Curriculum Vitae

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Neila BEN LAKHAL

PhD in Computer Science, Tokyo Institute of Technology

Assistant professor

PERSONAL INFORMATION

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Birth date: 15.06.1978

PROFESSIONAL SUMMARY

Self-motivated proactive assistant professor, with excellent teaching and university management track records, having more than 10 years of higher education experience. Very caring with strong communication skills, able to easily build trusting relationships with students, colleagues and university staff members. Consistently striving to motivate others and inspire them to pursue academic and personal excellence, looking for new academic opportunities.

HIGHLIGHTS

- Extensive experience with computer programming and teaching.
- Excellent experience in developing course materials.
- Easily adaptable, enjoy working in an international environment.
- Ability to communicate with students from diverse background.
- Inspired students to translate their academic interests into the professional world.
- Inspiring and motivating lecturer.
- Effective academic advisor and graduate mentor.
- Natural faculty members leader.
- Curriculum development proficiency.
- Arabic and French native speaker, fluent in English and Japanese.

SKILLS AND RESEARCH INTERESTS

- Profound knowledge of **software architectures** (SOA, MSA, ROA), REST|SOAP based **Web services**, **Microservices** implementation patterns, **Web applications** modelling and programming.
- Research interest in **dependable Microservices** composition, Microservices-based solution **deployment in the cloud**, **IoT** platforms with **Microservices**, **microservice**-based architecture using smart-contracts and **blockchain** technologies.
- Good programming experience of **Microservices**, **Web services**, **containerized Web applications** using PhP, HTML, CSS, JavaScript, JAVA, AJAX, XML, WS-* standards, **Docker** and **Kubernetes**.
- Good knowledge of software engineering methodologies and tools: **UML**, **DevOps**, Agile, unified process.
- Skilled in the basics and advanced working of database engineering.

EARNED DEGREES

(04.2004 ~ 03.2007) Ph.D. in Computer Science @Tokyo Institute of Technology, JAPAN

Dissertation: A framework for modelling executing and analysing dependable transactional Web services compositions.
Keywords: Web services · Service oriented computing · Data engineering · Dependability · Transaction model.
Financial support: The Japanese government.

(04.2002 ~ 03.2004) M.E. in Computer Science @Tokyo Institute of Technology, JAPAN

Master Thesis: Research on failure handling in distributed workflow management systems for Web services context.

(09.1996 ~ 06.2000) bachelor's degree (hons) in Computer Science @ ISG Tunis, TUNISIA.

TEACHING EXPERIENCE

Assistant professor (09.2009-Presently),

At the Depts. of Computer Engineering.
National School of Engineering of Carthage (ENICARTHAGE). TUNISIA
Public Engineering University.

GIVEN LECTURES

(2009-2010) (2010-2011) Web development, SOA and Web services.
(2011-2012) Web development, Web applications programming.
(2012-2013) | (2013-2014) Web technologies, Web information systems, Web Apps, advanced SOA.
(2014-2015) | (2015-2016) Web programming, advanced SOA.
(2016-2017) Web Programming, SOA and Web services.
(2017-2018) Advanced SOA and Web services, Microservices architecture (MSA), Advanced Web programming.
(2018-2019) Advanced SOC (service-oriented computing), MSA, REST-based service, Web technologies.
(2010-2020) Sabbatical leave.
(2020-2021) Advanced SOC, Microservices architecture, REST-based service, Web technologies.
(2021-2022) Advanced SOC, Microservices architecture, REST-based service, Web technologies.

ACCOMPLISHMENTS AND RESPONSIBILITIES

- Teaching and examining undergraduate and Master level students.
- Facilitating computer lab and designing appropriate and specialized lesson plans.
- Developing and actively contributing to the review of courses in accordance with department strategies.
- Contributing to the monitoring and enhancement of quality in teaching within the department.
- Acting as personal adviser to newly recruited lecturers.
- Supervising part-time lecturers, including organizing and delegating work, providing training and guidance.
- Actively contributing to departmental teaching administration.
- Actively contributing to the intellectual life of the department by attending and participating in departmental meetings.
- Participating in departmental hiring searches and making shortlisting recommendations for new members of academic staff.
- Resolving issues concerning program development, student examinations etc.
- Challenging and motivating students through in-depth lectures discussions.
- Creating material of courses websites to provide students with updated resources.

