

The **PASET** Regional Scholarship  
and Innovation Fund



**PASET**

Partnership for Skills  
in Applied Sciences,  
Engineering & Technology

*An Africa-led initiative to bridge the skills gap in Applied Sciences, Engineering, & Technology*



**UNIVERSITE  
GASTON BERGER**

*L'excellence au service du développement*

# RSIF Cohort III orientation and training workshop Academic year 2021

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Centre d'Excellence Africain en Mathématiques,  
Informatique et TIC



<https://www.ugb.sn/>

<https://www.ugb.sn/sat>

<https://www.ceamitic.sn>

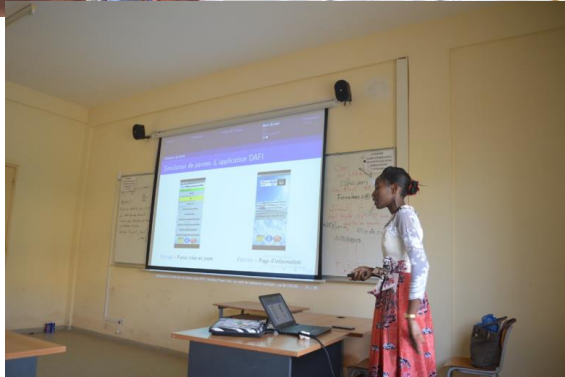
# About Gaston Berger University

- Established since 1990
- ~12000 students
- More than 300 permanent Researchers
- 250ha wide campus



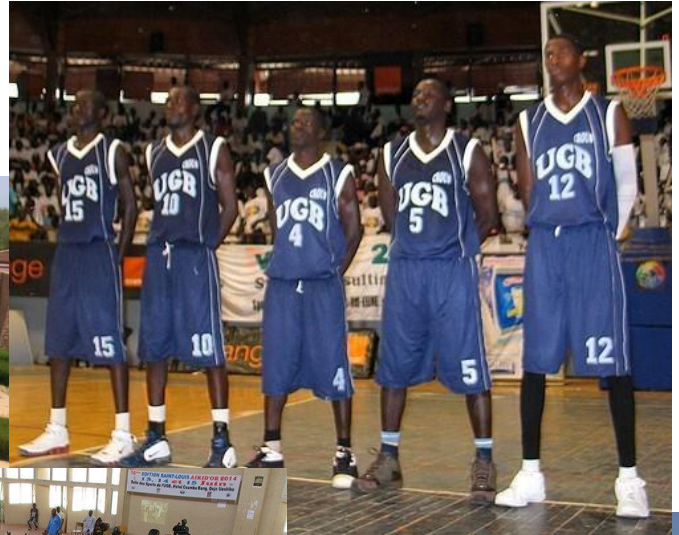
# UGB Facilities : Académic Campus

- Seven 7 training Labs related to ICT and Applied Physics
- Library with 75000 books and online resources
- Incubator for student and research innovation



# UGB Facilities Social Campus

- Campus Hosting 12,000 students
- Sport building and club
- Social activities



# About ACE-MITIC

- World BANK supported project hosted at Gaston Berger University in Saint-Louis, Senegal.
- **Main Objectives :**
  - Contribute to the development of science, technology, engineering sciences and mathematics (STEM),
  - Human capital development through initial training (Master and Doctorate levels) and short term courses
  - Promote research towards the productive sectors in Senegal and Africa (agriculture, environment, health, digital economy).
- **Main training and research topics:**
  - ICT including Big Data and Artificial Intelligence, Cybersecurity and IoT (involved in PASET-RSIF Program)
  - Applied Mathematics (Mathematical modeling, statistics, theoretical mathematics)
  - Applied physics (Electronics, Telecommunicaton, Renewable Energy, Nanotechnologies, Environment and Climate Change)



