiple authorship the main author's name appears in *Italics*. In addition, in the left-hand margin please star (*) what you consider were especially significant publications. For accepted but not yet published works please indicate expected publication date. PUBLICATIONS WILL ONLY BE EVALUATED WHEN THEY CAN BE TRACED IN PUBLIC CATALOGUES.

(*Italic* = main author, * = most significant publication)

Journal articles in refereed academic journals

- * *Sana Nadouri*, Allel Hadjali, Zaidi Sahnoun. *RG-SKY: A User Centric Group Skyline Relaxation for Combinatorial Decision Making*. *Computer Science and Information Systems*, Vol. 19(1), 2022. DOI: 10.2298/CSIS211020015N.

Conference papers

- *Sana Nadouri*, Allel Hadjali, Zaidi Sahnoun. *Fuzzy Group Skyline Relaxation*. 31st Conference on Fuzzy Logic and Applications (LFA), 2022, Toulouse, France.
- *Sana Nadouri*, Allel Hadjali, Zaidi Sahnoun. *Towards an Intelligent Skyline Decision Making*. 19th EGC Conference, 2019, Metz, France.
- *Sana Nadouri*, Zaidi Sahnoun, Allel Hadjali. *Using G-Skyline to Improve Decision-Making*. 3rd ICAASE, 2018, Constantine, Algeria.
- *Sana Nadouri*, Allel Hadjali, Zaidi Sahnoun. *Group Skyline Computation: An Overview*. INFORSID, 2018, Nantes, France.
- *Sana Nadouri*, Yassine Ouhammou, Zaidi Sahnoun, Allel Hadjali. *Towards a Multi-Agent Approach for Distributed Decision Support Systems*. 27th WETICE, 2018, Paris, France.
- *Sana Nadouri*, Hadjer Fellah. *OMCC: Organic Mobile Cloud Computing*. 8th ICMIC, 2016, Algiers, Algeria.

Publications about the applicant

Publications about the applicant

- Featured in ENSMA press communications during the **70th anniversary robotics and AI demonstrations** (2018).
- Presentation on *"Success Story of a Start-Up"*, RIF Day (Women in Computing), UC2, Constantine, March 8, 2013.

Further data

Presentations at scientific conferences over past 3 years (invited or selected, keynote, nature and status of conference)

- **2022** – *Fuzzy Group Skyline Relaxation*, 31st Conference on Fuzzy Logic and Applications (LFA), Toulouse, France. **Selected oral presentation** at an **international peer-reviewed conference**.
- **2022** – *RG-SKY: A User Centric Group Skyline Relaxation for Combinatorial Decision Making*, presented results from journal publication at research seminars in LIAS Laboratory, ISAE-ENSMA, Poitiers, France. **Invited seminar presentation**.
- **2021** – *Distributed Decision-Making Support System: Model and Implementation*, Computer Science Laboratory (LIB), University of Bourgogne, Dijon, France. **Invited seminar presentation** at a **national research laboratory**.

Entrepreneurship

Spin-offs, patents and entrepreneurship

Participated in multiple innovation and entrepreneurship competitions, achieving notable results:

  - **Winner** – OOREDOO Mobile App Competition for Autistic Children, 2015, Constantine, Algeria.
  - **Finalist** – Oobarmijoo IoT Competition (Connected Bracelet for Child Safety), 2015, Algiers, Algeria.
  - **3rd place** – DZ WEB DAYS Startup Weekend (Platform connecting pharmacists and suppliers), 2012, Constantine, Algeria.

- Developed several **independent freelance software projects** (management applications, COVID tracking app for a medical practice).
- Active in **online tech community development** (Google Developer Group, since 2013).
- Currently exploring potential academic-industry collaborations in **AI-based decision support systems**.

Statement of interest

Candidates should outline reflexively their expected contribution to the advertised position at the unibz and to the university overall. This statement should highlight relevant elements of the candidate's CV that underline the particular suitability of the applicant.

I am eager to contribute to the Free University of Bozen-Bolzano as a Researcher (RTD) by combining my research expertise in distributed systems, data management, and artificial intelligence with my solid teaching background in computer science. My doctoral research, conducted jointly between ISAE-ENSMA (France) and UC2 (Algeria), focused on distributed interactive decision support systems, integrating advanced algorithms such as the Skyline operator for multi-criteria data analysis. This work directly informs the advertised position on *Scalable Database Solutions for Temporal and Time Series Data Processing*, as it required the design and optimisation of complex data models, efficient query processing, and scalable architectures.

Building on my R&D industry experience at DigitalSquad, where I implemented large-scale real-time data processing pipelines using Apache Flink, Java, and Python, I will bring practical expertise in high-throughput, low-latency solutions for streaming and historical datasets. I see strong opportunities to extend my previous work to the temporal and time-series domain, including developing indexing strategies, compression techniques, and scalable query execution plans to support real-time analytics. This will not only advance the research objectives of the project but also create reusable components for other domains such as IoT, finance, and scientific computing.

From a teaching perspective, I have delivered over 900 hours of lectures, tutorials, and labs in subjects ranging from databases and web development to algorithmics and object-oriented programming. In the first semester, I will actively contribute to unibz's teaching mission by offering a Python programming course, as proposed by Prof. Gamper, emphasising clean coding practices, efficient data structures, and integration with data science libraries relevant to time-series processing. My aim is to bridge research and teaching, using examples and datasets from the project to enrich classroom learning and prepare students for applied research.

Beyond research and teaching, I will contribute to the university's international profile through my multilingual and multicultural background, active engagement in scientific communities, and prior involvement in organising international conferences. I am committed to fostering collaborations between unibz and industry partners to ensure that research outputs are both academically rigorous and practically impactful.

By aligning my expertise with unibz's research priorities and pedagogical needs, I am confident in my ability to deliver tangible contributions to the *Scalable Database Solutions for Temporal and Time Series Data Processing* project, the Faculty, and the University as a whole.

Language competence

Written and spoken competence in all languages according to CERF levels, Common European Reference Framework (http://www.coe.int/t/dg4/linguistic/cadre1_en.asp); append certificates wherever available

Language	Understanding (Listening/Reading)	Speaking (Interaction/ Production)	Writing	Level	Proof / Notes
Arabic	C2 / C2	C2 / C2	C2	Native	Mother tongue
French	C2 / C2	C2 / C2	C2	Proficient	TCF Certificate
English	C2 / C2	C2 / C2	C2	Proficient	Level 3 & 4 certificate (highest)
Italian	A1 / A1	A1 / A1	A1	Beginner	Self-taught, basic communicati on skills

Date

08/08/2025

Signature