

Yris Brice Wandji Piugie, PhD in Computer Science, 28 years old

*Artificial Intelligence & Biometrics
Researcher*

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Professional Experiences

- 2020–2024 **AI & Biometrics Researcher**, FIME SAS, Caen France
 - Biometric System Certification: Presentation Attack Detection (PAD)
 - FIDO, Google & Android Biometric PAD Tester
 - Biometric fingerprint Mastercard - PAD and performance tester
 - Identification & Authentication on Biometrics systems s.a. Facial, Voice/Speech, Fingerprint, Signature, Behavioral
- 2019–2020 **Research Engineer**, University of Caen Normandy, CNRS, CYCERON, France
 - Data Scientist at the CYCERON Support Unit
 - Develops statistical models to predict, score, and classify 3D/4D Images
 - Synthesizes, translates, and restores valuable information for decision-making
- 2018–2019 **Machine Learning Engineer**, National Institute for Research in Digital Science and Technology (INRIA), Rennes, France
 - 3D/4D Images Data analyst
 - Identification of MRI Brain Imaging Biomarkers
- 2016–2016 **Assistant Engineer**, Ministry of Posts and Telecommunications (MINPOSTEL)
 - Maintenance technician
 - Interim agent

Teaching Experiences (+ 300 hours)

- 2024-2024 **Teaching "Advanced Algorithms"**, to Licence 3/Bsc students at Ecole des Experts Métiers de l'Informatique (SUPINFO), Caen, France (+60 hours)
 - List, stack, file, and tree structures. **Implementation in C++**
 - Dynamic programming. **Implementation in Python**
 - Mini-project tutoring in groups of 2 students with an oral defense

- 2024-2024 **Teaching "Business Intelligence Modeling and Data Warehouse"**, at Ecole des Experts Métiers de l'Informatique, Caen, France (+21 hours)
- Supervision of Master 2 Research Projects.
 - Business Intelligence and its main principles.
 - Business intelligence modeling and Power BI
 - Data architecture and common technical building blocks (Datalake, DWH, DTM, etc.).
- 2023-2024 **Teaching "Deep Learning"**, to Master 2 students at Ecole des Experts Métiers de l'Informatique (SUPINFO), Caen, France (+60 hours)
- Supervision of Master 2 Research Projects
 - Recall of ML - Perceptron - General structure of a neural network
 - Training of networks - Convolutional neural networks (CNN), GAN networks
 - Recurrent neural networks (RNN): LSTM, GRU
- 2021-2022 **Internship instructor, Machine Learning**, at FIME SAS, Caen, France
- Work Supervisor of the undergraduate student (B.Sc.) (**3 months**)
- 2020-2023 **External Teacher, Data Mining and Machine Learning**, at École Nationale Supérieure d'Ingénieurs de Caen (ENSICAEN), Caen, France (+60 hours)
- 2021-2024 **Teaching (Online) Data, Data Mining, Machine & Deep Learning**, at National Polytechnic School of Maroua (ENSPM), Maroua, Cameroon
- Supervision of Master 2 Research Projects, (**2022-2023**)
 - Supervision of Master 1 Research Projects, (**2021-2024**)

Related Courses

- Data Mining - Business Intelligence Modeling and Data warehouse - Power BI
- AI - Machine Learning - Deep Learning - GAN networks - Diffusion models

Education

- 2020–2023 **Ph.D./Doctorate in Computer Science**, ENSICAEN, Caen, France
- **CIFRE Ph.D. Thesis:** "*Performance and Security Evaluation of Behavioral Biometric Systems*," under supervision of **Pr. Christophe Rosenberger**, **Dr. HDR Christophe Charrier** and **Ing. Joël Di Manno** defended the **28/11/2023** at the **Groupe de recherche en informatique, image, automatique et instrumentation de Caen (GREYC Laboratory)**
- 2018–2019 **M.Sc. in Electronics, Electrical Energy & Automatic**, ISTIC Electronique & Informatique, University of Rennes 1, Rennes, France
- **M.Sc. Thesis:** "*Identification of MRI Brain Imaging Biomarkers by Machine Learning*"

2017–2018 **M.Sc. in Physics – Electronics & Automatic**, University of Dschang

- **M.Sc. Thesis:** ”*Simultaneous and secure transmission of multi-channel physiological signals by chaotic DS-CDMA multiplexing*”

IT Skills

- **Programming**

- Python – Orange3 (8 years of experience)
- C/C++ - Pascal (2 years of experience)
- Java – HTML – CSS – JavaScript (Academic notions)

