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Date of Birth: 07.02.1979
Nationality: French
2 Children

RESEARCH

CNRS Researcher	02/2017- now	Researcher of CNRS at Néel Institute, Grenoble, France
CNRS Researcher	11/2008-01/2017	Researcher of CNRS at Laboratory Matériaux et Phénomènes Quantiques, Université Paris 7, France
Postdoctoral Fellow	05-10/2008	School of Physics and Astronomy, St-Andrews University, Scotland. With Pr. Mackenzie&Pr. Huxley
Postdoctoral Fellow	2006-2008	Osaka University, Graduate School of Science, Japan. Laboratory of Pr. Onuki
PhD	2002-2005	Université Joseph Fourier – CEA-Grenoble/SPSMS with Daniel Braithwaite.

EDUCATION/DIPLOMAS

PhD	2002-2005	Topic: Superconductivity and Correlations in the filled skutterudites PrOs ₄ Sb ₁₂
Postgrad. Diploma	2002	Graduated in Condensed Matter with Distinction; University Joseph Fourier (Grenoble)
Studies	1999-2002	Engineering degree at ENSPG (Phelma, Grenoble)
Preparatory school	1997-1999	Selective preparatory studies to engineering schools, Lycée Saint-Louis (Paris). DEUG MIAS in parallel

SCIENTIFIC AWARDS

CNRS award	2015-2019	Scientific Excellence Award from CNRS
CNRS cadre	2013	Prestigious selection into a small group (25 per year) of young cadre of the CNRS across all disciplines to be prepared for positions with management responsibilities

SCIENTIFIC AND EDUCATIONAL SCHOLARSHIPS

SUPA fellowship	2008	The Scottish Universities Physics Alliance (SUPA) financed my post-doc.
JSPS Fellowship	2006-2008	The JSPS (Japanese government) financed my post-doc, selected by the CNRS
Scholarship by CEA	2002-2005	The CEA financed my PhD thesis

SCIENCE OUTREACH

2021: Interview as expert Radio France Culture/La Méthode scientifique

2019 : Lab Open days, Scientific festival

2018 : Scientific festival (in-lab experiments)

2017: Public open house for high school students (100 students). TIPE and TPE. Exhibition at Cité des Sciences, Univers Science, Paris on the [Cold](#).

2016: Organization committee of the Olympiades de Physique. Lecture with experiments in a network of libraries

2015: PEPS Egalité-CNRS grant (3 k€) to promote the position of women in science thanks to presentations in high schools.

TV Arte (Magazine Futur Mag).

Public open house 50 high school students (C'nano days/Ptits Déb^{ards}).

2013-2015: Responsible of a formation to the quantum mechanic for high school teachers (2 days per year)

2013: [TV](#) shooting organization (USA) in the lab. Deux articles on the Higgs boson in superconductors ([Nature Journal](#), Pour la Science, New Scientific magazine).

2012: Nomination for the “goût des sciences » prize of the French Minister of research and education (3 nominations per year). Talk at the JEPHY/CNRS on the science for large audience. Presentation at the Musée de la Gaité Lyrique (presentation of the Magsurf), « [Tout est Quantique](#) » days at the musée des arts et métiers. Shootings spanish TV [El Hormiguero](#), shootings TV France 3 « [Incroyables Expériences](#) ». Responsible of the fête de la science stand on superconductivity.

2011: Responsible Paris-centre for the superconductivity year.

Design and building of a superconducting hoverboard (**MagSurf**): patent

Organization of a thematic week ‘Supra’ with the [Paris-Montagne](#) association, Org. of the [journée Supra](#) at the musée des arts et métiers, [Bar des Sciences](#), [Palais de la découverte](#) (Magsurf). Org. Fête de la science (inauguration of the Magsurf). Shootings TV France 5 « [On n’est pas que des cobayes](#) », public open house « 40 ans de l’université », talk with experiments at exposition « Entrée en Matière » and at la Cité des Sciences, participation to the movie « [100% conducteurs: supraconducteurs](#) » and to the web site « [supraconductivité.fr](#) ». Interviews and communications with journalists (France Inter ([Les Savanturiers](#)), TF1 (television news), Sciences et Vie découverte, Le petit quotidien, SkateMag ...)

2011-2015 : participation to the public open house of the university . Formation of the Phd students with teaching hours devoted to science for large audience (3 students). Set up of a “science for large audience” suitcase ‘Superconductivity’. TIPE et TPE (2-4 per years).

2007 : Talk with experiment in a japanese high school

CAREER BREAKS

1st Maternity leave: May – September 2013

2nd Maternity leave: March –September 2016

RESEARCH INTERESTS

Themes: Competing orders, Unconventional Superconductivity and strongly correlated systems in solids, relationship between structure and electronic orders, Collective mode in Superconductors and other electronic orders, Exotic electronic orders (hidden order, multiorbital orders), Topological Insulators.

Systems: Strongly correlated systems: Rare earth based compounds, skutterudites, superconducting and charge density wave dichalcogenides, Fe-based superconductors, cuprates, multiferroic compounds ...

Techniques

- Techniques of low temperature and high pressure
- Raman Spectroscopy under extreme conditions (low T, high P, high H)
- Macroscopic measurement of specific heat, resistivity, including under high pressure

PUBLICATIONS

PEER-REVIEWED ARTICLES

02/08/ 2021 (Web of Science)

Results found:

71 publications

Sum of Times Cited without self-citations : **2 011 (average per item 29.86)**

h-index :

26

Full list : ResearcherID: [here](#)

[OrcidID](#), [HalID](#), [GoogleScholar](#), [Researchgate](#)

PEER-REVIEWED ARTICLES: FULL LIST

[1 [Superconducting phase diagram of the filled skutterudite PrOs₄Sb₁₂](#),

Physical Review B 70 64516 (2004).

M.-A. Measson, D. Braithwaite, J. Flouquet, G. Seyfarth, J.-P. Brison, E. Lhotel, C. Paulsen, H. Sugawara, H. Sato

[2 [Flux-line lattice distortion in PrOs₄Sb₁₂](#),

Physical Review Letters 93 187005 (2004).