Short synopsis of main lectures

Lecture contents, assignments, calendar and syllabus are available at the course website (available from https://neilabl.github.io/).

Microservices Architectures (MSA), SOA and Restful Web services:
This course introduces students to the principles of SOA and practice of services programming. The session begins with a brief introduction to software architecture and then transitions to SOC key concepts, principal of web services static and dynamic composition and service containerization. They practice standards: XML, JSON, DTD, XSD, SOAP, REST, WSDL, WADL, BPEL, and docker. Projects include SOAP and REST Web services programming in PHP, JAVA and various implementation of SOAP protocols, comparatives studies of Restful/SOAP Web services/Microservices. Progress in SOA and emergence of Microservices. MSA implementation patterns and technologies, fundamentals of working with Docker. Students will also learn how to use Docker effectively, how each detailed feature of Docker ecosystem is meant to be used. They have the fundamental skillset required to learn advanced topics more quickly if you wish to go further with containerized ventures. Finally, students will learn how SOC relates to other emerging areas like cloud computing, IoT and big data.

Web programming:
This course teaches students how to build dynamic Web sites with environments like WAMP and XAMPP. Students learn how to publish Web sites, how to structure pages with HTML and CSS. Then, they learn how to program with client-side and server-side scripting languages (e.g., JavaScript and PHP), how to design and query databases with SQL, how to use DOM, Ajax with both XML and JSON, and how to build MashUps with API such as Google API, Facebook API and so forth. The course explores issues of security, standards evolution, responsive design, cross-browser support and discusses enterprise-level programming of websites (Front-end and back-end). Students learn new technologies on their own such as evolutionary libraries of interest Like HTML5 APIs, JavaScript Libraries (Angular.Js, Node.Js, Express.js etc.) and use them in final laboratories.

Adjunct Professor (09.2011-06.2016),

At the Depts. of Science and Technology, Time University, TUNISIA

Private Engineering University.

GIVEN LECTURE

(2011-2012) (2012-2013) Web development, business process modelling, workflow systems and SOA, Web portals.
(2013-2014) Web technologies, business process modelling, workflow systems and SOA.
(2014-2015) Web technologies, business process modelling, SOA.
(2015-2016) Web programming, SOA.

Adjunct Lecturer of computer science (Jan 2009-Aug 2009),

The Faculty of Political Science, TUNISIA

GIVEN LECTURE

(2009) Computer Applications.

ACADEMIC EXPERIENCE

Dean of Graduate studies (09.2014-09.2016),

At the Depts. of Science and Technology-Time Higher School, TUNISIA
Private University with 800+ students from 20+nationalites
Managed faculty staff: 120 teaching assistant and visiting professors.

- Faculty member selection and recruitment process.
- Faculty member technical skills evaluation and coaching.
- Recruit, lead and manage teaching and administrative staff within the faculty.
- Ensure they are supported enough to achieve their potential.
- Engage with employers and schools on the relevance of programme content.
- Oversee the development and implementation of the Faculty's agenda.
- Actively engage in revamping the graduate courses (computer science and engineering) programs and curricula.
- Graduate course programs preparation, update and accreditation process with the ministry.
- Prepare annual and mid-term academic plan in coordination with the director of the university.
- Supervise and monitor undergraduate and graduate programs, enforce rules and their compliances with established procedures.
- Oversee the possibilities of the implementation of Faculty's international activities.
- Promote and represent the faculty and its academic areas nationally and internationally.
- Confer with educators to identify current classroom concerns and diversify instructional strategies.

