

Ousmane THIARE

FULL PROFESSOR [EXCEPTIONAL CLASS] IN COMPUTER SCIENCE
GASTON BERGER UNIVERSITY - SAINT-LOUIS - SENEGAL

☎ (+221) 7 75 56 84 77 || ✉ othiare@ugb.edu.sn || 🌐 www.ousmanethiare.com || 📠 othiare || 📧 othiare || 📷 othiare || 📧 othiare || 📧 othiare

"Minds are like parachutes. They only work when they are open. Louis Pauwels"

ABOUT ME

Professor Ousmane THIARE has spent most of his academic and professional career at **University Gaston Berger (UGB)** of Saint-Louis Senegal, an institution of excellence created in January 1990 and Senegal's second public university.

Ousmane THIARE joined UGB in October 1994 and obtained a Diploma of Advanced Studies (DEA) in Applied Mathematics in 2000, after a clear course of study.

In 2002, he decided to strengthen his knowledge outside Senegal, notably at the Polytechnic School of the François Rabelais University of Tours (Polytech'Tours), where he obtained a second DEA, this time in Computer Science. He finished his studies in France with a PhD. in Computer Science at the CY Cergy Paris University in 2007.

In parallel to this brilliant career, Ousmane THIARE was already teaching courses at the same university that so brilliantly trained him, UGB. He was first a full-time Computer science Assistant in 2002, a full-time Assistant Professor in 2008 and then an HDR Senior Lecturer in Computer science between 2010 and 2015. He continues this teaching experience in Nigeria at the African University of Science and Technology (AUST) in Abuja where he has been an Associate Professor since April 2014.

It is in July 2015, that he is consecrated Full Professor of Universities at UGB. In April 2021, Ousmane THIARE becomes a Full Professor of the Universities of Exceptional class !

In addition to this academic experience, Ousmane THIARE was Head of the Computer science department at the Faculty of Applied Sciences and Technology (UFR SAT) between 2007 and 2009, Coordinator of the Post-Graduate in Computer Science in 2011 and then in 2013, Director of the Ousmane Seck Computer Centre. The IT Computing centre has a teaching, research and training mission. It is also responsible for the implementation of the University's computerization program.

Appointed Expert Evaluator of the National Authority for Quality Assurance in Higher Education (ANAQ-Sup) since 2014, he was also a member of the Scientific and Pedagogical Council of the Doctoral School of Sciences and Technologies of GBU between 2014 and 2019.

Professor THIARE has also been the Director of the **African Centre of Excellence for Mathematics, Informatics and ICT (ACE-MITIC)** between 2017 and 2020. ACE-MITIC is an ambitious World Bank project with a budget of USD 8 millions to change the dynamics of access to employment by training a quality workforce while connecting all actors, applicants and other service providers in the fields of Mathematics, Computer Science and Information and Communication Technologies (ICT). Areas in which Gaston Berger University and its Professor have proven expertise.

It is with this rich but comprehensive experience that Professor Ousmane THIARE was appointed, from May 2018 to March 2023, Rector of the University Gaston Berger of Saint Louis, President of the Academic Council of the University. As Rector President of the Academic Council of the University, he was the main responsible for the study programs within UGB. He exercised the function of leadership of the University and was responsible for the formulation and implementation of appropriate operational policies and decisions relating to the institution of higher education, and in accordance with the University's strategic plan. He has been responsible for the implementation of innovative programs and the adoption of new cutting-edge technologies by the University in order to make it globally competitive.

He is responsible for establishing and maintaining mutually beneficial relationships with educational and research institutions, governmental institutions, commercial enterprises, industrial, professional, social, civil society and cultural institutions on a regional and international scale. He has also been the chief authorizing officer of the university's budget.

In December 2021, Professor Ousmane THIARE was elected Full Member of the **National Academy of Sciences and Techniques of Senegal (ANSTS)** in the **Fundamental, Applied and Innovation Sciences (FAIS)** section.

From November 2019 to June 2022, Professor Ousmane THIARE led the team that worked on the Scholars Program of the Mastercard Foundation. This program resulted in a funding, over nine (09) years of an amount of USD 37,786,408 or 23.7 billion FCFA. The Scholars Program at UGB aims to train 1,000 Scholars, 70% of whom will be women, at the undergraduate level in the fields of digital, agriculture, health and engineering by 2030 and to facilitate their transition to dignified and fulfilling work so that they can serve their communities and contribute to Africa's development. At the end of the proposed program, Scholars will become committed leaders in their communities and participate in developing their countries and Africa.

In June 2022, Professor Ousmane THIARE was appointed Director General of the **National Cyber-infrastructure for Higher Education, Research and Innovation (CINERI)** at the **Ministry of Higher Education Research and Innovation (MESRI)**.

However, Ousmane THIARE remains active in research in his preferred fields, namely: distributed systems, distributed resource management, computing grids, cloud computing, mobile ad hoc networks, wireless sensor networks, artificial intelligence and the Internet of Things (IoT). His various works are published in numerous international journals and conferences that can be discovered by browsing his [web page](#).

CURRENT POSITIONS

General Manager of CINERI

MESRI - Senegal

NATIONAL CYBER-INFRASTRUCTURE FOR HIGHER EDUCATION, RESEARCH AND INNOVATION (CINERI)

Juin 2022 - Date

- Manage the supercomputer and the datacenter for higher education and research;
- Manage the national scientific computing capacities including the TAOUEY supercomputer;
- Implement and administer the Integrated Governance System for Higher Education and Research (SIGESR);
- Manage and administer CAMPUSEN, the orientation platform for baccalaureate holders;
- Manage the infrastructure of the National Education and Research Network (SnRER);
- Set up shared infrastructures for education and research;
- Contribute to the valorization of scientific research and innovation in the public and private sectors;
- Contribute to the valorization of scientific research and innovation in the public and private sectors;
- To ensure the operation of the National Education and Research Network;
- Ensure the administration and management of the national information system for Higher Education, Research and Innovation;
- To propose digital services to public and private companies.

Chairman of the ENSAE Board of Management

Dakar - Senegal

ECOLE NATIONALE DE LA STATISTIQUE ET DE L'ANALYSE ÉCONOMIQUE PIERRE NDIAYE (ENSAE)

July 2025 - Date

Full Professor [Exceptional class] in Computer Science

Gaston Berger University

Saint-Louis - Senegal

DEPARTMENT OF COMPUTER SCIENCE - FACULTY OF APPLIED SCIENCES AND TECHNOLOGY

April 2021 - Date

- Implementation of research projects;
- Organization of seminars;
- Supervise PhD thesis;
- Teaching in different modules.

Head of the RESOCC research team (Networks, Communicating Objects and Cybersecurity) Gaston Berger University
Saint-Louis - Senegal

NUMERICAL ANALYSIS AND COMPUTER LABORATORY (LANI)

June 2024 - Date

Elected full member of National Academy of Sciences and Techniques of Senegal. Fundamental, Applied and Innovation Sciences (FAIS) section

ANSTS - Senegal

National Academy of Sciences and Techniques of Senegal (ANSTS)

December 2021 - Date

- Assist and advise the Senegalese State and public and private institutions in the definition and implementation of the National Science and Technology Policy;
- Encourage scientific research, to initiate, impulse and develop programs in the fields of Science and Technology;
- Contribute to the promotion and valorization of the results of Research;
- Stimulate scientific vocations among young people and women;
- Facilitate exchanges with similar organizations;
- Award prizes and scholarships to persons who have distinguished themselves by their work;
- Contribute to the development of scientific culture and to the rapprochement between Science and Society.

Expert-evaluator

ARES* - Belgique

DEVELOPMENT RESEARCH PROJECTS (PRD), SOUTH TRAINING PROJECTS (PFS), SEED AND VALORIZATION

PROJECTS

June 2024 - Date

- Evaluate projects submitted in the framework of the call for Research for Development Projects (PRD), Training Projects South (PFS), Seed and valorization projects.

*Académie de Recherche et d'Enseignement Supérieur

Expert-evaluator

ANR - France

CALL FOR SPECIFIC PROJECTS - PARTNERSHIPS WITH AFRICAN HIGHER EDUCATION (PEA)

January 2022 - Date

- Evaluate projects submitted in the framework of the call for Partnerships with African Higher Education (PEA) of National Research Agency (ANR) in France;
- Mid-term evaluation of accepted projects.

Senegalese representative on the Board of Directors of the Islamic University of Technology (IUT)

Dhaka - Bangladesh

ISLAMIC UNIVERSITY OF TECHNOLOGY : A SUBSIDIARY ORGAN OF ORGANISATION OF ISLAMIC COOPERATION (OIC)

January 2025 - Date

Member of International francophone network for scientific advice

Quebec - Canada

INTERNATIONAL FRANCOPHONE NETWORK FOR SCIENTIFIC ADVICE (RFICS)

December 2024 - Date

Member of the Board of directors

Dakar - Senegal

SENIX (INTERNET EXCHANGE POINT)

August 2023 - Date

Member of the Board of directors

Dakar - Senegal

NATIONAL CYBERSECURITY SCHOOL WITH A REGIONAL FOCUS (ENC-VR)

May 2023 - Date

Member of the Board of directors

Dakar - Senegal

SENEGAL CONNECT PARK (FORMER PTN)

January 2024 - Date

Focal point Ministry of Higher Education, Research and Innovation (MESRI)

Presidency of the Republic - Senegal

COORDINATION OF CYBERATTACK DETECTION, WARNING AND RESPONSE ACTIVITIES (CADARCA)

December 2023 - Date

Coordinator

**Gaston Berger University
Saint-Louis - Senegal**

EUROPEAN PROJECT (ID: 101082391 - CALL: ERASMUS-EDU-2022-CBHE-STRAND-1)

April 2023 - Date

- **BASIS**: Boosting Agricultural Studies in Sub-Saharan Africa

Scientific and Technical Director

**Gaston Berger University
Saint-Louis - Senegal**

EUROPEAN RESEARCH PROJECT (ID: 101059232 - CALL: HORIZON-CL6-2021-FARM2FORK-01)

July 2022 - Date

- **URBANE**: One Health approaches to support agroecological transformation of peri-urban farming

Research Committee Member and Fellow

Pan-African Scientific Research Council (PASRC)

PASRC

March 2021 - Date

Expert evaluator ANAQ-Sup

MINISTRY OF HIGHER EDUCATION, RESEARCH AND INNOVATION (MESRI)

MESRI - Senegal

October 2016 - Date

- Evaluating and monitoring higher education institutions with a view to institutional accreditation;
- Evaluate and accredit training programs in Senegalese universities.

Senior Researcher IMU UMMISCO

INTERNATIONAL MIXED UNIT - INTERNATIONAL LABORATORY FOR MATHEMATICAL AND COMPUTATIONAL MODELING OF COMPLEX SYSTEMS

IRD - France

Octobre 2013 - Date

International expert in institutional assessment of training courses and / or research programs

CAMES (AFRICAN AND MALAGASY COUNCIL FOR HIGHER EDUCATION)

CAMES

April 2015 - Date

- Evaluate and accredit international training programs in the CAMES space universities

Member of the Learned Society

THE AFRICAN SOCIETY IN DIGITAL SCIENCES (ASDS)

Yaounde - Cameroon

June 2021 - Date

Associate Professor in Computer science

AFRICAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (AUST)

Abuja Campus - Nigeria

July 2013 - Date

PAST POSITIONS

Vice-Chancellor (Rector), President of the Academic Council of the University

Gaston Berger University
Saint-Louis - Senegal

GASTON BERGER UNIVERSITY

May 2018 - March 2023

- To represent the University in all bodies as President of the Academic Council;
- Conclude agreements, contracts or other arrangements between the University and other institutions of higher education competent bodies for educational, research, management or funding purposes;
- Supervising all university programs;
- Coordinate the development of a strategic plan for the operational implementation of Gaston Berger University and ensure that it is translated into appropriate and realistic goals and objectives to be implemented smoothly and successfully;
- Prepare the meetings of the Board of Directors and to ensure the execution of its deliberations;
- Present an annual activity report to the Board of Directors;
- Chair the meetings of the Academic Council and to ensure the execution of its deliberations;
- Develop the university's strategic development plan and quality assurance policy and ensure their implementation once approved by the Board of Directors;
- Ensure the proper administrative and accounting management of all human, material, financial and information resources of the university;
- Exercise hierarchical authority, especially over university staff.