A.D. Huxley, M.-A. Méasson, K. Izawa, C.D. Dewhurst, R. Cubitt, B. Grenier, H. Sugawara, J. Flouquet, Y. Matsuda, H. Sato

[3 [High-pressure phase diagrams of CeRhIn₅ and CeCoIn₅ studied by ac calorimetry](#),

Journal of Physics: Condensed Matter. 16, 8905 (2004).

G. Knebel, M.-A. Méasson, B. Salce, D. Aoki, D. Braithwaite, J.-P. Brison, J. Flouquet

[4 [Multiband superconductivity in the heavy fermion compound PrOs₄Sb₁₂](#),

Physical Review Letters, 95, 107004 (2005).

G. Seyfarth, J.-P. Brison, M.-A. Méasson, J. Flouquet, K. Izawa, Y. Matsuda, H. Sugawara, H. Sato

- [5] [Direct Observation of Quadrupolar Excitons in the Heavy-Fermion Superconductor PrOs₄Sb₁₂](#)
Physical Review Letters, 95, 107003 (2005).
K. Kuwahara, K. Iwasa, M. Kohgi, K. Kaneko, N. Metoki, S. Raymond, M.-A. Méasson, J. Flouquet, H. Sugawara, Y. Aoki, H. Sato
- [6] [Valence and magnetic ordering in intermediate valence compounds: TmSe versus SmB₆](#)
Journal of Physics : Condensed Matter, 18, 6, 2089-2106 (2006).
J. Derr, G. Knebel, G. Lapertot, B. Salce, M.-A. Méasson, J. Flouquet
- [7] [Superconducting PrOs₄Sb₁₂: a thermal conductivity study](#)
Physical Review Letters. 97, 236403 (2006).
G. Seyfarth, J.P. Brison, M.-A. Méasson, D. Braithwaite, G. Lapertot, J. Flouquet
- [8] [Nernst effect in semi-metals: the Effective Mass and the Figure of Merit](#)
Physical Review Letters 98, 076603 (2007).
Kamran Behnia, Marie-Aude Measson, Yakov Kopelevich
- [9] [Oscillating Nernst-Ettingshausen Effect in Bismuth across the Quantum Limit](#)
Physical Review Letters 98, 166602 (2007).
Kamran Behnia, Marie-Aude Measson, Yakov Kopelevich
- [10] [Double superconducting transition of the filled skutterudite PrOs₄Sb₁₂ and sample characterizations](#)
Physical Review B 77, 134517 (2008).
M.-A. Méasson, D. Braithwaite, G. Lapertot, J.-P. Brison, J. Flouquet, P. Bordet, H. Sugawara, P. C. Canfield,
- [11] [Pressure-induced Superconductivity in Antiferromagnet CePd₅Al₂](#)
Journal of the Physical Society of Japan 77, 143701 (2008).
F. Honda, M.-A. Measson, Y. Nakano, N. Yoshitani, E. Yamamoto, Y. Haga, T. Takeuchi, H. Yamagami, K. Shimizu, R. Settai, and Y. Onuki
- [12] [Magnetic and Superconducting Properties of CeTX₃ \(T: Transition Metal and X: Si and Ge\) With Non-centrosymmetric Crystal Structure.](#)
Journal of Physical Society of Japan 77, issue 6, 064716 (2008).
Tomoya Kawai, Hiroshi Muranaka, **Marie-Aude Measson**, Tetsuya Shimoda, Yusuke Doi, Tatsuma D. Matsuda, Yoshinori Haga, Georg Knebel, Gérard Lapertot, Dai Aoki, Jacques Flouquet, Tetsuya Takeuchi, Rikio Settai, and Yoshichika Ōnuki
- [13] [Magnetic Properties of RCoGe₃ \(R: Ce, Pr, and Nd\) and Strong Anisotropy of the Upper Critical Field in Non-centrosymmetric Compound CeCoGe₃](#)
Journal of Physical Society of Japan 78, issue 12, 124713 (2009).
Marie-aude Méasson, Hiroshi Muranaka, Tomoya Kawai, Yuuki Ota, Kiyohiro Sugiyama, Masayuki Hagiwara, Koichi Kindo, Tetsuya Takeuchi, Katsuya Shimizu, Fuminori Honda, Rikio Settai, and Yoshichika Onuki
- [14] [Doping dependence of the lattice dynamics in Ba\(Fe_{1-x}Cox\)\(₂\)As-₂ studied by Raman spectroscopy](#)
Physical Review B 80, 094504 (2009).
L. Chauviere, Y. Gallais, M. Cazayous, A. Sacuto, M. A. Méasson, D. Colson et A. Forget
- [15] [Quantitative Raman measurement of the evolution of the Cooper-pair density with doping in Bi₂Sr₂CaCu₂O₈+delta superconductors](#)
Physical Review B 80, 140502 (2009).
Blanc S, Gallais Y, Sacuto A, Cazayous M, Measson MA, Gu GD, Wen JS, Xu ZJ,
- [16] [Loss of antinodal coherence with a single d-wave superconducting gap leads to two energy scales for underdoped cuprate superconductors.](#)
Phys. Rev. B **82**, 144516 (2010).
S. Blanc, Y. Gallais, M. Cazayous, M. A. Méasson, A. Sacuto, A. Georges, J. S. Wen, Z. J. Xu, G. D. Gu, and D. Colson