Head of the Department of computer engineering (09.2011-08.2014),

At the Depts. of Science and Technology-Time Higher School, TUNISIA

- Plan and implement curriculum to teach up-to-date technology to (800) students.
- Participate in CISCO and MS academy certification centres set up.
- Responsible for preparing the certification sessions for undergraduate and master students (Microsoft MOS MTA certification, CISCO certifications, JAVA programmer certification).
- Responsible for validating curricular materials.
- Participate in online teaching evaluation process set up.
- Participate in faculty staff recruitment and selection: defining the required technical skills.
- Participate in the preparation of the annual and mid-term academic plans in coordination with the dean of the university.
- Utilize records, interviews and tests to evaluate students' abilities, interests and personality characteristics.
- Conducted pre- and post-observation conferences with teachers to review evaluations and observations.
- Determined course schedules and coordinated teaching assignments and room assignments to optimize use of buildings and equipment.

Research Fellow (Apr 2004- Mar 2007) | Japan Science and Technology Agency, JAPAN

- Contribute to learning and teaching programmes within and outside the University and supervise undergraduate research students.
- Coach and support laboratory colleagues in developing their research techniques.
- Supervise the work of others, for example in research teams or projects.
- Help colleagues resolve their concerns about progress in research.
- Develop ideas for application of research outcomes.
- Make presentations at conferences or exhibit work at other appropriate events and present research findings.

Student Mentor (April 2002-March 2007) |Tokyo Institute of Technology, Data Engineering & Parallel Processing Lab.

- Directed Japanese undergraduate students with their bachelor thesis.
- Supervised Japanese master course students.
- Provided advices and guidance for junior Lab members.
- Trained junior lab members to develop research proposals, initiated them to scientific paper writing and presentation.

Research student (October 2001-March 2002) | Tokyo Institute of Technology, Data Engineering and Parallel Processing Lab.

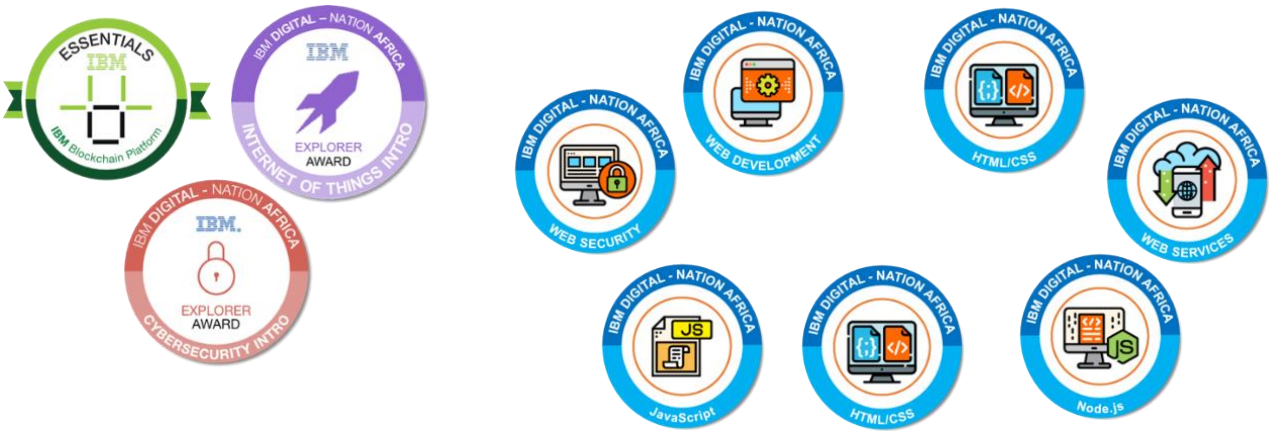
- Undertake appropriate skills and career development training.
- Developed an appropriate research plan and submitted it on time.
- Attended formal supervisory meetings (Either in Japanese or in English).
- Led seminars that introduced fundamental technologies.
- Provided insights into the emerging technologies and presented my own research progress. Seminars were followed by an open questioning time for informal networking and discussions.
- Developed the ability to communicate complex and technical details in a simple, comprehensible and succinct way.