Project Lead of Mastercard Foundation Scholar Program in Gaston Berger University

Gaston Berger University
Saint-Louis - Senegal

GASTON BERGER UNIVERSITY OF SAINT-LOUIS - SENEGAL

October 2019 - December 2022

- Train Fellows in the fields of digital, agriculture, health and engineering to serve their communities and contribute to the development of Senegal and Africa;
- Create favorable conditions to enable young people, including women, refugees, displaced persons, and people with disabilities, to make a smooth transition to dignified and fulfilling work and to create opportunities for others;
- Financing obtained: USD 37,786,408 over 09 years.

Co-chair of the Expert Review Committee

ANR - France

CALL FOR SPECIFIC PROJECTS - PARTNERSHIPS WITH AFRICAN HIGHER EDUCATION - 2nd EDITION (PEA2)

January 2022 - April 2023

- Evaluate projects submitted in the framework of the call for Partnerships with African Higher Education (PEA2) of the National Research Agency (ANR) in France.

Director of publication of Journal Global Africa

GASTON BERGER UNIVERSITY

Gaston Berger University
Saint-Louis - Senegal

March 2022 - March 2023

Full Professor in Computer Science (CAMES/LAFPT 2015)

DEPARTMENT OF COMPUTER SCIENCE - FACULTY OF APPLIED SCIENCE AND TECHNOLOGY (UFR SAT)

- Implementation of research projects;
- Organization of seminars;
- Supervise PhD thesis;
- Teaching in different modules.

Gaston Berger University
Saint-Louis - Senegal

July 2015 - April 2021

Director of ACE-MITIC (African Centre of Excellence for Mathematics, Informatics and ICT)

GASTON BERGER UNIVERSITY AND WORLD BANK

World Bank
April 2017 - March 2020

- Enable students to have an adequate training environment with high-level computer, electronics and telecommunications laboratories;
- Enable research teachers to enhance their skills in training and research;
- Integrate Mathematics and ICT into a research / training center with institutions, research centers, private companies and other relevant partners.

Director of the IT Computing Center Ousmane SECK (CCOS)

GASTON BERGER UNIVERSITY

Gaston Berger University
Saint-Louis - Senegal

November 2013 - November 2016

- Definition and Implementation of the University's IT Policy;
- Establishment of partnerships;
- Implementation of IT projects;
- Search for funding;
- Project manager for the implementation of the GIS of the University;
- Implementation and management of all the university's collective IT resources, and ensuring their coordination with regional and national networks;
- Ensure the coherence of all IT resources (hardware, software, human resources) of the University;
- Development of the institution's IT standards and norms, compatible with the recommendations of the national working groups;
- Participate in the preparation of the establishment contract with regard to IT resources;
- Management of the IT team.

Scientific and Technical Director

EUROPEEN RESEARCH PROJECT (ID: 780229 - H2020-ICT-2017-1)

Gaston Berger University
Saint-Louis - Senegal

May 2018 - July 2021

- **WAZIHUB**: Accelerating Open IoT and Big Data Innovation in Africa

Scientific and Technical Director

EUROPEEN RESEARCH PROJECT (ID: 687607 - H2020-ICT-2015)

Gaston Berger University
Saint-Louis - Senegal

February 2016 - January 2019

- **WAZIUP**: Open Innovation Platform for IoT-Big Data in Sub-Sahara Africa

Member of the Scientific and Pedagogical Council of the Doctoral School Sciences and Technologies (ED S&T)

GASTON BERGER UNIVERSITY OF SAINT-LOUIS - SENEGAL

Gaston Berger University
Saint-Louis - Senegal

October 2014 - October 2019

- Assign research grants in the different disciplines;
- Propose and select candidates for the different prizes;
- Validate and follow the different teaching modules;
- Implementation and follow-up of PhD Thesis.

Coordinator of the Faculty of Basic and Applied sciences

UNIVERSITY OF SINE-SALOUM EL HADJI IBRAHIM NIASS OF KAOLACK (USSEIN)

USSEIN - KAOLACK

January 2014 - January 2018

- Implementation of USSEIN;
- Establishment of the Faculty of Basic and applied sciences;
- Implementation of new training offers;
- Implementation of training models and syllabus.

Associate Professor in Computer Science (CAMES/LAFMC Cote A)

DEPARTMENT OF COMPUTER SCIENCE - FACULTY OF APPLIED SCIENCES AND TECHNOLOGY (UFR SAT)

- Implementation of research projects;
- Organization of seminars;
- Supervise PhD thesis;
- Teaching in different modules.

Coordinator of the MSc. in Computer Science

DEPARTMENT OF COMPUTER SCIENCE - FACULTY OF APPLIED SCIENCES AND TECHNOLOGY (UFR SAT)

- Establish timetables and organize pedagogical distribution;
- Supervise the updates, the management of the rooms in connection with the secretariat;
- Supervise the monitoring of absences;
- Organizing graduation juries.

Gaston Berger University Representative to the National committee on Science and Technology information for development (CODIST)

UNITED NATIONS ECONOMIC COMMISSION FOR AFRICA (UNECA)

Head of the Computer Science department

DEPARTMENT OF COMPUTER SCIENCE - FACULTY OF APPLIED SCIENCES AND TECHNOLOGY (UFR SAT)

- Ensure the organization and operation of the teaching;
- Collaborate with educational managers;
- Supervise knowledge assessments;
- Organizing graduation juries.

Assistant Professor in Computer Science (CAMES/LAFMA Cote A)

DEPARTMENT OF COMPUTER SCIENCE - FACULTY OF APPLIED SCIENCES AND TECHNOLOGY (UFR SAT)

- Provide supervised and practical work of some of the courses taught;
- Teaching some modules;
- Supervising students.

Assistant Lecture (Tenure) in Computer Science

DEPARTMENT OF COMPUTER SCIENCE - FACULTY OF APPLIED SCIENCES AND TECHNOLOGY (UFR SAT)

- Provide supervised and practical work of some of the courses taught.

Assistant Lecturer in Computer Science

DEPARTMENT OF COMPUTER SCIENCE - FACULTY OF APPLIED SCIENCES AND TECHNOLOGY (UFR SAT)

- Provide supervised and practical work of some of the courses taught.

Gaston Berger University
Saint-Louis - Senegal

July 2010 - July 2015

Gaston Berger University
Saint-Louis - Senegal

July 2012 - July 2014

Gaston Berger University
Saint-Louis - Senegal

June 2013 - November 2017

Gaston Berger University
Saint-Louis - Senegal

July 2007 - July 2009

Gaston Berger University
Saint-Louis - Senegal

July 2008 - July 2010

Gaston Berger University
Saint-Louis - Senegal

November 2005 - November 2008

Gaston Berger University
Saint-Louis - Senegal

November 2002 - November 2005

HONORS & AWARDS

Knight in the National Order of the LION

DECREE No. 2023-742/PR

Presidency of the Republic

Senegal. 2023

EDUCATION

Ph.D. in Computer Science

DEPARTMENT OF COMPUTER SCIENCE

CY Cergy Paris University
France

oct. 2003 - june. 2007

Post-Graduate (DEA) in Computer Science

POLYTECH'TOURS

University François
Rabelais Tours - France

2001 - 2002

Post-Graduate (DEA) in Applied Mathematics

DEPARTMENT OF APPLIED MATHEMATICS (UFR MAI)

Gaston Berger University
Saint-Louis - Senegal

1999 - 2000

Graduate (AEA) in Applied Mathematics

DEPARTMENT OF APPLIED MATHEMATICS (UFR MAI)

Gaston Berger University
Saint-Louis - Senegal

1998 - 1999

M.Sc. (Maîtrise) in Applied Mathematics

DEPARTMENT OF APPLIED MATHEMATICS (UFR MAI)

Gaston Berger University
Saint-Louis - Senegal

1997 - 1998

B.Sc. (Licence) in Applied Mathematics

DEPARTMENT OF APPLIED MATHEMATICS (UFR MAI)

Gaston Berger University
Saint-Louis - Senegal

1996 - 1997

Associates Degrees II (DEUG II) in Applied Mathematics

DEPARTMENT OF APPLIED MATHEMATICS (UFR MAI)

Gaston Berger University
Saint-Louis - Senegal

1995 - 1996

Associates Degrees I (DEUG I) in Applied Mathematics

DEPARTMENT OF APPLIED MATHEMATICS (UFR MAI)

Gaston Berger University
Saint-Louis - Senegal

1994 - 1995

RESEARCH INTERESTS

- [Res. Int. 1] Internet of Things (IoT)
- [Res. Int. 2] Artificial intelligence
- [Res. Int. 3] Wireless Sensor Networks (WSN)
- [Res. Int. 4] Mobile and Ad Hoc Networks (MANET)
- [Res. Int. 5] Parallel and Distributed Systems
- [Res. Int. 6] Peer-to-Peer (P2P) Systems
- [Res. Int. 7] Routing and Data replication
- [Res. Int. 8] Grid and Cloud computing
- [Res. Int. 9] Circular economy

RESEARCH PROJECTS

- [Project 1] **PI**, at Gaston Berger University of the European Project (ID: 101193598 Call: ERASMUS-EDU-2024-VIRT-EXCH "AGRI-MOCKS: Mastering Opportunities-scouting, Career-guidance and Key-job Skills in Agriculture". Estimated Project Cost: 499,990.96 €. 01-02-2025 – 31-01-2028.
- [Project 2] **PI**, at Gaston Berger University of Saint-Louis Senegal, of the Project funded by the Food and Agriculture Organization of the United Nations (FAO) "Design of a national digital livestock tracking system and training of beneficiaries in Mali and Senegal". Estimated Project Cost: XOF 36 530 315. 01-07-2024 – 31-12-2025.
- [Project 3] **Co-PI** of the project funded by the Public Diplomacy Section l'Ambassade des USA à Dakar (University Partnerships Initiative (UPI) - PAS-DKR-NOFO-FY22-02) "Enhancing computational expertise in Senegal - A partnership between Roux Institute

at Northeastern University and Gaston Berger University”. Estimated Project Cost: USD 150,000.00. 01-10-2023 – 30-09-2025.