- [17] [Magnetoelectric excitations in multiferroic TbMnO₃ by Raman scattering](#)
Phys. Rev. B **81**, 054428 (2010).
P. Rovillain, M. Cazayous, Y. Gallais, A. Sacuto, M-A. Measson, and H. Sakata
- [18] [Electric-field control of spin waves at room temperature in multiferroic BiFeO₃](#)
Nature Materials **9**, 975 (2010)
P. Rovillain, M. Cazayous, R. de Sousa, Y. Gallais, A. Sacuto, M-A. Measson, D. Colson,
M. Bibes & A. Barthélémy
- [19] [Impact of the Spin Density Wave Order on the Superconducting Gap of Ba\(Fe_{1-x}Co_x\)₂As₂](#)
PHYSICAL REVIEW B **82**, 180521 (2010)
L. Chauvière, Y. Gallais, M. Cazayous, M.A. Méasson, A. Sacuto, D. Colson and A. Forget
- [20] [Raman scattering study of spin-density-wave order and electron-phonon coupling in Ba\(Fe_{1-x}Co_x\)₂As₂](#)
Phys. Rev. B **84** (2011) 104508.
L. Chauvière, Y. Gallais, M. Cazayous, M. A. Méasson, and A. Sacuto, D. Colson and A. Forget
- [21] [Magnetic Field Induced Dehybridization of the Electromagnons in Multiferroic TbMnO₃](#)
Phys. Rev. Lett. **107** (2011) 027202.
P. Rovillain, M. Cazayous, Y. Gallais, M-A. Measson, A. Sacuto, H. Sakata, and M. Mochizuki
- [22] [Electronic Raman scattering in copper oxide superconductors: Understanding the phase diagram](#)
COMPTES RENDUS PHYSIQUE **12** (2011) **480**.
Alain Sacuto, Yann Gallais, Maximilien Cazayous, Sébastien Blanc, Marie-Aude Méasson, Jinsheng Wen, Zhijin Xu, Genda Gu, Dorothée Colso
- [23] [Electromagnon and phonon excitations in multiferroic TbMnO₃](#)
Phys. Rev. B **86**, 014437 (2012).
P. Rovillain, J. Liu, M. Cazayous, Y. Gallais, M-A. Measson, H. Sakata, and A. Sacuto
- [24] [Anharmonic suppression of Charge density wave in 2H-NbS₂](#)
Phys. Rev. B **86**, 155125 (2012).
M. Leroux, M. Le Tacon, M. Calandra, L. Cario, M-A. Measson, P. Diener, E. Borrisenko, A. Bosak, and P. Rodiere
- [25] [Lattice and spin excitations in multiferroic h-YbMnO₃](#)
Phys. Rev. B **86**, 184410 (2012).
J. Liu, C. Toulouse, P. Rovillain, M. Cazayous, Y. Gallais, M-A. Measson, S. W. Cheong, and A. Sacuto
- [26] [New Insights into the phase diagram of the copper oxide superconductors from electronic Raman scattering](#)
Rep. Prog. Phys. **76** (2013) 022502.
A. Sacuto, Y. Gallais, M. Cazayous, M.-A. Measson, G. D. Gu, D. Colson
- [27] [Raman-Scattering Measurements and Theory of the Energy-Momentum Spectrum for Underdoped Bi₂Sr₂CaCuO₈+ \$\delta\$ Superconductors: Evidence of an s-Wave Structure for the Pseudogap](#)
Phys. Rev. Lett. **111** (2013) 107001.
S. Sakai, S. Blanc, M. Civelli, Y. Gallais, M. Cazayous, M.-A. Measson, J. S. Wen, Z. J. Xu, G. D. Gu, G. Sangiovanni, Y. Motome, K. Held, A. Sacuto, A. Georges, M. Imada
- [28] [Anharmonic phonons in few layer MoS₂: Raman spectroscopy of ultra low energy compression and shear modes](#)
Phys. Rev. B **87**, 195316, (2013).
Mohamed Boukhicha, Matteo Calandra, Marie-Aude Measson, Ophelie Lancry, and Abhay Shukla
- [29] [Observation of Incipient Charge Nematicity in Ba\(Fe_{1-x}Co_x\)₂As₂](#)
Phys. Rev. Lett. **111**, (2013) 267001.

Y. Gallais, R. M. Fernandes, I. Paul, L. Chauvière, Y.-X. Yang, M.-A. Méasson, M. Cazayous, A. Sacuto, D. Colson, and A. Forget ,

[30] [Amplitude Higgs mode in the 2H-NbSe₂ superconductor](#)

Phys. Rev. B 89 (2014) 060503 (R).

M-A Méasson , Y. Gallais, M. Cazayous, B. Clair, A. Sacuto,

[31] [Lattice and spin excitations in multiferroic h-YMnO₃](#)

Phys. Rev. B 89 (2014) 094415.

C. Toulouse, J. Liu, Y. Gallais, M.-A. Measson, A. Sacuto, M. Cazayous, L. Chaix, V. Simonet, S. de Brion, L. Pinsard-Godart, F. Willaert, J. B. Brubach, P. Roy, and S. Petit

[32] [Temperature-induced change in the Fermi surface topology in the spin density wave phase of Sr\(Fe_{1-x}Cox\)₂As₂](#)

Phys. Rev. B 89 (2014) 125130.

Y.-X. Yang, Y. Gallais, F. Rullier-Albenque, M.-A. Méasson, M. Cazayous, A. Sacuto, J. Shi, D. Colson, and A. Forget

[33] [Damping and non-linearity of a levitating magnet in rotation above a superconductor](#)

New Journal of Physics , 16 (2014) 075011

J. Druge, C. Jean, O. Laurent, MA Measson, I. Favero.

[34] [Symmetry of the Excitations in the Hidden Order State of URu₂Si₂](#)

Phys. Rev. Lett. 113 (2014) 266405.

J. Buhot, M.-A. Méasson, Y. Gallais, M. Cazayous, A. Sacuto, G. Lapertot, and D. Aoki

[35] [Lattice dynamics of the heavy fermion compound URu₂Si₂](#)

Phys. Rev. B 91 (2015) 035129.

