

CV – Mathilde (born HUGBART) FOUCHE

Identité / Personal details					
Nom et prénom / Name and first name:		HUGBART (FOUCHE) Mathilde			
Identifiant chercheur / Researcher ID :		S-1745-2016			
Page web personnelle / Personal Webpage :					
Position actuelle / Current position					
Organisme(s) public(s) français / French public organisation(s)					
Code RNSR / RNSR code	Organisme / Organisation	Laboratoire / Laboratory	Code unite / Unit code	Code postal / Postcode	Ville / Town
201722398B	CNRS – Délégation Côte d’Azur	Institut de Physique de Nice	UMR 7010	06560	Valbonne
Titre / Function					
CNRS associate researcher					
Autres activités / Other activities					
<i>Activités de direction, encadrement, enseignement, activité d’évaluation dans des commissions ou en tant qu’expert scientifique / Executive board, supervision of student, teaching, memberships in panels or individual scientific reviewing activities</i>					
<ul style="list-style-type: none"> - 2020-...: Proposition for a new GdR “Gaz quantiques” from in the continuity of the previous “GdR atomes froids”. Member of the management team. - 2021: Co-organizer of the COSCALI workshop in Porquerolles (France). - 2018 – 2019: Co-organizer of the Predoc school in Les Houches (France) on cold atoms. - 2018: Vice-president of the committee “Technologie quantique” at ANR. - 2017 - ...: in charge of the initiative “visite un labo” of the GdR “Atomes froids”. - Member of several selection committees for “recrutement au poste de maître de conference” - 2012 – 2015: Teaching at INSA of Toulouse (France) - 2012: Co-organizer of the international school “QED and quantum vacuum, Low energy frontier” in Cargèse (France). 					
Positions antérieures / Previous positions					
Début / Start date	Fin / End date	Ville / Town	Etablissement / Organisation		Fonction / Function
2002	2005	Orsay (France)	Institut d’Optique		PHD Student
2005	2006	Paris (France)	SYRTE – Observatoire de Paris		Post-Doc
2006	2015	Toulouse (France)	LCAR and LNCMI		CNRS associate researcher
Formation supérieure / Education					
2016: Habilitation in Physics, Université de Nice Sophia Antipolis. Title: « Propagation de la lumière sous champ magnétique »					
2005: PhD in Physics, Université Paris Sud. Supervisor : Alain Aspect, Title: « Etude des propriétés de cohérence d’un condensat de Bose-Einstein à l’équilibre et hors équilibre »					
2002 : Master degree and Engineering degree, Institut d’Optique – Graduate School (Orsay, France)					
Productions scientifiques / Scientific productions					
Projets de recherche, prix, distinctions, bourses, etc. / Grants, prizes, awards, fellowships, etc.					
2021-2022 : Regional Program STIC-AmSud, “Atoms, photons and their interactions”, Mobility Brazil-France-Uruguay (Scientific coordinator for France).					
2020-2023: Coordinator of the international (France – Brazil) ANR grant “Cold atoms, photons and quantum correlations”					
2014: Member of the ANR project “Vacuum magnetic birefringence”, in charge of the optical setup					

2012: Accepted at "Incubateur Midi-Pyrénées" as a leader to create a start-up linked to the patent number FR20100057007 20100903

2011: Member of the project "Freelight" awarded by the OSEO prize for innovation technology

5 publications majeures / 5 most relevant publications

- 1 L. Ortiz-Gutiérrez, R. Celistrino Teixeira, A. Eloy, D. Ferreira, R. Kaiser, R. Bachelard and M. Fouché, "Mollow triplet in cold atoms", [New J. Phys. **21**, 093019 \(2019\)](#).
- 2 A. Cadène, P. Berceau, M. Fouché, R. Battesti and C. Rizzo, "Vacuum magnetic linear birefringence using pulsed fields: status of the BMV experiment", [Eur. Phys. J. D **68**, 16 \(2014\)](#).
- 3 C. Robilliard, R. Battesti, M. Fouché, J. Mauchain, A.-M. Sautivet, F. Amiranoff, and C. Rizzo, "No "Light Shining through a Wall": Results from a Photoregeneration Experiment", [Phys. Rev. Lett. **99**, 190403 \(2007\)](#).
- 4 R. Le Targat, X. Baillard, M. Fouché, A. Bruschi, O. Tcherbakoff, G. D. Rovera, and P. Lemonde, "Accurate Optical Lattice Clock with ^{87}Sr Atoms", [Phys. Rev. Lett. **97**, 130801 \(2006\)](#).
- 5 S. Richard, F. Gerbier, J. H. Thywissen, M. Hugbart, P. Bouyer, and A. Aspect, "Momentum Spectroscopy of 1D Phase Fluctuations in Bose-Einstein Condensates", [Phys. Rev. Lett. **91**, 010405 \(2003\)](#).

Publications des 3 dernières années / Publications in the past 3 years

- [1] A. Siciak, M. Hugbart, W. Guerin, R. Kaiser and L. A. Orozco, "A comparison of $g(1)(t)$, $g(3=2)(t)$, and $g(2)(t)$ for radiation from harmonic oscillators in Brownian motion with a coherent background", [Phys. Scr. **95**, 104001 \(2020\)](#).
- [2] D. Ferreira, R. Bachelard, W. Guerin, R. Kaiser and M. Fouché, "Connecting field and intensity correlations: The Siegert relation and how to test it", [Am. J. Phys. **88**, 831 \(2020\)](#).
- [3] J.-P. Rivet, A. Siciak, E. S. G. de Almeida, F. Vakili, A. Domiciano de Souza, M. Fouché, O. Lai, D. Vernet, R. Kaiser and W. Guerin, "Intensity interferometry of P Cygni in the Ha emission line: towards distance calibration of LBV supergiant stars", [Mon. Not. Roy. Astron. Soc. **494**, 218 \(2020\)](#).
- [4] L. Ortiz-Gutiérrez, R. Celistrino Teixeira, A. Eloy, D. Ferreira da Silva, R. Kaiser, R. Bachelard, M. Fouché, "Mollow triplet in cold atoms", [New J. Phys. **21**, 093019 \(2019\)](#).
- [5] W. Guerin, J.-P. Rivet, M. Fouché, G. Labeyrie, D. Vernet, F. Vakili and R. Kaiser, "Spatial intensity interferometry on three bright stars", [MNRAS **480**, 245 \(2018\)](#).
- [6] J.-P. Rivet, F. Vakili, O. Lai, D. Vernet, M. Fouché, W. Guerin, G. Labeyrie and R. Kaiser, "Optical long baseline intensity interferometry: prospects for stellar physics", [Exp. Astron. **46**, 531 \(2018\)](#).
- [7] A. Eloy, Z. Yao, R. Bachelard, W. Guerin, M. Fouché and R. Kaiser, "Diffusing-wave spectroscopy of cold atoms in ballistic motion", [Phys. Rev. A **97**, 013810 \(2018\)](#).

Valorisation

brevet, licence, création d'entreprise, développement de logiciel, base de données, prototype, etc. / patent, creation of a start-up, software development, database, prototype, etc.

G. Rikken, R. Battesti, A. Ben-Amar Baranga, M. Fouché, and C. Rizzo, "Dispositif et procédé pour caractériser un faisceau pulsé", Number: FR20100057007 20100903, Date: 03-09-2010