- [Project 4] **PI** at Gaston Berger University of the European Project (ID: 101082391 Call: ERASMUS-EDU-2022-CBHE-STRAND-1) ”**BASIS: Boosting Agricultural Studies in Sub-Saharan Africa**”. Estimated Project Cost: 399,015,212.00 €. 2023-04-01 - 2026-03-31.
- [Project 5] **PI**, at Gaston Berger University, of the European Project (ID: 101129023 Call: ERASMUS-EDU-2023-CBHE-STRAND 2) ”**MASSTER: Managing (South) Africa and Senegal Sustainability Targets through Economic-diversification of Rural-areas**”. Estimated Project Cost: 800,000,00 €. 01-03-2024 – 28-02-2027.
- [Project 6] **PI**, at Gaston Berger University, of the European Project (ID: 101082391 Call: ERASMUS-EDU-2022-CBHE-STRAND-3) ”**QADoc: Assessment and quality assurance capabilities for doctoral programs and research**”. (Estimated Project Cost: 940,328.00 €. 36 months.
- [Project 7] **Partner**, at Gaston Berger University, of the European Project (ID: 101129279 Call: ERASMUS-EDU-2022-CBHE-STRAND1) ”**Elevate-HER: Female Research Empowerment and Academic Career Reinforcement in Senegal Higher Education**”. Estimated Project Cost: 399,771.00 €. 36 months.
- [Project 8] **Partner** at Gaston Berger University of the RSIF Junior Investigator Research Award (JIRA) ”**Robust and Affordable SmartAgri-IoT Technology (Agri-IoT Tech)**”. Estimated Project Cost: 80,000.00 €. 2023-05-01 - 2025-04-30.
- [Project 9] **Co-PI**, at the National Cyber-Infrastructure for Higher Education, Research and Innovation (CINERI - MESRI) of the Solidarity Fund for Innovative Projects (FSPI) ”**Go-Taouey - Accelerated start-up of the Supercomputer of Senegal**”. Estimated Project Cost: 96,600.00 €. 12 mois.
- [Project 10] **Scientific and Technical Director** at Gaston Berger University of the European Research Project (ID: 101059232 - Call: HORIZON-CL6-2021-FARM2FORK-01) ”**URBANE: One Health approaches to support agroecological transformation of peri-urban farming**”. Estimated Project Cost: 5,015,233.75 €. 2018-07-01 - 2026-06-30.
- [Project 11] **Scientific and Technical Director** at Gaston Berger University of the European Research Project (ID: 780229 - Call: H2020-ICT-2017-1) ”**WAZIHUB: Accelerating Open IoT and Big Data Innovation in Africa**”. Estimated Project Cost: 2,367,606.88 €. 2018-05-01 - 2021-07-31.
- [Project 12] **Director** of the African Center of Excellence for Mathematics, Informatics and Communication Technologies (**CEA-MITIC**). Projet funded by the World Bank. Estimated Project Cost: 8 million US Dollar. 05-04-2017 - 31-03-2020.
- [Project 13] **Scientific and Technical Director** at Gaston Berger University of the European Research Project (ID: 687607 - Call: H2020-ICT-2015) ”**WAZIUP: Open Innovation Platform for IoT-Big Data in Sub-Sahara Africa**”. Estimated Project Cost: 2,799,662.50 €. 2016-01-01 - 2019-01-01.
- [Project 14] **PI** of ”**Wireless Sensor Networks applied to large-scale environmental surveillance of insects invasion in Sub-Sahara Africa**”. Research project funded by FIRST (Fond d’Impulsion de la Recherche Scientifique et Technique). Funding of 30,000 €. 2013-01-06 - 2017-31-05.
- [Project 15] **Member of the Research Project** ”**Wireless Sensor Networks and RFID technology against cattle theft**”. Research project funded by FIRST (Fond d’Impulsion de la Recherche Scientifique et Technique). Funding of 25,000 €. 2014-12-05 - 2016-12-05.
- [Project 16] **Project Partner** ”**Implementation of socio-economic infrastructure for distributed development approach knowledge**”. Funding Unesco-HP: US Dollar 45,000 on 2010–2012 and AUF 49,600 € on 2012 - 2013.

PUBLICATIONS

ACADEMIC RESEARCH DATABASES

IEEE XPLORE

DBLP

GOOGLE SCHOLAR

RESEARCHGATE-STAT

RESEARCHGATE-SCORE

AD SCIENTIFIC INDEX

BOOKS

2025

- [Book 1] A. A. Abba Ari, **O. Thiare**, A. M. Gueroui and N. Labraoui, "Green Energy and Networking", *9th EAI International Conference on Green Energy and Networking GreeNets 2024, Douala, Cameroon, November 19-20, 2024. Proceeding. Springer Nature*, April 2025.
-

2019

- [Book 2] G. Mendy, S. Ouya, I. Dioum and **O. Thiare**, "e-Infrastructure and e-Services for Developing Countries", *10th EAI International Conference, AFRICOMM 2018, Dakar, Senegal, November 29-30, 2019, Proceedings. Telecommunications Engineering Book 275). Springer Nature*, November 2019.
-

2010

- [Book 3] **O. THIARE**, "Exclusion mutuelle de groupe dans les systèmes distribués", *PhD Thesis defended in June 2007 and published in book form by Editions Universitaires Européennes ISBN: 978-613-1-50521-8*, Amazon, 164 pages, May 2010.
-

BOOK CHAPTERS

2025

- [Book chapter 1] G. Kponhinto, S. Khemiri-Kallel, A. M. Gueroui, **O. Thiare**, A. A. Abba Ari and J. Hwang, "Towards Network Protocol Attacks Mitigation: A Malicious Node Detection Framework in Mobility-Based IoT Networks", *Ari, A. A. A., Thiare, O., Gueroui, A. M., Labraoui, N. (eds) 9th EAI International Conference on Green Energy and Networking. GreeNets 2024. EAI/Springer Innovations in Communication and Computing*, April 2025.
-

- [Book chapter 2] A. A. Abba Ari, N. Yekoniya, J. E. Z. Gbadoubissa, A.N. Njoya, L. N. Wamba, **O. Thiare**, S. K. Kallel and A. M. Gueroui, "Correlation clustering adapted for cell site management of mobile networks in developing countries", *Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering (LNICST)*, Springer, vol. 566, pp. 108-127, April 2024.

-
- [Book chapter 3] M. Djam-Doudou, A. A. Abba Ari, B. H. Tchapgnouo, A. M. Gueroui, N. Labraoui, **O. Thiare**, A. Mohamadou, "A lightweight authenticated key agreement scheme for resource-constrained devices based on implicit certificates and finite graphs", *Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering (LNICST)*, Springer, vol. 566, pp. 128-155, April 2024.
-

- [Book chapter 4] A. A. Abba Ari, F. Y. Dtissibe, A. N. Njoya, H. Abboubakar, A. M. Gueroui, **O. Thiare** and A. Mohamadou, "Flood forecasting in the Far-North region of Cameroon: A comparative study of machine learning and deep learning methods", *Lecture Notes on Data Engineering and Communications Technologies (LNDECT)*, Springer, vol. 185, pp. 143-158, October 2023.
-

- [Book chapter 5] A. A. Abba Ari, A. N. Njoya, B. H. Tchapgnouo, **O. Thiare** and A. M. Gueroui, "Towards a lightweight cryptographic key management system in IoT sensor networks", *Lecture Notes on Data Engineering and Communications Technologies (LNDECT)*, Springer, vol. 185, pp. 29-45, October 2023.
-

- [Book chapter 6] A. N. Njoya, I. E. B. Maidadi, A. A. Abba Ari, W. Abdou, S. K. Kallel, **O. Thiare**, A. M. Gueroui and E. Tonye, "Towards Intra-cluster Data Prediction in IoT for Efficient Energy Consumption", *Lecture Notes on Data Engineering and Communications Technologies (LNDECT)*, Springer, vol. 185, pp. 75-89, October 2023.
-

- [Book chapter 7] E. Effah, **O. Thiare** and A. M. Wyglinski, "The Agricultural Internet of Things Ecosystem", *MDPI Encyclopedia, Category: Computer Science, Hardware & Architecture*, August 2023.
-

- [Book chapter 8] M. Djam-Doudou, A. A. Abba Ari, J. H. M. Emati, A. N. Njoya, **O. Thiare** and A. M. Gueroui, "A certificate-based pairwise key establishment protocol for IoT resource constrained devices", *Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering (LNICST)*, Springer Nature, vol. 459, pp. 3-18, February 2023.
-

- [Book chapter 9] A. N. Njoya, UN. Yefou, A. A. Abba Ari, Rockfeller, A. C. Djedouboum, W. Abdou and **O. Thiare**, "Reinforcement Learning-Based Dynamic Path Allocation in IoT Systems", *Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering (LNICST)*, Springer Nature, vol. 459, pp. 19-38, February 2023.

2022

- [Book chapter 10] H. L. Razafindralambo, S. Kouhounde, K. Adeoti, M. Mounir, A. Giusti, P. Refinetti, A. Otu, E. Effa, B. Ebenso, V. O. Adetimirin, J. M. Barceló, **O. Thiare** and H. N. Rabetafika, "Applications and Action Mechanisms of Probiotic-Based Multi-Components", *MDPI Encyclopedia*, 19 pages, September 2022.

2020

- [Book chapter 11] F. Y. Dtissibe, A. A. Abba Ari, C. Titouna, **O. Thiare** and A. M. Gueroui, "Flood forecasting based on an artificial neural network scheme", *Natural Hazards, Springer Nature B.V. 2020*, 27 pages, August 2020.
- [Book chapter 12] E. Effah and **O. Thiare**, "Realistic Cluster-based Energy Efficient and Fault-Tolerant (RCEEFT) Routing Protocol for Wireless Sensor Networks (WSNs)", Arai K., Kapoor S., Bhatia R. (eds) *Advances in Information and Communication. Advances in Intelligent Systems and Computing, Springer Cham*, vol. 1129, pp. 320-33, February 2020.

2019

- [Book chapter 13] M. Diop, C. Pham, and **O. Thiare**, "A 2-hop LoRa Approach based on smart and Transparent Relay-Device", *Springer Nature Switzerland AG 2019. Book Title "e-Infrastructure and e-Services for Developing Countries", LNICST 275*, pp. 24-34, February 2019.

2016

- [Book chapter 14] P. Cousin, P. Malo, C. Pham, X. Yu, J. Li, J. Song, **O. Thiare**, A. Daffe, S. Kofuji, G. Marao, J. Amazonas, L. Gurgun, T. Yonezawa, T. Akiyama, M. Maggio, K. Moessner, Y. Miyake, O. Vermesan, F. Le Gall and B. Almeida, "European IoT International Cooperation in Research and Innovation", *Book Chapter in "Digitising the industry: Internet of Things Connecting the Physical, Digital and Virtual Worlds" IERC (IoT European Research Cluster) Cluster book 2016, River Publishers Series in Communications*, vol. 49, pp. 293-333, May 2016.

2015

- [Book chapter 15] B. Diop, D. Diongue and **O. Thiare**, "Centralized and Distributed Scheduling Schemes for Coverage and Lifetime Maximization in Wireless Systems", *AUST International Conference in Technology (AUSTECH Abuja 2015), Book chapter in Springer*, October 2015.

- [Book chapter 16] D. Diongue and O. Thiare, "An Energy Efficient Self-Healing Mechanism for Long Life Wireless Sensor Networks", *In Book "In Advances and Innovations in Computing, Informatics, Systems Sciences, Networking and Engineering", Series: Lectures Notes in Electrical Engineering (LNEE), Springer-Verlag*, vol. 313, pp. 599-605, 2015.
-

2006

- [Book chapter 17] O. Thiare, M. Naimi and A. Gueroui, "A Group Mutual Exclusion Algorithm for Mobile Ad Hoc Networks", *Book "Innovations and Advanced Techniques in Computer and Information Sciences and Engineering", Springer-Verlag*, pp. 373-377, 2006.
-

- [Book chapter 18] O. Thiare, M. Naimi and A. Gueroui, "Access Concurrents Sessions Based on Quorums", *Book "Advances and Innovations in Systems, Computing Sciences and Software Engineering", Springer-Verlag*, pp. 351-356, 2006.
-

INTERNATIONAL JOURNALS

2025

- [Journal 1] A. A. Abba Ari, Y. H. Soukolsou, S. S. D. Baidi, M. Aboubakar, N. Labraoui, A. Mohamadou and O. Thiare, "A Thorough Review of Security in Information-Centric Networking", *IET Information Security, John Wiley & Sons Ltd.*, vol. X, Issue. X, pp. XXX-XXX, December 2025.
-

- [Journal 2] G. Kponhinto, S. Khemiri-Kallel, A. A. Abba Ari, A. M. Gueroui, O. Thiare and J. Hwang, "A Hybrid Biologically-Inspired Optimization Algorithm for Data Gathering in IoT Sensor Networks", *Journal of Network and Systems Management, Springer Nature*, vol. 33 (2), pp. 1-32, January 2025.
-

2024

- [Journal 3] H. Abdoul Aziz, A. A. Abba Ari, A. N. Njoya, A. C. Djedouboum, A. Mohamadou and O. Thiare, "A Collaborative WSN-IoT-ANIMAL for Large-scale Data Collection", *IET Smart Cities, John Wiley & Sons Ltd.*, vol. 6, Issue. 4, pp. 372-386, December 2024.
-

- [Journal 4] E. Effah, G. Ghartey, J. Kweku Aidoo and O. Thiare, "Hardware Development and Evaluation of Multihop Cluster-based Agricultural IoT Based on BLE and LoRa Communication Technologies", *Sensors, Section "Internet of Things", MDPI*, Sensors **2024**, 24 (18):6113, 29 pages, September 2024.
-

- [Journal 5] A. A. Abba Ari, H. Abdoul Aziz, A. N. Njoya, M. Aboubakar, A. C. Djedouboum, O. Thiare and A. Mohamadou, "Data Collection in IoT Networks: Architecture, solutions, protocols and challenges", *IET Wireless Sensor Systems, John Wiley & Sons Ltd.*, vol. 14, issue. 4, pp. 85-110, June 2024.
-