J. Buhot, M.A. Méasson, Y. Gallais, M. Cazayous, and A. Sacuto, F. Bourdarot, S. Raymond, G. Lapertot, D. Aoki, and L. Regnault, A. Ivanov, P. Piekarczyk and K. Parlinski, D. Legut, C. Homes, P. Lejay, R.P. Lobo

[36] [Collapse of the normal-state pseudogap at a Lifshitz transition in the Bi₂Sr₂CaCu₂O_{8+x} cuprate superconductor](#)

Phys. Rev. Lett. 114, 147001 (2015)

S. Benhabib, A. Sacuto, M. Civelli, I. Paul, M. Cazayous, Y. Gallais, M. -A. Méasson, R. D. Zhong, J. Schneeloch, G. D. Gu, D. Colson, and A. Forget

[37] [Optical conductivity of URu₂Si₂ in the Kondo liquid and hidden-order phases](#)

Phys. Rev. B 92, 045129 (2015)

R. P. S. M. Lobo, J. Buhot, M. A. Méasson, D. Aoki, G. Lapertot, P. Lejay, and C. C. Homes

[38] [Three energy scales in the superconducting state of hole-doped cuprates detected by electronic Raman scattering](#)

Phys. Rev. B 92, 134502 (2015)

S. Benhabib, Y. Gallais, M. Cazayous, M. -A. Méasson, R. D. Zhong, J. Schneeloch, A. Forget, G. D. Gu, D. Colson, and A. Sacuto

[39] [Driving spin excitations by hydrostatic pressure in BiFeO₃](#)

J. Buhot, C. Toulouse, Y. Gallais, A. Sacuto, R. de Sousa, D. Wang, L. Bellaiche, M. Bibes, A. Barthelemy, A. Forget, D. Colson, M. Cazayous and M-A. Measson

Phys. Rev. Lett. 115, 267204 (2015)

[40] [Gate dependent electronic Raman scattering in Graphene](#)

E. Riccardi, M.-A. Measson, M. Cazayous, A. Sacuto, and Y. Gallais,

Phys. Rev. Lett. 116, 6805 (2016).

[41] [Unconventional High-Energy-State Contribution to the Cooper Pairing in the Underdoped Copper-Oxide Superconductor \$\text{HgBa}_2\text{Ca}_2\text{Cu}_3\text{O}_{8+\delta}\$](#)

B. Loret, S. Sakai, Y. Gallais, M. Cazayous, M.-A. Méasson, A. Forget, D. Colson, M. Civelli, A. Sacuto
Physical Review Letters 116, 197001 (2016)

[42] [Charge-induced nematicity in FeSe](#)

Pierre Massat, Donato Farina, Indranil Paul, Sandra Karlsson, Pierre Strobel, Pierre Toulemonde, Marie-Aude Méasson, Maximilien Cazayous, Alain Sacuto, Shigeru Kasahara, Takasada Shibauchi, Yuji Matsuda, and Yann Gallais
PNAS 113, 9177 (2016)

[43] [Raman active high energy excitations of \$\text{URu}_2\text{Si}_2\$](#)

Jonathan Buhot, Yann Gallais, Maximilien Cazayous, Alain Sacuto, Przemysław Piekarczyk, Gérard Lapertot, Dai Aoki, Marie-Aude Méasson
Physica B: Condensed matter 506, 19 (2017).

[44] [Vertical temperature boundary of the pseudogap under the superconducting dome in the phase diagram of \$\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}\$](#)

B. Loret, S. Sakai, S. Benhabib, Y. Gallais, M. Cazayous, M. A. Méasson, R. D. Zhong, J. Schneeloch, G. D. Gu, A. Forget, D. Colson, I. Paul, M. Civelli, and A. Sacuto
Phys. Rev B 96 (2017) 094525

[45] [Strain and Magnetic Field Induced Spin-Structure Transitions in Multiferroic \$\text{BiFeO}_3\$](#)

A. Agbelele, D. Sando, C. Toulouse, C. Paillard, R. D. Johnson, R. Rüffer, A. F. Popkov, C. Carrétéro, P. Rovillain, J.-M. Le Breton, B. Dkhil, M. Cazayous, Y. Gallais, M.-A. Méasson, A. Sacuto, P. Manuel, A. K. Zvezdin, A. Barthélémy, J. Juraszek, M. Bibes
Adv. Mater 29, 1602327 (2017).

[46] [Role of the rare earth in lattice and magnetic coupling in multiferroic \$\text{h-HoMnO}_3\$](#)

J. Liu, Y. Gallais, M.-A. Measson, A. Sacuto, S. W. Cheong, and M. Cazayous
Phys. Rev. B 95, 195104 (2017)

[47] [Higgs-mode radiance and charge-density-wave order in \$2\text{H-NbSe}_2\$](#)

Romain Grasset, Tommaso Cea, Yann Gallais, Maximilien Cazayous, Alain Sacuto, Laurent Cario, Lara Benfatto, Marie-Aude Méasson
Phys. Rev. B 97, 094502 (2018)

[48] [Collapse of Critical Nematic Fluctuations in FeSe under Pressure](#)

Pierre Massat, Yundi Quan, Romain Grasset, Marie-Aude Méasson, Maximilien Cazayous, Alain Sacuto, Sandra Karlsson, Pierre Strobel, Pierre Toulemonde, Zhiping Yin, and Yann Gallais
PHYSICAL REVIEW LETTERS 121, 077001 (2018).

[49] [Iron-based superconductivity extended to the novel silicide \$\text{LaFeSiH}\$](#)

F. Bernardini, G. Garbarino, A. Sulpice, Nunez-Regueiro, M, Gaudin, E, Chevalier, B, Measson, MA, Cano, A, Tence, S
PHYSICAL REVIEW B 97, 100504 (2018)

[50] [Probing chiral electronic excitations in bilayer graphene by Raman scattering](#)

Elisa Riccardi, Oleksiy Kashuba, Maximilien Cazayous, Marie-Aude Méasson, Alain Sacuto, and Yann Gallais
Phys. Rev. Materials 3, 014002 (2019) – Published 10 January 2019

[51] [Pressure induced collapse of the charge density wave and Higgs mode visibility in \$2\text{H-TaS}_2\$](#)

Romain Grasset, Yann Gallais, Alain Sacuto, Maximilien Cazayous, Samuel Mañas-Valero, Eugenio Coronado, Marie-Aude Méasson,
Phys. Rev. Lett. 122, 127001 (2019)

[52] [Magnetic transitions in \$\text{CaMn}_7\text{O}_{12}\$: a Raman observation of spin-phonon couplings](#)

[Toulouse, C.](#); [Martin, C.](#); [Measson, M.-A.](#); et al.
PHYSICAL REVIEW B 99, 024303 (2019)

[53 [Structural, magnetotransport and Hall coefficient studies in ternary Bi₂Te₂Se, Sb₂Te₂Se and Bi₂Te₂S tetradymite topological insulating compounds](#)
Journal of Alloys and Compounds 794, 195 (2019)

[54 [Effective model for A_{2g} Raman signal in URu₂Si₂](#)
Carlene Silva de Farias, Alvaro Ferraz, Marie-Aude Méasson, and Sébastien Burdin.
Phys. Rev B. 101, 205114 (2020).