# PASET-RSIF at MITIC/UGB's

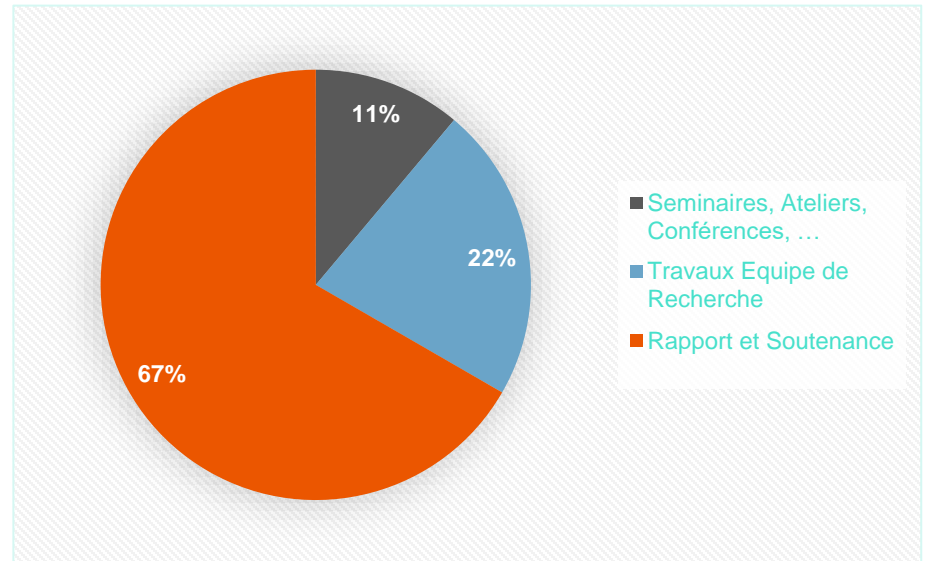
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- Management team
  - National Représentative in PEB (PASET Executive Board) : Pr. Mamadou Sy
  - FP at MITIC/UGB : Pr. Maïssa MBAYE
  - Head of PhD Program : Prof Cheikh BA
  - PHD Supervisors
- Scholars
  - Cohort 1 : 2 students (Ghana, Senegal)
  - Cohort 2 : 7 students (Burkina FASO, Malawi, Benin, Senegal, Uganda)
  - Cohort 3 : 8 students (Benin, Côte d'Ivoire, Kenya, Nigeria, Senegal)



# Computer Science PhD Program (1/3)

- Durations : PhD Program in 3 years (+ one possible extension to 4th Year)
  - [Find all steps of registration here https://www.ugb.sn/recherche/inscription-en-doctorat.html](https://www.ugb.sn/recherche/inscription-en-doctorat.html)
- 180 Credits :
  - 20 crédits : Teachings class, seminars, workshops, conferences and internships;
  - 40 crédits : Research work with supervisor
  - 120 crédits : Thesis report and defense



# Computer Science PhD Program (2/3)

Nature	Unite d'Enseignement	Code UE	Crédits
<b>Transversales</b>	Participations aux doctoriales	DOCT611	2
	Techniques et outils de communication	DOCT612	2
	Ethique, Déontologie et Propriété intellectuelle	DOCT613	2
	Pédagogie Universitaire et Méthodologie de la recherche	DOCT614	2
	Gestion de projet	DOCT615	2
<b>Spécifiques</b>	Logiciels libres et recherche en informatique	INFO616	2
	Innovation et veille technologique	INFO617	2
	Valorisation et transfert de technologies	INFO618	2
	Les données, puissance du futur	INFO619	2
	UE de renforcement/ mise à niveau (à définir chaque année)	INFO620	2
		TOTAL	20





# Computer Science PhD Program (3/3)

## RESEARCH TOPICS AT THE PHD LEVEL

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>• Embedded systems, IoT</li><li>• Data mining, and Big Data</li><li>• Artificial Intelligence / Machine Learning</li><li>• Computer and Telecommunication Networks</li><li>• Cryptography and Cyber Security</li></ul> | <ul style="list-style-type: none"><li>• Software Engineering and Multidimensional Database</li><li>• Image processing</li><li>• Semantic Web and complex systems modelling</li><li>• Distributed systems</li><li>• ICT4Dev (e-Health, eLearning, e-Agriculture,)</li></ul> |
|--|--|

- Application domains
  - Health, Agriculture, Environment, Energy, ...



# Research Labs at MITIC related to ICT

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- LANI (Laboratoire d'Analyse Numérique et d'Informatique) :
  - Numerical Analysis and Computer Science Laboratory
- LEITER (Laboratoire d'Electronique, Informatique, Télécommunications et Energies Renouvelables) :
  - Electronics, Computer Science, Telecommunications and Renewable Energies Laboratory
- l'ACCA (Laboratoire Algèbre, Cryptographie, Codes et Applications).
  - Algebra, Cryptography, Codes and Applications Laboratory



# Academic Staff in computer Science

Qualification	Number of faculty members	Comments
Professeurs titulaires	3	<ul style="list-style-type: none"><li>Equivalent to Full Professor</li><li>Authorized to supervise PhD alone</li></ul>
Professeurs Assimilés	5	<ul style="list-style-type: none"><li>Equivalent to Associate Professor</li><li>Authorized to supervise PhD alone</li></ul>
Maitre de conferences Titulaires et Assimilés	6	<ul style="list-style-type: none"><li>Equivalent to Senior Lecturer</li><li>Authorized to co-supervise PhD with a Professeur Titulaire or Professeur Assimilé</li></ul>
Assistant	2	<ul style="list-style-type: none"><li>Equivalent to Assistant Professors</li><li>Not Authorized to co-supervise</li></ul>

- Plus more that 40 academic partners in Senegal and around the World





Welcome to UGB