- [Journal 6] F. Y. Dtissibe, A. A. Abba Ari, H. Aboubakar, A. N. Njoya, A. Mohamadou and **O. Thiare**, "A comparative study of Machine Learning and Deep Learning methods for flood forecasting in the Far-North region, Cameroon", *Scientific African, ScienceDirect, ELSEVIER*, vol. 23, 15 pages, March 2024.
-
- [Journal 7] E. Effah, **O. Thiare** and A. M. Wyglinski, "Hardware Evaluation of Cluster-based Agricultural IoT Network", *IEEE Access*, vol. 12, pp. 33628-33651, February 2024.
-
- [Journal 8] A. A. Abba Ari, O. K. Ngangmo, C. Titouna, **O. Thiare**, K. Kolyang, A. Mohamadou and A. M. Gueroui, "Enabling Privacy and Security in Cloud of Things: architecture, applications, security & privacy challenges", *Applied Computing and Informatics, ELSEVIER*, vol. 20, no. (1/2), pp. 119-141, January 2024.
-

2023

- [Journal 9] E. Effah, **O. Thiare** and A. M. Wyglinski, "A Tutorial on Agricultural IoT: Fundamental Concepts, Architectures, Routing, and Optimization", *IoT 2023 - MDPI*, vol. 4, Issue 3, pp. 265-318, July 2023.
-
- [Journal 10] A. A. Abba Ari, A. C. Djedouboum, A. N. Ndam, AA. Hamayadji, A. Gueroui, A. Mohamadou, **O. Thiare** and L. Nabila, "Optimizing relay sensors in large-scale wireless sensor networks: A biologically inspired approach", *International Journal of Engineering Research in Africa (JERA). Trans Tech Publications Ltd, Switzerland*, ISSN: 1663-4144, vol. 63, pp. 119-135, March 2023.
-
- [Journal 11] **O. Thiare**, "Peer Review Report For: Available Wireless Sensor Network and Internet of Things testbed facilities: dataset [version 2; peer review: 2 approved, 1 approved with reservations].", *Open Research Europe*, **2**:127, November 2023.
-

2022

- [Journal 12] A. N. Njoya, A. A. N. Tchangmena, A. A. Abba Ari, A. Gueroui, C. Thron, B. N. Mpinda, **O. Thiare** and E. Tonye, "Data Prediction based encoder-decoder learning in Wireless Sensor Networks", *IEEE Access*, vol. 10, pp. 109340-109356, October 2022.
-
- [Journal 13] S. Kouhounde, K. Adeoti, M. Mounir, A. Giusti, P. Rafinetti, A. Otu, A. Guisti, E. Effa, B. Ebenso, V. O. Adetimirin, J. M. Barceló, **O. Thiare**, H. N. Rabetafika and H. L. Razafindralambo, "Applications of Probiotic-Based Multi-components to Human, Animal and Ecosystem Health: Concepts, Methodologies, and Action Mechanisms", *Special Issue "Shaping the Future of Probiotics: Novel Methodologies, Applications, and Mechanisms of Action" of Microorganisms*, **10**, 1700, *MDPI*, 31 pages, August 2022.
-
- [Journal 14] B. Ebenso, A. Otu, A. Guisti, P. Cousin, V. Adetimirin, H. L. Razafindralambo, E. Effa, V. Gkissakis, **O. Thiare**, V. Levavasseur, S. Kouhounde, K. Adeoti, A. Rahim and M. Mounir, "Nature-based One Health approaches to urban agriculture can deliver food and nutrition security", *Frontiers in Nutrition, section Nutrition and Sustainable Diets, FRONTIERS*, pp. 1-9, March 2022.
-

2021

- [Journal 15] O. K. Ngangmo, A. A. Abba Ari, A. Mohamadou, **O. Thiare** and D. T. Kolyang, "Guarantees of Differential Privacy in Cloud of Things: A Multilevel Data Publication Scheme", *International Journal of Engineering Research in Africa*, vol. 56, pp. 199-212, October 2021.
-

2020

- [Journal 16] A. A. Abba Ari, AC. Djedouboum, A. M. Gueroui, **O. Thiare**, A. Mohamadou and Z. Aliouat, "A Three-Tier Architecture of Large-Scale Wireless Sensor Networks for Big Data Collection", *Applied Sciences (MDPI)*, 10(15), 5382, 21 pages, August 2020.
-
- [Journal 17] A. C. Djedouboum, A. A. Abba Ari, A. M. Gueroui, A. Mohamadou, **O. Thiare** and Z. Aliouat, "A Framework of modeling Large-Scale Wireless Sensor Networks for Big Data collection", *Special Issue Symmetry and Complexity 2020 (MDPI)*, 12(7), 1113, 23 pages, June 2020.
-
- [Journal 18] A. A. Abba Ari, A. C. Djedouboum, A. M. Gueroui, **O. Thiare**, A. Mohamadou and C. Titouna, "A Bio-inspired Scheme for Optimizing Relay Sensors in Large-Scale Wireless Sensor Networks", *International Journal of Engineering Science and Technology (JESTECH)*, *ELSEVIER*, July 2020.
-

2019

- [Journal 19] A. A. Abba Ari, A. M. Gueroui, C. Titouna, **O. Thiare** and Z. Aliouat, "Resource Allocation Scheme for 5G C-RAN: a Swarm Intelligence based approach", *Computer Networks (ELSEVIER)*, vol. 165 (2019) 106957, 20 pages, December 2019.
-
- [Journal 20] J. E. Z. Gbadoubissa, A. A. Abba Ari, C. Titouna, A. M. Gueroui and **O. Thiare**, "HGC: HyperGraph based Clustering Scheme for Power aware Wireless Sensor Networks", *Future Generation Computer Systems (ELSEVIER)*, vol. 105 (2020), pp. 175-183, December 2019.
-
- [Journal 21] E. Effah and **O. Thiare**, "Estimation of Optimal number of Clusters : A New Approach to Minimizing Intra-Cluster Communication Cost in WSNs", *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, *Scopus Journal*, ISSN: 2278-3075, vol. 8 Issue-7S2, pp. 521-524, May 2019.
-

2018

- [Journal 22] E. Effah and **O. Thiare**, "Survey: Faults, Fault Detection and Fault Tolerance Techniques in Wireless Sensor Networks", *International Journal of Computer Science and Information Security (IJCSIS)*, vol. 16, no. 10, pp. 1-14, October 2018.
-

2016

- [Journal 23] M. D. Faye, E. Caron and **O. Thiare**, "Un algorithme auto-stabilisant pour le déploiement auto-adaptatif d'un intergiciel hiérarchique: spécification, preuve, simulations", *Special issue CNRIA 2015, Arima Journal*, vol. 25, pp. 1-20, December 2016.
-
- [Journal 24] A. A. El Arby and **O. Thiare**, "Modeling voice over LTE", *Journal of Software Networking, 2016 River Publishers*, vol. 2016, Issue. 1, pp. 101-112, November 2016.
-
- [Journal 25] A. A. El Arby and **O. Thiare**, "Voice Over LTE Performance Evaluation", *Lecture Notes in Electrical Engineering LNEE Series, Springer-Verlag*, vol. 391, pp. 25-33, May 2016.
-
- [Journal 26] B. Diop, D. Diongue and **O. Thiare**, "Normalized Audio Power Sequences Technique for Detecting Grain-eating Birds in Rice Fields Based on Bird Sounds Variance", *International Journal of Multimedia and Ubiquitous Engineering (IJMUE)*, pp. 157-168, April 2016.
-

2015

- [Journal 27] B. Diop, D. Diongue and **O. Thiare**, "Greedy Algorithms for Target Coverage Lifetime Management Problem in Wireless Sensor Networks", *International Journal of Control and Automation (IJCA)*, vol. 8, no. 2, pp. 232-250, February 2015.
-

2013

- [Journal 28] D. Diongue and **O. Thiare**, "A New Sentinel Approach for Energy Efficient and Hole Aware Wireless Sensor Networks", *International Journal of Computer Science and Information Security (IJCSIS)*, vol. 11, no. 9, pp. 30-37, September 2013.
-
- [Journal 29] Y. Caniou, E. Caron, F. Desprez, M. D. Faye, G. Le Mahec, A. Muresan, J. R. Cornabas, **O. Thiare** and L. Toch, "Description of an open-source Distributed Framework Designed for HPC in Multi-Cloud Environment", *Journal of Grid Computing*, October 2013.
-
- [Journal 30] **O. Thiare** and M. Naimi, "A Distributed Free-Deadlock Quorum-Based Algorithm for Mutual Exclusion", *International Journal of Computer Science and Information Security (IJCSIS)*, vol. 11, no. 8, pp. 7-13, August 2013.
-

2012

- [Journal 31] **O. Thiare** and P. A. Fall, "Using Maekawa's algorithm to perform distributed mutual exclusion in quorums", *Journal of Advances in Computing, ISSN: 2163-2944*, vol. 2, no. 5, pp. 54-59, September 2012.
-
- [Journal 32] N. M. Ndiaye, P. Sens and **O. Thiare**, "Performance Comparison of Hierarchical Checkpoint Protocols Grid Computing", *IEEE/DCAI2012, Extended paper selected as one of*

2011

- [Journal 33] **O. Thiare** and M. Naimi, "A Weight-Throwing Group Mutual Exclusion Algorithm for Mobiles Ad Hoc Networks", *International Journal of Digital Content Technology and its Applications (JDCTA)*, ISSN : 1975-9339, vol. 5, no. 4, pp. 254-263, April 2011.
-
- [Journal 34] **O. Thiare**, "Several Tokens Distributed Mutual Exclusion Algorithm in a Logical Ring Network", *ICMLC 2009, extended version selected for publication In International Proceedings for Computer Science and Information Technology*, vol. 3, pp. 567-572, November, 2011.
-

2010

- [Journal 35] **O. Thiare**, "A Solution to Improve Algorithm for Distributed Mutual Exclusion by Restricting Message Exchange in Quorums", *IEEE/ICADIWT'09, Extended version selected for publication in Journal of Information Technology Review (JITR)*, vol. 1, no. 2, pp. 74-78, May 2010.
-

2009

- [Journal 36] **O. Thiare**, M. Naimi and A. Gueroui, "Distributed Groups Mutual Exclusion Based on Dynamical Data Structures", *Journal of Theoretical and Applied Information Technology (JATIT)*, vol. 5, no. 3, pp. 277-285, March 2009.
-
- [Journal 37] M. Naimi and **O. Thiare**, "Distributed Mutual Exclusion Based on Causal Ordering", *Journal of Computer Science (JCS) 5(5)*, pp. 398-404, May 2009.
-
- [Journal 38] **O. Thiare** and M. Naimi, "New Quorum Construction Method", *in progress*.
-

INTERNATIONAL CONFERENCES

2025

- [Conference 1] G. Kponhinto, S. K. Kallel, A. A. Abba Ari, **O. Thiare**, A.M. Gueroui and J. Hwang, "An Energy-Efficient Data Collection Protocol for IoT Networks Using Social Network Search Metaheuristic", *Proceedings of the 22nd IEEE Consumer Communications and Networking Conference (IEEE/CCNC 2025)*, pp. 778-784, January 2025.
-

2024

- [Conference 2] G. Kponhinto, S. K. Kallel, A. A. Abba Ari, **O. Thiare**, A.M. Gueroui and J. Hwang, "Towards Network Protocol Attacks Mitigation : A Malicious Node Detection Framework in Mobility-Based IoT Networks", *to appear in Proceedings of the 9th EAI International Conference on Green Energy and Networking*, Springer-Verlag, September 2024.
-

2023

- [Conference 3] G. Kponhinto, **O. Thiare**, A. A. Abba Ari, A.M. Gueroui, S. K. Kallel and J. Hwang, "Bio-inspired Solution for Cluster-Tree Based Data Collection Protocol in Wireless Sensors Networks", *in Proceedings of the 19th IEEE/IFIP Network Operations and Management Symposium (NOMS 2023)*, pp. 1-6, May 2023.
-