[55 [Anisotropic Kondo pseudo-gap in URu₂Si₂](#)
J. Buhot, X. Montiel, Y. Gallais, M. Cazayous, A. Sacuto, G. Lapertot, D. Aoki, N. E. Hussey, C. Pépin, S. Burdin, M.-A. Méasson,
Phys. Rev. B 101, 245103 (2020)

[56 [Electrical Transport Properties of half-Heusler ScPdBi single crystals Under Extreme Conditions](#)
S D Ramarao; Amit Pawbake; Ashutosh K Singh; M Nunez-Regueiro; Marie-Aude Measson, Sebastian Chirambatte Peter
Journal of Alloys and Compounds 848, 156632 (2020)

[57 [Spatially resolved optical spectroscopy in extreme environment of low temperature, high magnetic fields and high pressure](#)
Breslavetz¹, A. Delhomme¹, T. Pelini¹, A. Pawbake¹, D. Vaclavkova¹, M. Orlita¹, M. Potemski¹, M.-A. Measson^{2,a)}, and C. Faugeras^{1,a)}
Review of Scientific Instruments 92 (12), 123909 (2021)

PROCEEDINGS IN INTERNATIONAL CONFERENCES

[58 Superconductivity of the filled skutterudite PrOs₄Sb₁₂: Phase diagram and characterizations
[M.-A. Méasson](#), J.P. Brison, G. Seyfarth, D. Braithwaite, G. Lapertot, B. Salce, J. Flouquet, E. Lhotel, C. Paulsen, H. Sugawara, H. Sato, P.C. Canfield, K. Izawa and Y. Matsuda
International Conference on Strongly Correlated Electron Systems, Karlsruhe 26-30 July 2004
Physica B Condensed Matter, 359-361, 827-829, (2005).

[59 Nature of the double superconducting transition in PrOs₄Sb₁₂?
[M.-A. Measson](#), D. Braithwaite, B. Salce, J. Flouquet, G.. Lapertot, J. Pécaut, G.. Seyfarth, J.P. Brison, H. Sugawara, H. Sato
International Conference on Strongly Correlated Electron Systems, Vienne 26-30 July 2005
Physica B: Condensed Matter, 378-380, 56-57 (2006).

[60 Pressure dependence of the of the double superconducting transition of the filled skutterudite PrOs₄Sb₁₂
M.-A. Measson, D. Braithwaite, B. Salce, J. Flouquet, G.. Lapertot, J. Pécaut, G.. Seyfarth, J.P. Brison, H. Sugawara, H. Sato
International Conference on Magnetism, Kyoto, 20-26 august 2006
Journal of Magnetism and Magnetic Materials, 310, 626 (2007).

[61 Inelastic neutron scattering study on low-energy excitations of the heavy-fermion superconductor PrOs₄Sb₁₂
K. Kuwahara, K. Iwasa, M. Kohgi, K. Kaneko, N. Metoki, S. Raymond, M.-A. Méasson, J. Flouquet, H. Sugawara, Y. Aoki and H. Sato
Physica B: Condensed Matter, 385-386, 82-84 (2006).

[62 Multigap Superconductivity in Heavy Fermion systems
[G. Seyfarth](#), J. P. Brison, M.-A. Méasson, J. Flouquet, G. Lapertot and D. Aoki,

Invited paper.

Proc. Int. Conf. New Quantum Phenomena in Skutterudite and Related Systems (Skutterudite 2007)
J. Phys. Soc. Jpn. 77 (2008) Suppl. A, pp. 14–20

[63 Upper critical field and vortex lattice in triplet superconductivity in PrOs₄Sb₁₂

K. Maki, M.-A. Measson, D. Parker, W. Li and H. Won

Proceedings of the 17th International Conference on Magnetism, The International Conference on Magnetism

Journal of Magnetism and Magnetic Materials, 310, 631 (2007).

[64 Superconductivity in PrOs₄Sb₁₂: On the double transition and multiband effects

G. Seyfarth, J.P. Brison, M.A. Méasson, D. Braithwaite, G. Lapertot, J. Flouquet

Proceedings of the 8th International Conference on Materials and Mechanisms of Superconductivity and High Temperature Superconductors - M2S-HTSC VIII

Physica C: Superconductivity and its Applications, 460-462, 694, (2007).

[65 Superconductivity in PrOs₄Sb₁₂: On the double transition and multiband effects

G. Seyfarth, J.P. Brison, M.A. Méasson, D. Braithwaite, G. Lapertot and J. Flouquet

Proceedings of the 17th International Conference on Magnetism, The International Conference on Magnetism

Journal of Magnetism and Magnetic Materials, 310, 703, (2007)

[66 Huge upper critical field in the superconductor with non-centrosymmetric crystal structure CeCoGe₃,

M.-A. Méasson, H. Muranaka, T.D. Matsuda, T. Kawai, Y. Haga, G. Knebel, D. Aoki, G. Lapertot,

F. Honda, R. Settai, J.-P. Brison, J. Flouquet, K. Shimizu, Y. Onuki

International Conference on Materials and Mechanisms of Superconductivity. M2S-IXe N°9, Tokyo, JAPON (2009)

Physica. C. Superconductivity, 2010, vol.470 (1063 p.)

[67 Multigap superconductivity in heavy fermion systems

G.Seyfarth,JP Brison, MA Measson, J. Flouquet, G.Lapertot, D. Aoki

25TH INTERNATIONAL CONFERENCE ON LOW TEMPERATURE PHYSICS (LT25)

Journal of Physics Conference Series 150, 052229 (2009).

