

Pascal D. Bassène, Ph.D.

Physicist | Biomedical Imaging | Nonlinear Optics
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ACADEMIC POSITIONS

Research Associate & Laboratory Manager — Rensselaer Polytechnic Institute	2022 – Present
<i>Department of Physics, Applied Physics and Astronomy — Nano-Characterization Core (NCC) facility</i>	
Postdoctoral Research Associate — Rensselaer Polytechnic Institute	2020 – 2022
<i>Department of Physics, Applied Physics and Astronomy</i>	
Research Engineer — Sorbonne University (Paris, France)	2016 – 2019
<i>Nanostructure and Optics, Paris Institute of NanoSciences (INSP)</i>	
Internship — Paris Diderot University (Paris 7) (Paris, France)	2011 – 2014
<i>Magneto-elastic instability of Nickel nanowire, Matter and Complex System Laboratory (MSC)</i>	

EDUCATION

Ph.D. student — Cheikh Anta Diop University of Dakar	2016 – 2019
<i>Optics, photonics, quantum emitter in near infrared</i>	
Electronics, Telecommunications, and Metrology	2015 – 2016
<i>National Conservatory of Arts and professionn (CNAM), Paris, France</i>	
Master II — Sorbonne University, Paris, France	2011 – 2013
<i>Science of Materials and Nano-Objects (SMNO)</i>	
Master I — Sorbonne University, Paris, France	
<i>Physics and Applications, <u>option</u>: fundamental physics</i>	
Bachelor and Master I — Cheikh Anta Diop University of Dakar	2007 – 2010
<i>Mathematics, Physics, and Chemistry</i>	

TEACHING EXPERIENCE AND COURSES

Adjunct-Lecturer – Rensselaer Polytechnic Institute	2022 – 2023
<i>Classical Mechanics (PHYS 1100)</i>	
Adjunct-Lecturer – University Cheikh Anta Diop of Dakar (Senegal)	2016 – 2019
<i>Classical Mechanics (PHYS 1100), Introduction to Electromagnetic (PHYS 1250), Quantum Mechanics</i>	

TRAINING AND MENTORING EXPERIENCE

Trained and supported 20+ graduate students	2023 – Present
Mentored and trained 9+ Ph.D. students	2020 – Present
Trained and supervised 13+ undergraduate students	2020 – Present
• I trained and mentored Ph.D. students in projects including nonlinearities using structured light, retrieving hidden signal with wavefront shaping, wavefront shaping as a fundamental block for photonics interaction, engineering structured light across linear, nonlinear, and quantum regimes, etc. More work on ferroelectric and semiconductor 2D materials and new methods for engineered chiral material macharacterization. • Supported and trained 20+ graduate students and projects on characterization using Confocal Raman, AFM, Nanoindenter, Fourier transform infrared . . .	