2021

- [Conference 4] P. Cousin, O. Husson, **O. Thiare** and G. Ndiaye, "Technology-enabled sustainable agriculture: the agroecology case", *IEEE/IST-Africa 2021 Conference Proceedings, Paul Cunningham and Miriam Cunningham (Eds), IST-Africa Institute and IIMC, 2021, ISBN: 978-1-905824-66-3*, pp. 1-8, May 2021.
-

2020

- [Conference 5] O. Dieng, C. Pham and **O. Thiare**, "Comparing and Adapting Propagation Models for LoRa Networks", *16th IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (IEEE/WIMOB'20)*, pp. 1-7, October 2020.
-

- [Conference 6] E. Effah, **O. Thiare** and A. M. Wyglinski, "Energy-Efficient Multihop Routing Framework for Cluster-based Agricultural Internet of Things (CA-IoT) Networks", *in 2020 IEEE 92nd Vehicular Technology Conference (IEEE VTC2020-Fall), in IEEE Proceedings*, pp. 1-5, October 2020.
-

- [Conference 7] E. Effah, **O. Thiare** and A. M. Wyglinski, "Multi-Objective Optimization Modeling of Clustering-Based Agricultural Internet of Things", *in 2020 IEEE 92nd Vehicular Technology Conference (IEEE VTC2020-Fall), in IEEE Proceedings*, pp. 1-5, October 2020.
-

2019

- [Conference 8] O. Dieng, C. Pham and **O. Thiare**, "Outdoor Localization and Distance Estimation Based on Dynamic RSSI Measurements in LoRa Networks: Application to Cattle Rustling Prevention", *15th IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (IEEE/WIMOB'19), in IEEE Proceedings*, pp. 1-6, December 2019.
-

2018

- [Conference 9] C. Dupont, A. Wussah, M. Sadouanouan, **O. Thiare**, F. Niass, C. Pham, S. Dupont, F. Le Gall and P. Cousin, "Low-cost IoT solutions for fish farmers in Africa", *IEEE Proceedings of IST Africa 2018, ISSN: 2576-8581*, pp. 1-8 May 2018.
-

2017

- [Conference 10] C. Pham, F. Ferrero, M. Diop, L. Lizzi, O. Dieng and **O. Thiare**, "Low-cost Antenna Technology for LPWAN IoT in Rural Applications", *IEEE 7th International Workshop on Advances in Sensors and Interfaces (IEEE/IWASI 2017)*, pp. 121-126, June 2017.
-
- [Conference 11] P. Cousin, C. Dupont, S. Fatnassi, C. Pham, **O. Thiare**, A. Wussah and S. Koffi, "IoT, an affordable technology to empower African addressing needs in Africa", *IST Africa 2017, published in IEEE Proceedings*, pp. 1-8, November 2017.
-
- [Conference 12] O. Dieng, B. Diop, **O. Thiare** and C. Pham, "A Study on IoT Solutions for Preventing Cattle Rustling in African Context", *2nd ACM International Conference on Internet of Things, Data and Cloud computing (ACM/ICC'17), Published in ACM Proceedings Article n°160*, pp. 1-11, March 2017.
-

2016

- [Conference 13] M. Traore, L. Escalade, **O. Thiare** and B. Pottier, "Life dynamics cellular modelling and simulation", *Proceedings of the 6th IASTED International Conference on Modelling, Simulation and Identification (MSI 2016)*, pp. 134-140, August 2016.
-

2015

- [Conference 14] B. Diop, D. Diongue and **O. Thiare**, "Bird Sounds Detection Using Normalized Audio Power Sequences", *Proceedings of IEEE International Conference on Modeling and Simulation (IEEE/MAS 2015)*, pp. 43-48, December 2015.
-
- [Conference 15] E. Caron, M. D. Faye and **O. Thiare**, "Autonomic Management using Self-Stabilization for Hierarchical and Distributed Middleware", *Proceedings of the 13th IEEE International Conference on Dependable, Autonomic and Secure Computing (IEEE/DASC 2015)*, pp. 2043-2048, October 2015.
-
- [Conference 16] El. M. Nguer, M. Khoule, M. N. Thiam, B. B. Thiam, **O. Thiare**, M. T. Cisse and M. Mangeot, "Dictionnaires wolof en ligne: état de l'art et perspectives", *Proceedings of CNRIA 2015, Thies Senegal*, October 2015.
-
- [Conference 17] A. A. El Arby and **O. Thiare**, "Handling Voice in LTE", *Proceedings of the IEEE International Conference on Computer, Communication, and Control Technology (IEEE/I4CT 2015)*, pp. 7-10, April 2015.
-

2014

- [Conference 18] B. Diop, D. Diongue and **O. Thiare**, "Managing Target Coverage Lifetime in Wireless Sensor Networks with Greedy Set Cover", *Proceedings of the 6th IEEE International Conference on Multimedia, Computer Graphics and Broadcasting (IEEE MulGraB 2014)*, pp. 17-20, December 2014.
-
- [Conference 19] B. Diop, D. Diongue and **O. Thiare**, "Target Coverage Management in Wireless Sensor Networks", *Proceedings of the IEEE International Conference on Wireless Sensors (IEEE/ICWiSE 2014)*, pp. 25-30, October 2014.
-
- [Conference 20] B. Diop, D. Diongue and **O. Thiare**, "A Weight-based Greedy Algorithm for Target Coverage Problem in Wireless Sensor Networks", *Proceedings of the IEEE International Conference on Computer, Communication, and Control Technology (IEEE I4CT 2014)*, pp. 120-125, September 2014.
-
- [Conference 21] D. Diongue and **O. Thiare**, "An Hybrid Scheduling Algorithm for Wireless Sensor Networks", *Proceedings of the IEEE International Conference on Computer Communication and Informatics (IEEE/ICCCI 2014)*, pp. 165-170, January 2014.
-

2013

- [Conference 22] C. Pham, El. S. M. Diop and **O. Thiare**, "Selecting Source Image Sensor Nodes based on 2-hop Information to improve Image Transmissions to Mobile Robot Sinks in Search & Rescue Operations", *Workshop on Robots and Sensors integration in future rescue Information system (ROSIN'13) , in conjunction of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2013), Japan.*, November 2013.
-
- [Conference 23] El. S. M. Diop, C. Pham and **O. Thiare**, "2-Hop Neighborhood Information for Cover Set Selection in Mission-Critical Surveillance with Wireless Image Sensor Networks", *Proceedings of IFIP/IEEE Wireless Days 2013 (WD'13)*, pp. 1-7, November 2013.
-
- [Conference 24] D. Diongue and **O. Thiare**, "ALARM: An Energy Aware Sleep Scheduling Algorithm for Lifetime Maximization in Wireless Sensor Networks", *Proceedings of the 3rd IEEE/International Symposium on Wireless Technology and Applications (IEEE/ISWTA 2013)*, pp. 74-79, September 2013.
-
- [Conference 25] E. Caron, M. D. Faye, J. R. Cornabas and **O. Thiare**, "Déploiement auto-adaptatif d'intergiciel sur plateforme élastique", *Poster presented at ComPAS 2013*, January 2013.
-
- [Conference 26] E. Caron, M. D. Faye, J. R. Cornabas and **O. Thiare**, "Grid Middleware Modeling for self adaptive deployment", *Proceedings of the 11th IEEE International Symposium on Autonomous Decentralized Systems (IEEE/ISADS 2013)*, pp. 1-5, Mars 2013.
-
- [Conference 27] D. Diongue and **O. Thiare**, "SENTINEL: Un mécanisme pour use prolongation de la durée de vie des réseaux de capteurs sans fil", *Proceedings of CNRIA 2013*,

-
- [Conference 28] M. Traore, B. Pottier and **O. Thiare**, "Introduction à la Programmation des capteurs sans fil", *Proceedings of CNRIA 2013, Ziguinchor Senegal*, pp. 144-146, April 2013.
-

2012

- [Conference 29] N. M. Ndiaye, P. Sens and **O. Thiare**, "Hierarchical Composition of Coordinated Checkpoint with Pessimistic Message Logging", *Proceedings of IEEE/International Conference on Parallel, Distributed and Grid Computing (IEEE/PDGC 2012)*, pp. 752-756, December 2012.
-
- [Conference 30] El. S. M. Diop, C. Pham and **O. Thiare**, "Best Cover Set Selection with Multi-Criteria Approach in Mission-Critical Surveillance for Wireless Image Sensor Networks", *Proceedings of the IFIP/IEEE Wireless Days 2012 (WD'12)*, pp. 1-6, September 2012.
-
- [Conference 31] **O. Thiare**, "A Token-based Group Mutual Exclusion Algorithm for MANets", *International Conference on Digital Contents and Applications (FGCN/DCA 2012)*, *LNCS CCIS, Springer-Verlag*, vol. 350, pp. 243-250, October 2012.
-
- [Conference 32] El. S. M. Diop, C. Pham and **O. Thiare**, "Approche Multicritère pour la Sélection du Meilleur Ensemble Couvrant dans les Applications de Détection d'Intrusion à base de Capteurs Image", *Journée Thématique PHC/ResCom "Réseaux de Capteurs et Applications critiques de surveillance", (RESSACS 2012)*, IUT Bayonne Parc Montaury, Juin 2012.
-
- [Conference 33] N. M. Ndiaye, P. Sens and **O. Thiare**, "Performance Comparison of Hierarchical Checkpoint Protocols Grid Computing", *Proceedings of IEEE/International Symposium of Distributed Computing and Artificial Intelligence (IEEE/DCAI2012)*, *In book Advances in Intelligent and Soft-Computing, Springer Verlag*, vol. 151, pp. 339-346, January 2012.
-

2009

- [Conference 34] **O. Thiare**, "A Solution to improve Algorithm for Distributed Mutual Exclusion by Restricting Message Exchange in Quorums", *Proceedings of IEEE 2th International Conference on the Applications of Digital Information and Web Technologies (IEEE/ICADIWT 2009)*, pp. 38-42, 2009.
-
- [Conference 35] **O. Thiare**, "Several Tokens Distributed Mutual Exclusion Algorithm in a Logical Ring Network", *Proceedings of IACSIT International Conference on Machine Learning and Computing (ICMLC 2009)*, *World Academic Union*, pp. 567-572, 2009.
-
- [Conference 36] **O. Thiare**, M. Naimi, "A Group k -Mutual Exclusion Algorithm for Mobile Ad Hoc Networks", *International Symposium on Distributed Computing and Artificial Intelligence (DCAI 2009)*, *IWANN 2009, Part II, LNCS*, vol. 5518, pp. 58-66, 2009.
-

- [Conference 37] **O. Thiare**, "An Efficient Distributed Quorum-Based Group Mutual Exclusion Algorithm with Coordinator in each Group", *Proceedings of International Conference on High Performance Computing Networking and Communication Systems, (HPC-NCS 2009)*, pp. 120-126, 2009.
-

- [Conference 38] **J. F. Myoupo, M. Naimi and O. Thiare**, "A Clustering Group Mutual Exclusion Algorithm for Mobile Ad Hoc Networks", *Proceedings of IEEE Symposium on Computers and Communication (IEEE/ISCC 2009)*, pp. 693-696, 2009
-

2006

- [Conference 39] **O. Thiare, M. Naimi and A. Gueroui**, "Distributed Groups Mutual Exclusion Based on Client Server Model", *Proceedings of 7th IEEE International Conference on Parallel and Distributed Computing Applications and Technologies (IEEE/PDCAT'06)*, pp. 67-73, December 2006.
-

- [Conference 40] **O. Thiare and M. Naimi**, "A Quorum-Based Algorithm for Group Mutual Exclusion", *Proceedings of ISCA 19th International Conference on Parallel and Distributed Computing Systems (PDCS'06)*, pp. 63-69, September 2006.
-

RESEARCH AND SUPERVISION ACTIVITIES

CURRENT Ph.D. STUDENT

- [PhD. 1] **Diafra Soumare**, "Contribution of AI to cybersecurity", *Gaston Berger University of Saint-Louis (Senegal)*. With Prof. Toufik Ahmed (LaBRI - University Bordeaux - Institut Polytech. de Bordeaux, France). 2024-2027.
- [PhD. 2] **Ndella Diop**, "Intrusion detection in industrial Internet of Things systems", *Gaston Berger University of Saint-Louis (Senegal)*. With Pr. Toufik Ahmed (LaBRI - University Bordeaux - Institut Polytech. de Bordeaux, France). 2024-2027.
- [PhD. 3] **Cheikh Diop**, "Studies and solutions for distributed learning in hostiles environments", *Gaston Berger University of Saint-Louis (Senegal)*. With Prof. Eddy Caron and Prof. Laurent Lefèvre (Parallel Computing Laboratory, University of Lyon 1 (France)). 2024-2027.
- [PhD. 4] **Mounirah Djam-Doudou**, "Integration of light cryptographic schemes to improve trust and security in the Internet of Things", *University of Maroua (Cameroun)*. With Prof. Aliou MOHAMADOU (University of Maroua (UMa-Cameroun)) and Prof. Ado Adamou ABBA ARI (University of Maroua (UMa-Cameroun)). 2022-2025.