[68 [*Magnetic and superconducting properties of a pressure-induced superconductor CePd₅Al₂*](#)

PHYSICA B-CONDENSED MATTER 404, 3202 (2009).

Proceedings of the International Conference on Strongly Correlated Electron Systems

F. Honda, MA Measson, Y. Nakano, N. Yoshitani, T. Takeuchi, K. Sugiyama, M. Hagiwara, K. Shimizu, K.

Kindo, N. Tateiwa, E. Yamamoto, Y. Haga, M. Ishizuka, H. Yamagami, R. Settai, Y. Ōnuki

[69 Pseudogap in cuprates by Electronic Raman scattering

A. Sacuto, S. Benhabib, Y. Gallais, S. Blanc, M. Cazayous, M.-A.Méasson

Journal of Physics: Conference Series Volume 449 (2013)

[70 Raman Scattering Study of the Lattice Dynamic of URu₂Si₂ and sample's preparation,

J. Buhot, M.-A. Méasson, Y. Gallais, M. Cazayous, A. Sacuto, G. Lapertot, D. Aoki

ICM Pusan, Korea (2012)

JOURNAL OF THE KOREAN PHYSICAL SOCIETY 6,1427 (2013).

[71 [*France: Charter for Gender Fairness at Conferences*](#)

[Pierron-Bohnes, V.](#), [Westbrook, N.](#), [Champenois, C.](#), [Lacroix, C.](#), [Launois, P.](#), [Measson, MA.](#), [Spiro, M.](#), [Taleb, A.](#). Conference: 6th IUPAP International Conference on Women in Physics (ICWIP) Location: Univ Birmingham, Birmingham, ENGLAND Date: JUL 16-20, 2017

PATENTS

Patent référence FR 1159134 ("Dispositif de lévitation, installation et procédé utilisant un tel dispositif"),
auteurs : **M.-A. Méasson**, A. Sacuto, Y. Gallais, M. Cazayous

SCIENTIFIC PRESENTATIONS

INVITED CONFERENCE PRESENTATIONS

I report only the personal invitations done by my-self.

1. Workshop on Novel Materials and Superconductors 2020, Austria 2020. *"Higgs mode in CDW superconductors"*
2. Workshop of the « [Higgs Hunting](#) », July 2019, France. *Higgs mode and condensed matter physics.*
3. EMFL user meetings: June 2019, Warsaw. *"High field Raman Spectroscopic study of the Hidden Order State in URu₂Si₂"*
4. SIT, *International Workshop on The Superconductor-Insulator Transition and Low-Dimensional Superconductors*, Villard de Lans, France, 7 – 12 October 2018, <http://sit2018.neel.cnrs.fr/>
5. Workshop "[Fundamental Enduring Problems in Quantum Condensed Matter](#)", in the honor of Chandra Varma, University of California, Riverside (7th to 9th December, 2017)
6. [SCTE'18](#), 25th to 29th of March 2018, Vienna (declined due to competing schedule)
7. [Gordon Research Conference](#) 2018, 24-29 June 2018, Entanglement and Coherence in Quantum Materials
8. Workshop Natal, august 2018, Emergent Phenomena in Strongly Correlated Quantum Matter, 27-31 August 2018: "Anisotropic Kondo Pseudogap"
9. [LEES 2018](#), June 24-29 2018, Portonovo (declined due to competing schedule with GRC)
10. [ECRYS 2017](#), 24th of August 2017, Cargèse
Charge density wave and higgs-mode radiance in dichalcogenides
Romain Grasset, Tommaso Cea, Yann Gallais, Maximilien Cazayous, Alain Sacuto, Laurent Cario, Samuel Mañas-Valero, Eugenio Coronado, Lara Benfatto, and Marie-Aude Méasson
11. [SCES 2017](#), 18th of July 2017, Praha (Symposia 4: Mysterious Hidden Order in URu₂Si₂ into its 4th Decade)
Raman Spectroscopy of the Hidden Order and Kondo Physics in URu₂Si₂
M.-A. MEASSON, J. BUHOT, R. GRASSET, X. Montiel, Y. Gallais, M. Cazayous, A. Sacuto, G. Lapertot, D. Aoki, S. Burdin, C. Pépin
12. [ISOE2017](#), 20th-21st of April 2017, Cargèse. Two lectures (1h each)
Introduction to Superconductivity, Marie-Aude Méasson
Raman Spectroscopy, Marie-Aude Méasson
13. [DPG Spring meeting 2015](#) (18 march 2015)
Symposium "Higgs Modes in Condensed Matter and Quantum Gases »
Amplitude 'Higgs' mode in 2H-NbSe₂
14. [Workshop Natal 2014](#) (July 21, 2014 - August 01, 2014)
Quantum Criticality in Correlated Materials and Model Systems
Raman Signatures of the Hidden Order and of the Kondo Physics in URu₂Si₂
15. International Workshop: The New Generation in Strongly Correlated Electron Systems (2010)
Introductory talk: *Introduction to the High Pressure Technique at Low Temperature*
Advanced talk: *Superconductivity in Non-centrosymmetric Heavy Fermions Compounds*
16. SCES 2016, **Invited Talk** on your recent work of Raman spectroscopy of URu₂Si₂ (declined due to maternity leave)
17. Invitation at Fermi-surface topology and emergence of novel electronic states in strongly correlated systems", International Institute of Physics (IIP) in Natal, Brazil, from July 18th to August 1st, 2016.
<http://www.iip.ufrn.br/events> (declined due to maternity leave)

INTERNATIONAL CONFERENCE PRESENTATIONS

I report here only the communications done by my-self or my students.

