

# BAPTISTE AUGUIÉ

PhD in physics  
French, NZ permanent resident  
Born in 1982

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*I have followed an original path, with work experiences in France, Canada, UK, Spain, NZ, Argentina.  
Beside Physics, I am passionate about education and data visualisation.*

## WORK EXPERIENCE

2017	<b>SENIOR LECTURER</b>	TE HERENGA WAKA — VICTORIA UNIVERSITY
	Group leader; research, teaching, mentoring, and administrative responsibilities Associate Investigator with the MacDiarmid Institute and the Dodd-Walls Centre Rutherford Discovery Fellowship (2017–2022, \$800,000) Marsden grant (P.I. 2023–2026, \$940,000), Endeavour <i>Smart Ideas</i> (A.I. 2017–2020, \$1,000,000)	
2016 (4 mo.)	<b>RESEARCHER</b>	ENGENDER TECHNOLOGIES, AUCKLAND
	Optical design & experiments, electromagnetic modelling, reporting Contributed to the Photon Factory's research and teaching environment	
2015–2016	<b>RESEARCH AND TEACHING FELLOW</b>	VICTORIA UNIVERSITY OF WELLINGTON
	Lectured for the 3rd year physics curriculum (30 students, 1.5 trimesters) Contributed to a study of absorption in turbid media published in <i>Nature Photonics</i> Co-wrote open-source programs and user guides for electromagnetic simulations	
2013–2015	<b>RESEARCH FELLOW</b>	CENTRO ATÓMICO BARILOCHE, ARGENTINA
	Proposed and demonstrated a novel optical sensor, initiating a new collaboration	
2011–2013	<b>POST-DOCTORAL FELLOW</b>	VICTORIA UNIVERSITY OF WELLINGTON
	Developed a new technique enabling Raman spectroscopy of highly fluorescent dyes Combined SPR and SERS spectroscopy with an original microscopy setup	
2010–2011	<b>POST-DOCTORAL FELLOW</b>	UNIVERSITY OF VIGO, SPAIN
	Conducted pioneering research in chiral plasmonics	
2009, 2010	<b>INVITED VISITING RESEARCH FELLOW</b>	CSIC, MADRID, SPAIN
	Elucidated incompatible results on supported arrays of metal nanoparticles	
2005–2009	<b>PHD IN PHYSICS</b>	EXETER UNIVERSITY, UK
	Thesis: <i>Optical properties of gold nanostructures</i> (Advisor: Prof William L. Barnes) First publication in the prestigious journal <i>Physical Review Letters</i>	

## CORE COMPETENCIES

Physics	<b>EXPERT IN NANO-TECHNOLOGY, ELECTROMAGNETISM AND SPECTROSCOPY</b> > 50 peer-reviewed publications, > 7000 citations • <i>H-index</i> : 25 (google scholar) <i>Research design</i> as well as <i>fabrication, characterisation, analysis, modelling</i> <i>Theory</i> : light scattering, electromagnetism, nano-technology
Programming	<b>BROAD EXPERIENCE WITH DATA ANALYSIS, NUMERICAL MODELLING &amp; SIMULATIONS</b> Data analysis and simulations, mostly using R, Julia, Matlab; some C++, Fortran Active github profile since 2008. Over 70 git repositories, including > 15 R packages R user since 2007; contributions acknowledged in numerous books and over 30 publications (notably for: grid, knitr, ggplot2, Rcpp) Expert advice and help via mailing lists, > 1000 answers read by 5M users, 72k reputation on Stack Overflow: <a href="https://stackoverflow.com/users/471093/baptiste">stackoverflow.com/users/471093/baptiste</a>

## ////////// NOTABLE SKILLS

Writing	<b>ACCOMPLISHED SCIENCE COMMUNICATOR</b> Competitive grant applications, cover letters, high-impact scientific articles Dynamic report generation, using modern literate programming tools (quarto, pandoc, L <sup>A</sup> T <sub>E</sub> X, R) for a more reproducible and efficient data analysis workflow
Presentation	<b>EXPERT IN SCIENTIFIC GRAPHICS, GREAT ATTENTION TO DETAIL</b> My co-authors have trusted me with the figures for over 20 articles Invited speaker at two <i>Emerging Scientist</i> MacDiarmid Institute workshops on graphics R software contributions used worldwide (e.g. gridExtra since 2010, 400k downloads/mo.) Long-time user of design tools such as Adobe Illustrator, Indesign, Lightroom For specific visuals I also use 3D ray-tracing, and custom-made R graphics
Speaking	<b>EXPERIENCED SPEAKER IN DIVERSE SETTINGS</b> Fluent in French (native speaker) and English (4 years in England, 9 in New Zealand), and proficient in Spanish (1 year in Spain, 2 in Argentina) Over 25 talks at international conferences and meetings (audiences of 10–100) Invited speaker at a 3-day workshop, and 5 other seminars (30–50 students and researchers)
Leadership	<b>VALUED AND ADAPTABLE TEAM WORKER</b> Sat on a recruitment panel; made key contributions to a revamp of the Physics curriculum Team leader, with a network of national and international collaborators Lecturing, supervision of student projects, interns, and visitors Organiser and host of ~45 monthly Physics seminars for the School Co-supervised ~12 PhD students, 5 research assistants or postdocs Organised and chaired several conferences and hui for the MacDiarmid Institute

## ////////// EDUCATION

2004–2005	<b>MASTERS IN PHYSICS</b> Year abroad at École Polytechnique, Montréal Thesis: <i>Ultralow chromatic dispersion measurement in optical fibres</i>	MONTRÉAL, CANADA   RENNES, FRANCE
2000–2005	<b>ENGINEERING DEGREE IN PHYSICS</b> Core topics: physics, technology, materials science Specialised in modern optics and nano-technology	NATIONAL INSTITUTE OF APPLIED SCIENCES, RENNES, FRANCE
2000	<b>BACCALAURÉAT SCIENTIFIQUE</b> Highest honours ( <i>mention très bien</i> )	FRANCE

## ////////// PERSONAL INTERESTS



I am passionately curious about the world's diversity, and keen to connect with other cultures. I enjoy travelling, foreign literature (Murakami, Cortázar, Salter, Kundera) and cinema (Miyazaki, Iñárritu, Kusturica)



My professional interest in graphics and presentation sometimes overlaps with personal hobbies, notably typography, calligraphy and photography (digital and film). I designed my personal website at [photo.bapt.xyz](http://photo.bapt.xyz)



During most holidays you will find me hiking, taking photos and exploring new areas. The rest of the year I enjoy regular yoga, swimming and running — I finished Wellington's "Round the bays" half-marathon in 1h52 (2013), and 1h40 (2018).