FORMER Ph.D. STUDENTS

- [PhD. 1] **Gerard Kponhinto**, "Data Collection and Transmission in the Internet of Things", *Gaston Berger University of Saint-Louis - Senegal*, Scholar PASET/RSIF (World Bank). With Prof. Abdelhak Mourad GUEROUI (University of Versailles Saint-Quentin (UVSQ-France)) and Prof. Ado Adamou ABBA ARI (University of Maroua (UMa-Cameroun)). Ph.D. Thesis funded by PASET/RSIF (World Bank) defended on December 19 2024 at Université de Versailles Saint-Quentin en Yvelines, Paris - France Berger.
- [PhD. 2] **Emmanuel Effah**, "Robust and Affordable Cluster-based Agricultural IoT Technology", *Gaston Berger University of Saint-Louis - Senegal*. Ph.D. Thesis funded by PASET/RSIF

(World Bank) defended on February 11 2022 at Gaston Berger University of Saint-Louis - Senegal.

- [PhD. 3] Ousmane Dieng, "Low-Cost Localization Methods with LPWAN IoT to Prevent Cattle Rustling in Africa", *Gaston Berger University of Saint-Louis - Senegal*. Ph.D. Thesis funded by WAZIUP Project, defended on January 19 2021 at Gaston Berger University of Saint-Louis - Senegal.
- [PhD. 4] Babacar Diop, "Management of target coverage in wireless sensor networks", *Gaston Berger University of Saint-Louis - Senegal*. Ph.D. Thesis defended on May 03 2019 at Gaston Berger University of Saint-Louis - Senegal.
- [PhD. 5] Mahamadou Traore, "Cell modeling and physical simulation: contribution to the analysis of insect pest population dynamics", with Prof. Bernard Pottier *University de Bretagne Occidentale Brest - France*. Ph.D. Thesis defended on March 09 2018 at LabSTICC, UMR CNRS 3192 Laboratory - Université de Bretagne Occidentale (UBO) - France.
- [PhD. 6] Maurice Djibril Faye, "Automatic deployment for middleware on elastic platform", with Prof. Eddy Caron, *Ecole Normale Supérieure de Lyon, France*. Ph.D. Thesis defended on November 10 2015 at LIP Laboratory - Ecole Normale Supérieure Lyon - France.
- [PhD. 7] El Hadji Serigne Mamour Diop, "Optimization of image transmission in wireless sensor networks for critical monitoring applications", with Prof. Congduc Pham *University of Pau - France*. Ph.D. Thesis defended on June 17 2014 at University of Pau and the Adour region - France.
- [PhD. 8] Dame Diongue, "Lifetime centralized and distributed optimization of wireless sensor networks", *Gaston Berger University of Saint-Louis - Senegal*. Ph.D. Thesis defended on June 13 2014 at Gaston Berger University of Saint-Louis Senegal
- [PhD. 9] Ndeye Massata Ndiaye, "Technical failure management for fault-tolerant computing grids", with Prof. Pierre Sens *University Paris VI LIP6 Lab - France*. Ph.D. Thesis defended on September 17 2013 at LIP6 Lab, University Pierre et Marie Curie.

REPORTS OF Ph.D. THESIS

- [PhD. 1] M. CHOLLET NICOLAS, "Embedded-AI-enabled semantic IoT platform for Agroecology", *University Paris-Saclay (France)*, November 2023.
- [PhD. 2] M. ZACKO GBADOUBISSA Jocelyn Edinio, "Smart Routing-based Clustering for Energy Savings in narrowband Internet of Things", *University of Maroua (UMa - Cameroon)*, March 2023.
- [PhD. 3] M. Janardhan, "Some studies related to enhance the performance and network lifetime of IEEE802.15.4 for Wireless sensor networks", *Andhra University - Inde*, September 2022.
- [PhD. 4] MARA ANNA Awa, "Coverage Control and Routing in IoT Wireless Networks ", *University of Maroua (UMa - Cameroon)*, June 2022.
- [PhD. 5] Kengni Ngangmo Olga, "Towards efficient and lightweight security for the Cloud of Things", *University of Maroua (UMa - Cameroon)*, April 2021.
- [PhD. 6] Bernard Ousmane Sane, "Game Theory and Virtual Machine Security in Cloud Computing: Risk Studies, Vulnerabilities and Secure and Efficient Virtual Machine Allocation Policy", *University Cheikh Anta Diop of Dakar (UCAD) - Senegal*, 2021.
- [PhD. 7] Jeanne Roux Ngo Bilong, "Contribution to information systems access control models: optimal management of role delegation", *Ecole Sup rieur Polytechnique (ESP) - UCAD*, 2020.
- [PhD. 8] Sri D. Venkata Divakara Rao, "A Framework to enhance the network lifetime by minimizing energy consumption of LAR protocol in MaNets", *Andhra University - India*, August 2019.

- [PhD. 9] **Ignace Djitog**, "A Model Driven Engineering Framework for Healthcare Systems Management", *African University of Science and Technology (AUST) - Abuja-Nigeria*, 2017.
- [PhD. 10] **Adedoyin Adegoke**, "Towards A Unifying Framework for Engineering Devs Distributed Simulations", *African University of Science and Technology (AUST) - Abuja-Nigeria*, 2017.
- [PhD. 11] **Ibrahima Gaye**, "Social networks analysis : Contribution of detection of the seeds for maximizing the influence spread", *Ecole Sup rieuse Polytechnique (ESP) - UCAD*, 2017.
- [PhD. 12] **Sri K. Sreerama Murthy**, "Some Performance Studies related to IDS for Mails Clients in the context of Cryptographic Algorithms using SNORT", *Andhra University - Inde*, 2017.
- [PhD. 13] **Abdourahmane Ndiaye**, "Optimizing Resource Allocation in 4G Cellular Systems", *University Cheikh Anta Diop of Dakar - Senegal*, 2016.
- [PhD. 14] **Bassirou Gueye**, "Self-adaptive services for peer-to-peer grid", *University of Reims Champagne Ardenne Reims - France*, 2016.
- [PhD. 15] **Samuel Ouya**, "Study of the convergence of Telecommunications and its applications to virtual organizations", *University Cheikh Anta Diop of Dakar - Senegal*, 2015.
- [PhD. 16] **Ibrahima Gueye**, "Processing of large-scale transactions with dynamic adjustment of demand resources", *University Cheikh Anta Diop of Dakar (UCAD) - Senegal*, 2015.
- [PhD. 17] **G. Sanjiv Rao**, "A coverage efficient model for wireless sensor networks", *Andhra University - India*, 2015.
- [PhD. 18] **Mahamat Borgou Hassan**, "Estimation mechanisms and bandwidth allocation in IPv6 networks", *University of Thies - Senegal* 2015.
- [PhD. 19] **Idy Diop**, "Steganography images based on low density codes (LDPC)", *Ecole Supérieure Polytechnique (ESP) - UCAD* 2015.
- [PhD. 20] **Sidy Ould Cheikh**, "Routing with QoS of IEEE 802.11s mesh networks", *University of Versailles Saint-Quentin en Yvelines - France* 2014.
- [PhD. 21] **Mamadou Diallo Diouf**, "Study of network systems architectures 40-200GPON", *Ecole Supérieure Polytechnique (ESP) - UCAD* 2013.
- [PhD. 22] **Abdou Khadre Diop**, "Reliable transmission of video motion JPEG 2000 codestream estimation and motion compensation", *Ecole Supérieure Polytechnique (ESP) - UCAD* 2013.

MASTER STUDENTS SUPERVISION

- [M.Sc. 1] **Cyrille Kesiku**, "Deep learning IoT risk monitoring" *African Institute for Mathematical Sciences (AIMS), Mbour (Senegal)*. February 2021.
- [M.Sc. 2] **Ya Jabou Sanyang**, "Comprehensive E-Healthcare System for Edward Francis Small Teaching Hospital (EFSTH)", *Department of Computer science, University of the Gambia (UTG)*. February 2018.
- [M.Sc. 3] **Gbenga Adebayo**, "Study and implementation of a Wireless sensor networks to manage energy in a smart home", *Department of Computer science, African University of Science and Technology (AUST) Abuja-Nigeria*. 2016-2017.
- [M.Sc. 4] **Eze Chijioke**, "Security and Privacy in Internet of Things : Models, Algorithms, and Implementations", *Department of Computer science, African University of Science and Technology (AUST) Abuja-Nigeria*. 2016-2017.
- [M.Sc. 5] **Naby Ndiaye**, "Implementation of a digital working environment solution", *Department of Computer science, UFR SAT, Gaston Berger University of Saint-Louis*. 2015-2016.
- [M.Sc. 6] **El Hadji Mamadou Dieng**, "Implementation of modules PREVU PAY, PREVU HOSPITAL, PREVU ENROL and PREVU SERVER of a membership management software",

- [M.Sc. 7] **Ohida Sefiyat**, "Implementation of New Fault Tolerance Solution in a Wireless Sensor Networks in a Multi-Channel Context", *Department of Computer science, African University of Science and Technology (AUST) Abuja-Nigeria. 2015-2016.*
- [M.Sc. 8] **Odo Christian Maduabuchi**, "Wireless sensor networks for environmental monitoring applications", *Department of Computer science, African University of Science and Technology (AUST) Abuja-Nigeria. 2015-2016.*
- [M.Sc. 9] **AfolabiBello Oluwayemis**, "Quality of Service and NFC Communications Security of Applications dedicated to Dependent People", *Department of Computer science, African University of Science and Technology (AUST) Abuja-Nigeria. 2015-2016.*
- [M.Sc. 10] **Asulba Barikisu Ahmed**, "Group Mutual Exclusion in Opportunistic network", *Department of Computer science, African University of Science and Technology (AUST) Abuja-Nigeria. 2015-2016.*
- [M.Sc. 11] **Adebajo Fisayomi Yetunde**, "Detection of Denial service Attack in Wireless sensor networks", *Department of Computer science, African University of Science and Technology (AUST) Abuja-Nigeria. With Dr. Dame Diongue. 2013-2014.*
- [M.Sc. 12] **Ousmane Dieng**, "Detection of denial service in Wireless sensor networks", *Department of Computer science, UFR SAT, Gaston Berger University of Saint-Louis. With Dr. Dame Diongue. 2013-2014.*
- [M.Sc. 13] **Cheikh Brahim Ould Mactar Ould Mohamed**, "Development of a WEB application for the rent management of CROUS", *Department of Computer science, UFR SAT, Gaston Berger University of Saint-Louis. 2013-2014.*
- [M.Sc. 14] **Serigne Fall**, "Implementation of family cluster and traceability of actions of project SIGC-NSS (Information System of the National Security Social)", *Department of Computer science, UFR SAT, Gaston Berger University of Saint-Louis. 2013-2014.*
- [M.Sc. 15] **Moustapha Mbengue**, "Establishment of a system of inventory management and asset for the social security fund", *Department of Computer science, UFR SAT, Gaston Berger University of Saint-Louis. 2012-2013.*
- [M.Sc. 16] **Modou Ndiaye**, "Management of the registry office of Patte d'oie municipality", *Department of Computer science, UFR SAT, Gaston Berger University of Saint-Louis. 2012-2013.*
- [M.Sc. 17] **Rougui Ly**, "Analysis and design of software for performance management of human resources", *Department of Computer science, UFR SAT, Gaston Berger University of Saint-Louis. 2012-2013.*
- [M.Sc. 18] **Abdou Kane Diagne and Serigne Fall**, "A Platform processing XML Documents", *Department of Computer science, UFR SAT, Gaston Berger University of Saint-Louis. 2012-2013.*
- [M.Sc. 19] **Illioussou Adamou Abdelmadjid et Khady Seck**, "Implementation of a web platform for the management, monitoring and evaluation funding from FNPJ", *Department of Computer science, UFR SAT, Gaston Berger University of Saint-Louis. 2012-2013.*
- [M.Sc. 20] **Ibou Ndione**, "Analysis and design of software for human resources performance", *Department of Computer science, UFR SAT, Gaston Berger University of Saint-Louis. 2012-2013.*
- [M.Sc. 21] **Babacar Diop**, "Management coverage targets in wireless sensor networks", *Department of Computer science, UFR SAT, Gaston Berger University of Saint-Louis, With Dr. Dame Diongue. 2012-2013.*
- [M.Sc. 22] **Alimatou Dieye**, "Design of a tool for decision support for receipts SENELEC", *Department of Computer science, UFR SAT, Gaston Berger University of Saint-Louis, 2011-2012.*