Talks:

1. LEES 2020: postponed to 2021, done in June 2021: Measson, URu₂Si₂ under magnetic field.
2. Workshop NMS, 02-2020: Measson, Higgs
3. HiggsHunting 2019: Measson
4. EMFL users 2019: Measson: URu₂Si₂
5. SNS 2019: Measson: Higgs mode
6. Satellite SNS 2019: Measson: URu₂Si₂
7. SIT2018: Measson
8. GRC 2018: Measson
9. Natal 2018: Measson
10. Varma workshop 2017: Measson
11. SCES 2017 (Praha): MA Measson
12. ISOE 2017: MA Measson
13. ECRYS 2017: MA Measson
14. SCES 2016 (China): J. Buhot (BiFeO₃ under pressure)
15. M2S 2015 (Geneva): Romain Grasset
16. DPG 2015 (Berlin): Marie-aude Méasson, invited
17. ICM 2015 (Barcelone): Marie-aude Méasson
18. APS March Meeting 2015 (San Antonio): C. Toulouse
19. LEES 2014 (Amboise): Marie-aude Méasson
20. Workshop 'Quantum Criticality in Correlated Materials and Model Systems' 2014 (Natal Brésil) : MA Méasson, invited
21. JMC14-CMD25 2014 (Paris): Marie-aude Méasson
22. JMC14-CMD25 2014 (Paris): J. Buhot
23. JMC14-CMD25 2014 (Paris): C. Toulouse
24. March meeting 2013 (Baltimore, USA): Marie-aude Measson
25. Workshop 'Hidden Order, Superconductivity and Magnetism in URu₂Si₂' 2013 (Leiden): MA Méasson
26. MMM 2013 (Denver, USA): J. Buhot
27. NGSCES 2013: J. Buhot
28. NGSCES 2010: MA Méasson, invited
29. Japan – French Workshop on Correlated Electronic Systems 2012: MA Measson
30. SCES 05: MA Measson
31. SCES 04: MA Measson

Posters :

1. Gordon Conference 2017 (Novel Trends in Superconductivity of Correlated Electrons, June 2017) : Romain Grasset (Higgs mode)
2. LEES 2016 (Kyoto) : Romain Grasset (2H-TaS₂ under pressure)
3. ICM 2015 (Barcelone) : J. Buhot
4. SCES14 (Grenoble): MA Measson
5. SCES14 (Grenoble): J. Buhot
6. LEES 2014 (Amboise) : J. Buhot
7. LEES 2014 (Amboise) : C. Toulouse
8. ICM 2012 (Corea) : MA Measson
9. SCES 2011 (Cambridge) : MA Measson
10. M2S 2009 (Tokyo): MA Measson
11. ICM 2006 : MA Measson
12. Workshop skutterudite 2007 (Kobe): MA Measson

NATIONAL CONFERENCE PRESENTATIONS

I report here only the communications done by my-self or my students.

Talk:

1. Congrès general de la SFP (Nantes, 2019): Measson : Ta₂N₃ superconductor

2. GDR MICO 2015 (Paris): MA Measson
3. GDR MICO 2013 (Roscoff): J. Buhot
4. GDR MICO 2013 (Gif-sur-yvette) : J. Buhot
5. JMC12 (Montpellier): jonathan buhot
6. GDR NEEM 2005: MA Measson
7. JMC9: MA Measson

Poster:

8. JMC Grenoble: Amit Pawbake (Topological Insulator)
9. GDR Meeticc 2017 (Bordeaux)
10. GDR mico 2008: MA Measson
11. SUPA (Scotland): MA Measson
12. JPSJ2008 (Japan): MA Measson
13. JPSJ 2007 (Japan): MA Measson

INVITED SEMINARS

About 20 invited seminars, non exhaustive list :

Bristol University, July 2021 : Collective modes in CDW and superconducting states
University of Tours, July 2019 (new collaboration)
INSP, 15th of June 2017
CEA DAM, 16th of January 2017
IMPMC, Paris, 2016
Néel Institut, Grenoble, 2015
CFEL, Hambourg, 2015
Journées du laboratoire MPQ 2015
Bilan ANR Princess, Toulouse 2015
IMN, Nantes 2013
Réunion mi-ANR Princess, Paris 2013
ESPCI 2010
Madrid 2009
Murata lab, Osaka 2007
Réunion Francojap 2005

FUNDING HISTORY

SCIENTIFIC FUNDING

Project Title	Funding body	Funding period	Amount	PI
HiggS ²	ERC	2020-2025	1 877 000 Euro	MA Measson
SADAHPT	ANR	2019-2023	623 000 Euro (of this 86 000 Euro for my team)	Jean-François Roch (MA Measson)
PRESTO	ANR	2019-2023	475 000 Euro (of this 170 000 Euro for my team)	Alfonso San Miguel (Laetitia Marty)
IRONMAN	ANR	2018-2022	510 000 (of this 250 000 for my team)	Andrés Cano
	PROCOPE	2018-2019	~16 000	Measson/LeTacon
Instrumentation aux limites CNRS	CNRS	2017	15 000euro (Of this 7 000 euro)	Jean-François Roch MA Measson
Studies on the Topological Insulator Behaviour in Heavy Metal based Ternary Chalcogenides	CEFIPRA	2017-2019	90 000 Euro	MA Measson
SEO-HiggS2	ANR	2016-2020	210 000 Euro	MA Measson
FERMI-NEST	ANR	2017-2021	445 000 Euro (French side) (of this 49 000 Euro)	S. Burdin MA Measson
SOCRATE	ANR	2012-2017	495 000 Euro (of this 71 000 Euro)	V. Brouet (Y. Gallais)
DYMMOS	ANR	2012 – 2017	200 000 Euro	M. Cazayous
PRINCESS	ANR	2011-2014	550 000 Euro (of this 178 000 Euro)	D. Braithwaite (MA Measson)
SOE-Ultra 2D	C'nano	2009/2010	36 000 Euro	MA Measson
Equipement cryogénique pour Raman sous pression	LABEX SEAM	2011-2012	27 000 Euro	MA Measson
Lab action	Lab MPQ	2010	25 000 Euro	MA Measson
BQR	Lab MPQ	2009	13 000 Euro	MA Measson
TOTAL public funds raised			5 606 000Euro	
Total as PI			2 613 000 Euro	MA Measson