- **Dev - Simulation tools**

- MatLab – R studio (8 years of experience)
- SAS – MedInria – Image J – SPM – Blender (3 years of experience)
- VHDL – Proteus – Pspice – Uipath (2 years of experience)

- **Framework/Library**

- Tensorflow – Keras – PyTorch – Scikitlearn – NumPy - OCR– OpenCV
- Pandas – VGG19 – GoogleNet – ResNet – DenseNet (3 years of experience)
- ITK – ITK Snap – VTK (Notions)

- **IDE**

- Anaconda – PyCharm – Spyder – Glueviz – Jupyter Notebook VScode – Sublime tex 3 – Node.js

- **IT and Office Automation**

- AWS - Hadoop, Spark, VB, SQL, NoSQL, MongoDB (Academic notions)
- Good Control of the Microsoft Office Pack & Latex (Overleaf - Beamer)
- Relative mastery of computer graphics tools: Photoshop & the Adobe Pack

Honors & Awards

2022 **Best paper award**, #CyberWorlds conference in Kanazawa, Japan

- ”*Keystroke Dynamics based User Authentication using Deep Learning Neural Networks*”

Publications

- **Yris Brice Wandji Piugie**, Christophe Charrier, Joël Di Manno, Christophe Rosenberger, ”Deep Features Fusion for User Authentication Based on Human Activity,” in *IET Biometrics Journal*, vol. 12, no. 4, pp. 222-234, July 2023. (**ranked Q2**)

- **Yris Brice Wandji Piugie**, Joël Di Manno, Christophe Rosenberger, Christophe Charrier, ”Keystroke Dynamics based User Authentication using Deep Learning Neural Networks,” *International Conference on Cyberworlds (CW)*, Kanazawa, Japan, 2022, p. 220-227. (**ranked CORE B**)

- **Yris Brice Wandji Piugie**, Joël Di Manno, Christophe Rosenberger, Christophe Charrier, "How Artificial Intelligence can be used for Behavioral Identification?" *International Conference on Cyberworlds (CW). IEEE*, Caen, France, 2021, pp. 246-253.(ranked **CORE B**)
- Cyrius Nugier, Diane Leblanc-Albarel, Agathe Blaise, Simon Masson, Paul Huynh and **Yris Brice Wandji Piugie**, " An Upcycling Tokenization Method for Credit Card Numbers," *SECRYPT 2021-18th International Conference on Security and Cryptography*, Paris, France, 2021, pp. 1-12.(ranked **CORE B**)
- **Yris Brice Wandji Piugie**, Daniel Tchiotsop, Adelaide Nicole Kengnou Telem, Elie Bertrand Megam Ngouonkadi, "Denoising of electroencephalographic signals by canonical correlation analysis and by second-order blind source separation," *IEEE AFRICON*, IEEE, 2019, pp. 1-8.

Activities

- 2023 **EAB & CITeR Biometrics Workshop** , Martigny, Switzerland, April 18 - 19, 2023
- 2022 **2nd INRIA-DFKI European Summer School on Artificial Intelligence**, Saarbrücken, Germany, August 29 - September 2, 2022
- 2022 **19th Int. Summer School for Advanced Studies on Biometrics for Secure Authentication: CONTINUALLY LEARNING BIOMETRICS**, Alghero, Italy – June 6-10, 2022
- 2021 **18th Int. Summer School for Advanced Studies on Biometrics for Secure Authentication: BIOMETRICS FOR AI/AI FOR BIOMETRICS**, Alghero, Italy – May 30 to June 4, 2021
- 2020 **GDR Computer Security, REDOCS 2020 CIRM**, Luminy, France

Scientific Mediation

- 2023 **Festival de l'Excellence Normande (FENO)**, Rouen
 - **Animating the Biometrics Stand:**
 - "Fingerprints
 - Facial recognition
 - Keystroke dynamics

Reviewer

- **IEEE International Conference on Cyberworlds 2023 (CW2023)**

Languages

- **English:** Professional level
- **French:** Mother language
- **German:** Academic notions

Interests

Music : Tenorite (3 years) at the choir the "Messengers"

IT : Video gamer; Stenotype writer

Reading : Journals; dramatic romans; novels

Sport : Chess player (7 years); football team captain; passionate of basketball (3 years)

Travel : Switzerland, Germany, Japan, Italy, Tunisia, Nigeria, Cameroon

References

- **Christophe Rosenberger, Professor in Cybersecurity,**
Normandie Univ, UNICAEN, ENSICAEN, CNRS, GREYC, Caen, France
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- **Loïck Lhote, Professor in Computer Science,**
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- **Laurent Godefroy, Full Professor in Mathematics**
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