- [M.Sc. 23] **Mouhamadou Bamba Kane**, "Extension of GPSR routing on wireless sensor networks for surveillance applications", *Department of Computer science, UFR SAT, Gaston Berger University of Saint-Louis. With Dr. EL. S.M. Diop and Prof. Congduc Pham (University of Pau France), 2011-2012.*
- [M.Sc. 24] **Papa Cheikh Cisse**, "Lifetime optimization on wireless sensor networks management", *Department of Computer science, UFR SAT, Gaston Berger University of Saint-Louis, 2010-2011.*
- [M.Sc. 25] **Dame Diongue**, "Management and QoS in mesh networks 802.11s", *Cheikh Anta Diop University of Dakar, 2009-2010.*
- [M.Sc. 26] **Cire Sall Ba**, "Security and data aggregation in wireless sensor networks", *Department of Computer science, UFR SAT, Gaston Berger University of Saint-Louis, 2009-2010.*
- [M.Sc. 27] **Abdou Aziz Ndiaye**, "Preserving energy in wireless sensor networks", *Department of Computer science, UFR SAT, Gaston Berger University of Saint-Louis, 2009-2010.*
- [M.Sc. 28] **Ahmed Wade**, "Sensor-actuator networks: architecture and performance", *Department of Computer science, UFR SAT, Gaston Berger University of Saint-Louis, 2009-2010.*

DOCTORAL STUDIES

Subject: Group mutual exclusion in Distributed systems

Abstract: Group mutual exclusion is an interesting generalization of the mutual exclusion problem. This problem was introduced by Joung, and some algorithms for the problem have been proposed by incorporating mutual exclusion algorithms. Group mutual exclusion occurs naturally in a situation where a resource can be shared by processes of the same group, but not by processes of different groups. It is also called the "congenial talking philosophers problem". An example of application interesting is a CD jukebox (documentation, films...) on Internet : several users wishing to reach same CD will be able to do it at the same time instead of awaiting the end of the request of the other users.

Effective solutions, written in the message passing model and based on the quorums on the one hand and the circulation of token on the other hand are presented in this thesis. We tackle also the problem of the mutual exclusion of group on the ad hoc mobile networks and we have proposed an algorithm which is sensitive to link formation and link breaking and thus which is suitable for ad hoc mobile networks.

Keywords: Mutual exclusion, Group mutual exclusion, Quorum, Ad Hoc Networks.

Defended on June 25th, 2007 to Paris in front of the following committee:

| First and last name | Title | University | Role |
|-------------------------|-----------|---|------------|
| Christian LAVAUT | Professor | University of Paris 13 | Chairman |
| Jean Frederic MYOUP | Professor | University of Amiens Picardie Jules Verne | Referee |
| Abdelmadjid BOUABDALLAH | Professor | U.T.C Compiègne | Referee |
| Mohamed NAIMI | Professor | CY Cergy Paris University | Supervisor |
| Mary TEUW NIANE | Professor | Gaston Berger University of Saint-Louis | Inspector |
| Mourad GUEROUI | Professor | University of Versailles Saint-Quentin | Inspector |
| Laurent AMANTON | Professor | University of Le Havre | Inspector |

Thesis Master II Numerical Analysis

Dissertation Title: Exact Controllability of viscoelastic bodies. UFR SAT Gaston Berger University of Saint-Louis (Senegal), under the supervision of Professor Abdou Sene. 2001.

Thesis Master II Computer Science

Dissertation Title: Association rules. Antenne de Blois University François Rabelais of Tours (France), under the supervision of Professor Arnaud Giacometti. 2002.

Memory Master I Applied Mathematics

Dissertation Title: Grid of polygonal field of \mathbb{R}^2 . Gaston Berger University of Saint-Louis (Senegal), under the supervision of Professor Samuel Ouya. 1998.

TECHNICAL PROGRAM COMMITTEE MEMBERSHIP

The complete list is available in [Technical Program Committee and Reviewer](#)

- 2025 - ... Technical Program Committee (TPC) Member and Reviewer, [IEEE CICN](#)
- 2025 - ... Technical Program Committee Member and Reviewer, [NEPCON](#)
- 2025 - ... Technical Program Committee Member and Reviewer, [TENCON](#)
- 2025 - ... Technical Program Committee Member and Reviewer, [MPCON](#)
- 2025 - ... Technical Program Committee Member and Reviewer, [IEEE AI-SI](#)
- 2025 - ... Technical Program Committee Member and Reviewer, [IEEE MENACOMM](#)
- 2025 - ... Technical Program Committee Member and Reviewer, [CNST](#)
- 2024 - ... Technical Program Committee (TPC) Member and Reviewer, [CSNT](#)
- 2023 - ... Technical Program Committee (TPC) Member and Reviewer, [IJCDs](#), [IEEE CICN](#), [CNST](#)
- 2022 - ... Technical Program Committee (TPC) Member and Reviewer, [ICSECC](#), [ISMODE](#), [IEEE CICN](#), [SAIN](#), [MobiApps](#), [IJAI](#), [IJECE](#)
- 2021 - ... Technical Program Committee (TPC) Member and Reviewer, [CSNT](#), [BEEI](#), [3ICT](#), [IJAI](#), [IJECE](#)
- 2020 - ... TPC Member and Reviewer, [IJAI](#), [IJCDs](#), [BEEI](#), [CSIT](#)
- 2020 - ... TPC Member and Reviewer, [IEEE/PIMRC](#)
- 2019 - ... TPC Member and Reviewer, [MobiApps 2019](#)
- 2015 - ... TPC Member and Reviewer, [DPNoC 2015](#), [ICEPIT](#), [ISWTA](#), [ISIEA](#)
- 2014 - ... TPC Member and Reviewer, [REEGETEC](#), [ICOST](#), [ADVCIT](#), [ISTMER](#), [I4CT](#), [ICOCOE](#)
- 2013 - ... TPC Member and Reviewer, [PDPTA](#), [IADIS/MCCSIS](#)
- 2010 - ... TPC Member and Reviewer, [IEEE ICOS](#), [HPCS](#), [IEEE ICIC](#), [IEEE NISS](#), [IEEE NCM](#), [IEEE IDC](#), [IEEE INC](#), [IEEE ICIS](#)
- 2009 - ... TPC Member and Reviewer, [TNS](#), [IEEE WCNC](#), [IEEE ICADIWT](#)

ELITE PANEL OF INTERNATIONAL JOURNALS EDITORIAL MEMBERSHIP

The complete list is available in [Journals](#)

- 2024 - ... Reviewer, [IoT](#), [MDPI](#)
- 2014 - ... Reviewer, [Sensors](#), [MDPI](#)
- 2015 - ... Reviewer, [Journal of Grid Computing](#)
- 2015 - ... Reviewer, [The Journal of Supercomputing](#)
- 2021 - ... Reviewer, [IEEE Access](#)

- 2021 - ... Associate editor, [International Journal of Intelligent Instrumentation and Computing \(IJIIAC\)](#)
- 2021 - ... Associate editor, [International Journal of Informatics and Communication Technology \(IJ-ICT\)](#)
- 2021 - ... Reviewer, [International Journal of Artificial Intelligence \(IJ-AI\)](#)
- 2021 - ... Reviewer, [IEEE International Conference on Innovation and Intelligence for Informatics, Computing and Technologies \(IEEE/3ICT\)](#)
- 2020 - ... Reviewer, [IEEE Access](#)
- 2013 - ... Editorial Board Member, [International Journal of Internet and Distributed Systems \(IJIDS\)](#)
- 2013 - ... Editorial Board Member, [International Journal of Internet and Distributed Systems \(IJCNCS\)](#)
- 2013 - ... Editorial Board Member, [International Journal of Digital Content Technology and its Applications \(JDCTA\)](#)
- 2015 - ... Editorial Board Member, [International Journal of Research and Reviews in Applied Sciences \(IJRRAS\)](#)
- 2016 - ... Editorial Board Member, [International Journal of Computational Intelligence and Information Security \(IJCHIS\)](#)
- 2015 - ... Editorial Board Member, [Journal of Theoretical and Applied Information Technology \(JATIT\)](#)
- 2014 - ... Editorial Board Member, [International Journal of Reviews In Computing \(IJRIC\)](#)
- 2014 - ... Editorial Board Member, [Advances in Information Sciences and Service Sciences \(AISS\)](#)
- 2013 - ... Editorial Board Member, [Journal of Convergence Information Technology \(JCIT\)](#)
- 2013 - ... Editorial Board Member, [Journal of Next Generation Information Technology \(JNIT\)](#)

TEACHING

Since I have been in the Computer Science department, I have been involved in a lot of teaching. The subjects covered are based on the following topics:

- [Course 1] [Emerging technologies](#), Master II Computer Science, Department of Computer science, Faculty of Applied Science and Technology, Gaston Berger University of Saint-Louis Senegal.
- [Course 2] [Wireless and Distributed Systems](#), Master II Computer Science, African University of Science and Technology, Abuja Campus Nigeria.
- [Course 3] [Distributed Algorithmic](#), Master I Computer Science, Department of Computer science, Faculty of Applied Science and Technology, Gaston Berger University of Saint-Louis Senegal.
- [Course 4] [Concurrent and Parallel Programming](#), Master II Computer Science, Department of Computer science, Faculty of Applied Science and Technology, Gaston Berger University of Saint-Louis Senegal.
- [Course 5] [Distributed Algorithmic](#), Master II Computer Science, Department of Computer science, Faculty of Applied Science and Technology, Gaston Berger University of Saint-Louis Senegal.
- [Course 6] [Graph Theory](#), Master II Computer Science, Department of Computer science, Faculty of Applied Science and Technology, Gaston Berger University of Saint-Louis Senegal.
- [Course 7] [Distributed Systems](#), Master II Computer Science, Department of Computer science, Faculty of Applied Science and Technology, Gaston Berger University of Saint-Louis Senegal.
- [Course 8] [Distributed applications](#), MADS I Computer Science, Department of Computer science, Faculty of Applied Science and Technology, Gaston Berger University of Saint-Louis Senegal.
- [Course 9] [Mathematics for Computer science](#), Bachelor Computer Science, Department of Computer science, Faculty of Applied Science and Technology, Gaston Berger University of Saint-Louis

Senegal.