SCIENCE OUTREACH PROJECTS

Project Title	Funding organisation	Funding period	Amount	PI
PEPS égalité	CNRS	2015	3 000 Euro	MA Measson
Mallette	Physics Department	2014	1 000 Euro	MA Measson
Magsurf	France 3 (French TV)	2012	1 000 Euro	MA Measson
100 years of superconductivity	Region Ile de France	2011	20 000 Euro	MA Measson
Magsurf	SFP	2011	1 000 Euro	MA Measson
100 years of superconductivity	C’Nano	2011	3 000 Euro	MA Measson
Magsurf	University (culture and com. Services)	2011	6 000 Euro	MA Measson
TOTAL funds raised			35 000 Euro	

SUPERVISION

Postdoc:	Owen Moulding (2021-) Amit Pawbake (2018 – 2020) Paraskevas Parisiades at 50% (2016)
PhD students:	Gregory Setnikar at 90% (2018-2022) Romain Grasset at 90% (2014-2017) Jonathan Buhot at 90% (2011 -2014) Constance Toulouse at 20% (2012-2015)
Masters students	Mahé Lezoualc'h (M2, 2021) Thaïs Garcia Sanchez (M1, 2020) Baptiste Alperin (M1, 2019) Maxime Gaignard (M1, 2019) Jorge VALLEJO-BUSTAMANTE (M2, 2019) Gregory Setnikar (M2, 2018) Adrien rosuel (M1, 2018) Mingli Cao (M1, 2015) R. Grasset (M2, 2014) Linda Amichi (M1, 2014) Cyril Jean (M2 ENS année 4, 2013) Jeremie Druge (1ere année sup opt., 2012) Nacerredine boubiche (M2, 2011) Quentin gaimard (M2,2011) Oscar Laurent (M1,2011) Vincent Lahoche (M1,2011) Bertrand Clair (M2,2010) Noée Galès (M2,2010) Alessia Marruzzo (M1,2009) M2 japon (2007)
Undergraduates	Corentin Sabatier (<i>two-year university degree in technology; 01/21-8/22</i>) Simon Gruffaz (<i>two-year university degree in technology; 2020</i>) Lahsen Alexis (L3;2010) 3 Japanese students (2006-2008)

TEACHING EXPERIENCE

- 2D@Grenoble : 2 hours lecture on Quantum phase transition in/with 2D systems (June 0218) (public: Master2, Phd, post-doc, researchers, 30 persons)
- Superconductivity and Magnetism, M2 (Master CFP) 24 hours per year in 2016, Tutorials and Practical [2016]
- Condensed Matter lab project M1 (University Paris 7) 50hours per year [2011 et 2012]
- Tutorials Advanced optics L3 (University Paris 7) 12hours per year [2012 and 2013]
- Tutorials of Mechanics L1 (IUT de mesures physiques de Grenoble) 45hours per year [2004 -2005]
- Lab work of heat exchanges L1 (IUT de mesures physiques de Grenoble) 30 hours per year [2004-2005]
- Tutorials of mathematics L1 (IUT de mesures physiques de Grenoble) 33hours per year [2003-2004]
Lab work of thermodynamic L1 (IUT de mesures physiques de Grenoble) 36hours per year [2003-2004]
- Lab work of electronics L1-L2 (University Joseph Fourier) 28 hours per year [2002-2003]

SERVICES TO THE SCIENTIFIC COMMUNITY

BOARD MEMBERSHIP

- Board member of the Condensed Matter section of the SFP (2020-)
- Board member of the EPS, Equal opportunity committee : 2015-2017
- Board member of SFP, section Paris centre 2011-2017
- Board member of the SFP, Women in Physics section since 2012. Organization of seminars at the JMC13 and JMC14-CMD25 conferences.

REVIEWING ACTIVITIES

Nature, PRX, Physical Review Letter, Physical Review B, Scientific Reports, Solid State Communication

Project reviewing: ANR (2012, 2020), DFG (2017, 2019) and FWF (2017), BES-USA (2022)

JURY ACTIVITIES

PhD Reviewer (Israel Zion Osmond/ Bristol- 2022; Victor Barrena Escolar /Madrid-2022)

PhD examiner (two in 2021: Hancheng YANG at IMPMC and Chaima Essghaier at LPS)

Member H2020/QUSTEC: PhD candidates' selection (2019&2020)

PhD examiner (two in 2019: INSP and ESPCI/CEA-DAM)

Member of the board examiners for Maître de Conférence position (two in 2015).

PhD examiner of Abderrezak Torche (Supervisor Matteo Calandra IMPMC/UCL) (September 2017)

Member of the PhD defense of Blair Lebert (Supervisor Matteo d'Astuto) (January 2018)

SCIENCE COORDINATION

- Member of the scientific council of the Lanef/Cryogenics (2020 -)
- Nominated member of the [CNU](#), section 28 (2016-2020)
- Member of the scientific council of the GDR MEETICC (2016-)
- In charge of the monthly Seminar of the Laboratoire MPQ (2011-2014)
- Elected member of the laboratory council (2013-2017 at LMPQ), nominated from 2017 (Neel Institute)
- Organization of the yearly general assembly of the SFP (2011-2017)

ORGANISATION OF SCIENTIFIC EVENTS

- Member of the organization committee of the International School Les Houches 2022
- Member of the organization committee of the national conference GDR Meeticc in 2016
- Member of the organization committee of the international conference JMC14-CMD25 in 2014
- Organization of a colloquium at the international conference JMC14-CMD25 in 2014
- Member of the publication committee of the international conference SCES2014 in 2014
- Organization of a colloquium at the national conference JMC13 in 2012

CNRS WORKING GROUP

- Member of the CNRS working group for the enhancing of collective and transversal actions in the CNRS. 'Promotion Jeunes Talents'/DDCS project (2015-2016). See [here](#) and [here](#).
- Organization of an open house in the laboratory MPQ for the administrative and technical staff of the CNRS and the University; 'Promotion Jeunes Talents'/DDCS project. 2015
- Jury member of the QVT call (Quality WorkLife at CNRS): 130 projects, 150 000euro [2018]

CONTINUOUS EDUCATION (FORMATIONS)

1. 3 x 3 days + 2 x 1 day “*Young Talents*” of the CNRS (Preparation for leadership) organised by the CNRS in 2014

LANGUAGES

French: fluent (mother tongue)
English: fluent
Japanese: basic