ADVISED (GRADUATE STUDENTS)

Supervised 60+ end of study projects (bachelors, Engineers and Masters) since 2009.
Noteworthy supervised THESIS:

1. Mobile and web solution for printing **(ASP.NET).**
2. Ontology definition for defining emails types and email mining (**RDF, semantic Web, ontologies**).
3. Designing and programming a mobile and Web solution for postal services using **Angular.Js and J2EE**.
4. Designing and programming of an E-learning platform (**ASP.NET**).
5. Web services composition solution in Java for stock market build in Palmyra SOA architecture (**JAX-WS, HTML, XML, JAVA).**
6. Web application for product management (OOREDOO) (**JSP, JAVA, HTML**).
7. E-recruitment platform using **Symfony** Framework (**PHP, HTML, JAVASCRIPT**).
8. Design, implementation and integration of a salary module in OpenERP with **Python**.
9. Government meeting planning solution implementation using **SharePoint**.
10. Design and implementation of **BPMN** based solution for medical service management (**BPMN, ASP.NET**).
11. Design and implementation of Business Intelligence Solution (**J2EE/ooReDoo**).
12. Research and implementation of a **Big Data** store to optimize response time (**CASSANDRA/ NoSQL**).
13. Design and programming of a mobile Web application using **augmented reality, web semantics and web services** (TUNISAIR). (**ANDROID).**

CERTIFICATIONS



SELECTED PUBLICATIONS

[1] **Neila Ben Lakhal**, Takashi Kobayashi, Haruo Yokota: FENECIA: failure endurable nested-transaction based execution of composite Web services with incorporated state analysis. VLDB J. 18(1): 1-56 (2009)

[2] **Neila Ben Lakhal**, Takashi Kobayashi, Haruo Yokota: Dependability and Flexibility Centered Approach for Composite Web Services Modeling. Springer OTM Conferences (1) 2006: 163-182

[3] **Neila Ben Lakhal**, Takashi Kobayashi, Haruo Yokota: A Failure-Aware Model for Estimating and Analyzing the Efficiency of Web Services Compositions. PRDC 2005: 114-124

[4] **Neila Ben Lakhal**, Takashi Kobayashi, Haruo Yokota: Reliability and Performance Estimation for Enriched WS-SAGAS. IEEE WIRI 2005: 54-63

[5] **Neila Ben Lakhal**, Takashi Kobayashi, Haruo Yokota: THROWS: An Architecture for Highly Available Distributed Execution of Web Services Compositions. RIDE 2004 IEEE: 103-110

AWARDS AND HONOURS

- Research Assistantship from Japan Science and Technology Agency (JST) through the Core Research for Evolutional Science and Technology (CREST) program for supporting my PhD degree.
- The Monbukagakusho Scholarship from the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) upon graduating with the highest academic achievements for pursuing postgraduate studies (research student, M.E., and PhD.). Every year, only 8 Tunisian students are granted this scholarship.
- First of class honour with distinction from ISG Tunis in TUNISIA, ranked top of class.
- Japanese proficiency certificate after the completion of Japanese intensive course.

MEMBERSHIP

Member of the organizing committee, technical committee and local arrangement of a number of Japanese workshops, industrial and academic tutorials, international conferences in the data engineering area: ISNCC'2018, IEEE ISNCC2017, CoopIS2006, IEEE PRDC 2005, IEEE ICDE2005, ICDE2004, DEWS2004, IEICE DBWS2003.

OTHER WORK EXPERIENCE AND TRAININGS

Technical Assistant (Sep 2000 ~ Feb 2001)

@ the Japanese Embassy to TUNISIA

Mainly, news reporting and summing up, reports translation. Occasionally, technical support, software upgrade and troubleshooting.

Web Developer (Jan 2000 ~ Jun 2000)

@ Arabic International Bank of Tunisia (BIAT)

Project: «E-banking: programming a web application for online loan request».

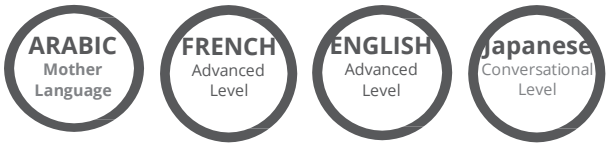
Main programming tools and languages: ORACLE, MERISE, PL/SQL, HTML/CSS, MS FrontPage.

Internship (Summer 1999)

A two-month Project «electronic cheques payment and compensation »

Main programming tools and languages: MERISE COBOL and SQL.

LANGUAGE SKILLS



HOBBIES & INTERESTS