- [Course 10] **Computing engineering**, Bachelor Computer Science, Department of Computer science, Faculty of Applied Science and Technology, Gaston Berger University of Saint-Louis Senegal.
- [Course 11] **Numerical Methods for PDE**, Master I Applied Mathematics, Department of Computer science, Faculty of Applied Science and Technology, Gaston Berger University of Saint-Louis Senegal.
- [Course 12] **Data Analysis**, Bachelor in Computer Science and MAIF, Department of Computer science, Faculty of Applied Science and Technology, Gaston Berger University of Saint-Louis Senegal.
- [Course 13] **Operational research**, Bachelor in Computer Science and MAIF, Department of Computer science, Faculty of Applied Science and Technology, Gaston Berger University of Saint-Louis Senegal.
- [Course 14] **Algorithmic I**, Associates Degrees (DEUG I) MAI-MPI-MASS, LPGI I, Department of Computer science, Faculty of Applied Science and Technology, Gaston Berger University of Saint-Louis Senegal.
- [Course 15] **Algorithmic II**, Associates Degrees (DEUG II) MAI-MPI-MASS, Department of Computer science, Faculty of Applied Science and Technology, Gaston Berger University of Saint-Louis Senegal.
- [Course 16] **Language C**, Associates Degrees (DEUG II) MAI-MPI-MASS, Department of Computer science, Faculty of Applied Science and Technology, Gaston Berger University of Saint-Louis Senegal.
- [Course 17] **Computer Science**, Master I Economics, University Cheikh Anta Diop of Dakar Senegal
- [Course 18] **Analysis**, Associates Degrees (DEUG I and II) Economics, University Cheikh Anta Diop of Dakar Senegal.

The table below shows all of my teaching activities.

| Course | Public | Type of education |
|-------------------------------------|--------|-------------------------------------|
| Emerging technologies | MSc. | Lecture, Practical works |
| Distributed systems | MSc. | Lecture, Tutorials, Practical work |
| Distributed algorithmic | MSc. | Lecture, Tutorials |
| Concurrent and Parallel Programming | MSc. | Lecture, Tutorials |
| Distributed and Wireless systems | MSc. | Lecture, Tutorials |
| Distributed algorithmic | MSc. | Lecture, Tutorials |
| Graph theory | MSc. | Lecture, Tutorials |
| Distributed applications | MSc. | Lecture, Tutorials, Practical works |
| Data Analysis | BSc. | Lecture, Tutorials, Practical works |
| Mathematics for Computer science | BSc. | Lecture, Tutorials |
| Computing engineering | BSc. | Lecture, Tutorials, Practical works |
| Language C | BSc. | Tutorials, Practical works |
| Algorithmic | BSc. | Lecture, Tutorials, Practical works |
| Algorithmic 2 | BSc. | Tutorials, Practical works |

PROFESSIONAL ACTIVITIES

| | |
|---|--|
| Kick-Off-Meeting of the AGRI-MOCKS project ENTREPRENEURSHIP DEVELOPMENT INSTITUTE (EID) | Addis Ababa - Ethiopia February 28 to May 3 2025 |
| E+ BASIS Workshop on Gender balance, Inclusion and Diversity VRIJE UNIVERSITEIT BRUSSEL (VUB) | Brussels - Belgium 4-7 november 2024 |
| Participant GITEX GLOBAL 2024 DUBAI WORLD TRADE CENTER (DUBAI, UAE) | Dubai - UAE Dubai. 14-18 october 2024 |
| Research Visit UNIVERSITÉ DE VERSAILLES SAINT-QUENTIN EN YVELINES (UVSQ, PARIS) | Paris - France Paris. 22-29 june 2024 |
| VIVATECH 2024 PARC DES EXPOSITIONS, PORTE DE VERSAILLES (PARIS) | Paris - France Paris. 20-25 may 2024 |
| Project evaluation and appraisal mission of "PEA TCHAD" AGENCE NATIONALE DE LA RECHERCHE (FRANCE) | INSTA - Tchad N'Djamena. 17-20 january 2024 |
| Project evaluation and appraisal mission of "PEA IMPACT" AGENCE NATIONALE DE LA RECHERCHE (FRANCE) | Lome Polytechnical School (EPL) Togo Lome. 31 january-03 february 2024 |
| Course: Robotic Process Automation for Leaders SINGAPORE COOPERATION PROGRAMME TRAINING AWARD | Civil Service College - Singapour Singapour. 06-10 november 2023 |
| Participating in HUAWEI CONNECT 2023. HUAWEI | Shanghai - China Shanghai. 20-22 september 2023 |
| Training in setting up collaborative projects for the European Research and Innovation Framework Program for the 2021-2027 programming period Horizon Europe Pillar 2. FRENCH NATIONAL RESEARCH INSTITUTE FOR SUSTAINABLE DEVELOPMENT (IRD) | IRD - France Marseille. 6-7 september 2023 |
| Member of the committee of experts for the institutional accreditation of Amadou Mahtar MBOW University (UAM) NATIONAL QUALITY ASSURANCE AUTHORITY (ANAQ-SUP) | ANAAQ-Sup Senegal. June 2023 |
| Visit to Supercomputing centers CRIANN (ROUEN), ROMEO (REIMS), CINES (MONTPELLIER), GENCI AND IDRIS (PARIS) | CINERI France. December 2022 |
| African Centers of Excellence Workshop (ACE I & ACE IMPACT) DIRECTOR OF ACE-MITIC | World Bank & AAU Abuja (Nigeria). 23-29 February 2020 |
| Invitation Prospective workshop for a partnership with the Mastercard Foundation Scholarship Program VICE-CHANCELLOR OF GASTON BERGER UNIVERSITY OF SAINT-LOUIS | Marriott Kigali Kigali (Rwanda). 25-28 November 2019 |
| Invitation 3rd Network of Universities of NorthWest Africa and Macaronesia (UNWAM) VICE-CHANCELLOR OF GASTON BERGER UNIVERSITY OF SAINT-LOUIS | University of Nouakchott Al-Aasriya Nouakchott (Mauritania). 20-23 November 2019 |

Invitation for the 10th International Circular Economy Week & Conference

VICE-CHANCELLOR OF GASTON BERGER UNIVERSITY OF SAINT-LOUIS

IfaS (Institute für angewandtes Stoffstrommanagement)
Birkenfeld (Allemagne). 20-25
October. 2019

Signing Ceremony: Partnership Agreements between PASET-RSIF African Host Universities and icipe, the RSIF Regional Coordination Unit

VICE-CHANCELLOR OF GASTON BERGER UNIVERSITY OF SAINT-LOUIS

World Bank & AUA

Nairobi (Kenya). 4-10 October
2019

African Centers of Excellence Workshop (ACE I)

VICE-CHANCELLOR OF GASTON BERGER UNIVERSITY OF SAINT-LOUIS

World Bank & AUA

Burkina Faso. 7-9 May 2018

Guest Workshop "Digital Agriculture in Africa"

PROFESSOR AT GASTON BERGER UNIVERSITY OF SAINT-LOUIS

World Bank & AUA

INRIA/CIRAD (Montpellier). 3-4
April 2018

- Title of my presentation: Transforming African Agriculture through IoT and Big Data.

Joint ACE I & ACE II Projects Workshop

VICE-CHANCELLOR OF GASTON BERGER UNIVERSITY OF SAINT-LOUIS

World Bank & AUA

Accra (Ghana). 7-9 November
2017

KIST-PASET Partnership Workshop

PROFESSOR AT GASTON BERGER UNIVERSITY OF SAINT-LOUIS

KIST (Korea Institute of Science and Technology)

Séoul (South Korea). 6-12
September. 2017

International conference on Agrobiosciences and digital technology: the challenges of training

PROFESSOR AT GASTON BERGER UNIVERSITY OF SAINT-LOUIS

Agreenium

AgroParistech - Paris. 30 May
2017

African Centers of Excellence Workshop

DIRECTEUR OF ACE-MITIC

World Bank & AUA

Lagos (Nigeria). 16-18 May 2017

Official review of the first year of the WAZIUP project

PROFESSOR AT GASTON BERGER UNIVERSITY OF SAINT-LOUIS

European Union

Brussels (Belgium). 10-11 April
2017

Visiting researcher

PROFESSOR AT GASTON BERGER UNIVERSITY OF SAINT-LOUIS

LIUPPA Lab

University of Pau (UPPA). 03-09
April 2017

Participation Workshop "Capacity Building on Syllabus Development and Production"

COORDINATOR OF THE FACULTY OF APPLIED FUNDAMENTAL SCIENCES OF USSEIN

USSEIN

Kaolack - Senegal. 13-17 March
2017

Participation in the "Competency-based approach" workshop

COORDINATOR OF THE FACULTY OF APPLIED FUNDAMENTAL SCIENCES OF USSEIN

USSEIN

UCAD - Dakar. 08-12 February
2016

Visiting researcher

PROFESSOR AT GASTON BERGER UNIVERSITY OF SAINT-LOUIS

Dept. of Computer science
Oklahoma University

Oklahoma City (USA). October.
2016

Benchmarking mission in Canada on services dedicated to the national network for education and research in Senegal

DIRECTOR OF THE IT COMPUTING CENTER OUSMANE SECK (CCOS)

PGF-SUP MESRI

UQAM Montreal. 05-15
December. 2014

Evaluating member of the selection committee for projects proposed for financing by FIRST (Impulse Fund for Scientific and Technical Research)

PROFESSOR AT GASTON BERGER UNIVERSITY OF SAINT-LOUIS

MESRI

Senegal. February 2014

Gaston Berger University's representative to the national Committee on Science and Technology Information for Development (CODIST)

PROFESSOR AT GASTON BERGER UNIVERSITY OF SAINT-LOUIS

United Nations Economic Commission for Africa (UNECA)

June 2013

1st African Ministerial Forum on the Integration of ICT in Education and Training

DIRECTOR OF THE IT COMPUTING CENTER OUSMANE SECK (CCOS)

Hotel Ramada Plaza

Tunis. 9-11 December 2013

Panelist at the Workshop Doctoral Education and E-supervision

PROFESSOR AT GASTON BERGER UNIVERSITY OF SAINT-LOUIS

University of Oberta Catalunya

Barcelone - Espagne. 2013

- Present and discuss the importance and pertinence of e-supervision and the academic challenges and opportunities involved;
- Analyse the use of Personal Learning Environments for Doctoral Students (PLEDS) as new models of effective e-supervision;
- Share concrete experiences and practice in the field of e-supervision: how does it work; what are the basic principles that should guide e-supervision; what are the challenges (advantages and opportunities or difficulties);
- Identify the institutional actors to involve (programme designers, professors, students and administrators);
- Debate challenges and possible solutions to develop successful e-supervision.

Workshop Projet HP-UNESCO Brain Gain Initiative

DIRECTOR OF THE IT COMPUTING CENTER OUSMANE SECK (CCOS)

CSIR Meraka Institute

Pretoria - South Africa.

December 2011

- Site Administration and Deployment;
- Basic User Training;
- Grid Portals and Application Gateways;
- Registration Authority assignment;
- Application and cloud computing development.

3rd Euro-Africa Cooperation Forum on ICT Research

PROFESSOR AT GASTON BERGER UNIVERSITY OF SAINT-LOUIS

VTT Finlande

Helsinki - Finlande. 2010

HP-UNESCO Project to contain Brain Gain in Africa

DIRECTOR OF THE IT COMPUTING CENTER OUSMANE SECK (CCOS)

University of Johannesburg

South Africa. December 2009

- Configuring Proliant Server and Array Hardware;
- Installing Operating System and Server Support Hardware;
- Storage Solutions for Proliant Server;
- Troubleshooting Proliant Motherboards;
- Grid Computing.

Postdoc Research 10 month, PRISM Lab.

PROFESSOR AT GASTON BERGER UNIVERSITY OF SAINT-LOUIS

University of Versailles Saint-Quentin en Yvelines

Paris. September 2009 - May 2010

Certificate of the Institute of Mathematical Sciences

ASSISTANT PROFESSOR AT GASTON BERGER UNIVERSITY OF SAINT-LOUIS

University Kuame Nkrumah

Accra - Ghana. 2003

Assistant Professor for tutorials and practical work in computer science

ASSISTANT ENGINEER, DEPARTMENT OF COMPUTER SCIENCE

University François Rabelais

Tours - France. 2001-2002

COMPETENCIES

Languages Python || C/C++ || JAVA || Node.JS || Pascal || Omnet++ || NS2 || L^AT_EX

Networks WAN || IP || VLAN || RCSF

Plateforms Matlab || Maple || Scilab || Castalia

Systems Windows XP/Seven/Server 2008 || Linux (Debian)

Word processing Word || Excel || Open Office

Languages French || English

Centers of interest

- Reading
- Scrabble
- Sciences, technologies and innovations
- Sport