

1. BIOGRAPHY

Dr. Patrice Genevet

Senior Scientist I

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SIMTech - Singapore Institute of Manufacturing Technology

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Married, 2 children.

Language: French(first language), English, Italian.

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genevetp@simtech.a-star.edu.sg

Born on august, 20, 1982 in Nice, France

Ph.D in physics (2009).

Publication: 46

h-factor: 23 (Google scholar).

Citation: 2676 (Google scholar)

Research Gate: https://www.researchgate.net/profile/Patrice_Genevet

Google Scholar: <http://scholar.google.com/citations?user=IEyXxl4AAAAJ&hl=fr>

Orcid ID: [0000-0003-0216-3885](https://orcid.org/0000-0003-0216-3885)

Scopus Author ID: [15131744800](https://scopus.com/authid/detail.uri?authorId=15131744800)



Current Position

2014

* **Senior Research Scientist I**, grade 4

A*STAR, Singapore Institute of Manufacturing Technology, 71 Nanyang Drive, 638075, Singapore.

Previous research Positions and Education

2011-2014

Research Associate at Harvard University

Development of ultra-thin plasmonic interfaces for controlling light.

2009-2011

Post-Doctoral fellow at Harvard University in Prof. Capasso group in collaboration with

Prof. Marlan O. Scully (Texas A&M University). Investigation of plasmonic structures for linear and nonlinear optics and spectroscopy.

2006-2009

* **Ph.D in physics at University of Nice Sophia Antipolis** under the direction of Prof. J.R.

Tredicce and Dr. S. Barland. Title of the thesis: "Localized lasing structures in broad area coupled microresonators". Thesis defended October, 9, 2009 mention "très honorable".

* **University teacher formation** ("Monitorat d'initiation à l'enseignement supérieur", Univ. Of Nice-Sophia-Antipolis, France).

2004-2006

Master OMEGA option Nonlinear Dynamics at the University of Nice Sophia Antipolis

(UNSA), mention "très bien" obtained in July 2006.

Awards and scientific recognitions

2014- European Research Council Starting Grant (Starting date September 2015 for 5 years)

2006- PhD fellowship from the French Ministry of Higher Education and Research

Research interests and skills keywords

Nanophotonics, plasmonics, metamaterials, metasurfaces, nanofabrication including E-beam lithography, FIB, RIE etching and CVD, deposition, experimental optics (visible, near and mid-IR), Cherenkov radiation, nonlinear optics, ultra-fast laser system, semiconductor lasers, and nonlinear dynamics, Near-field, linear and nonlinear microscopy techniques (NSOM, Fluorescence, SERS, CARS, SRS), Optical vortices, Thin-film technology, boundary optics.

Scientific Responsibility

Projects Co-investigator: EARly-concept Grants for Exploratory Research (EAGER) at NSF Grant (ECCS-1347251) on “*New coupling scheme for surface plasmon polaritons*”, the Intelligence Advanced Research Projects Activity (IARPA) Grant No. N66001-13-2007 on “*Generation and Detection of Optical Vortices for High Information Capacity Secure Free-space Communications*” and the Robert A. Welch Foundation (A.1261).

Projects leader:

- **ERC StG** on “*FLATLIGHT: Functional 2D metamaterials at visible wavelengths*” under the European Union’s Horizon 2020 and innovation programme (Grant agreement No: 639109, 2015-2020)
- XRP5: “*Ultrafast and Broadband Mid-infrared Photonics*” Science and Engineering Research Council, A-Star (grant No: 1426500053, 2015-2018)

Reviewer for funding agencies : NSERC (Canada), Cariplo (Italy), ANR (France)

Conference Chair : PQE (2013), SPIE Photonics West (2013), MRS (2014)

Scientific publications, patents and conferences

46 papers published in peer reviewed journals, some of these in high impact journal as *Nature nanotechnology* (2), *Science* (2), *Nature Materials* (1), *Nature communications* (1), *Nano Letters* (7), *Physical Review Letters* (5) and *PNAS* (2). I co-authored 4 book chapters. I hold one US patents and three pending patents. I have personally been invited to 18 talks in national and international conferences. I gave several seminars and one plenary talk at the “*Optical MEMS and Nanophotonics Conference*” in Banff on the behalf of Prof. Capasso. I co-authored more than 30 conference proceedings and more than 20 other oral communications.

Broad Audience Outreach

Part of the results I have obtained were treated in broad audience scientific magazines and websites such as *Physics Today*, *Nature photonics news and views*, *La Recherche* and also in non scientific magazines as the *Huffington post*, *Economist* and *Engadget*. **I was invited to give a webinar** (a web seminar) on photonics media, an online journal with global coverage of optics.

Editorial Responsibility and Refereeing

Reviewer for: Science, Nature Nanotechnology, Nature Photonics, Scientific Report, Nature Communications, PRX, Proceedings of the National Academy of Sciences, Nanotechnology, PRA, Applied Physics Letters, Optics Letters, Applied Physics B, JOSA B, Advanced Optical Materials, Nanoscale Research Letters, Journal of Optics, Optics Express, European Physical Journal D.

Teaching Experience

- I gave 6 months tutorial courses at Center for nanoscale system (CNS) at Harvard University for users on nonlinear microscopy and fluorescence microscopy.
- One of my duties as post-doc researcher at Harvard University was to supervise Master and Graduate students during their internship in our group. This supervision consists of helping students to define their projects, of advising them and eventually reporting the results to the professor. During my Post Doc, I have been mentoring nine students:
 - (2010-now) Mikhail Kats, graduate student, Harvard University.

- (2010) Jean-phillipe Tetienne, Master student from ENS de Cachan (France).
- (2011) Vincent Chery, Master student from Ecole Polytechnique (France). He received the “**Prix du stage de recherche**” from Ecole Polytechnique
- (2011) Jan Philipp Balthasar Muller, Master student from the University of Iceland.
- (2012) Guillaume Aoust, Master student from Ecole polytechnique (France). He won the “**Grand Prix du stage de recherche**” from Ecole Polytechnique.
- (2012) Zach Gault, Master student at Harvard University.
- (2013) Francesco Aieta, PhD student from Universita d’Ancona, Italy.
- (2013-now) Alan She, PhD student at Harvard University.
- (2013-now) Daniel Wintz, Third year PhD student at Harvard University.
- (2014) Yutong Zhu, NSS A-star student, internship at SIMTech.
- (2015) Jonathon Teo Hi Han, A-star, SIMTech

- During my Ph.D. years (2006-2009) I was Moniteur à l’Université de Nice Sophia Antipolis (96 hrs/year). I was charged to teach undergraduate courses in experimental optics.

Interests and Activities

Triathlon, hiking, climbing, ski de randonnee, outdoor activities, fishing.

2012 - Finisher of the Half-Ironman triathlon: Half Vermont Journey in 5h43mn

2. PUBLICATIONS

2.1. PEER-REVIEWED ARTICLES

- [46] “*Achromatic Metasurface Lens at Telecommunication Wavelengths*”
M. Khorasaninejad, F. Aieta, P. Kanhaiya, M. Kats, P. Genevet, F. Capasso, **Nano Letters**, *accepted*
- [45] “*Controlled steering of Cherenkov surface plasmon wakes with a one-dimensional metamaterial*”
P. Genevet, D. Wintz, A. Ambrosio, A. She, R. Blanchard and F. Capasso, **Nature Nanotechnology**, doi:10.1038/nnano.2015.137 (2015).
See press release on [SEAS Harvard news](#), and [news and views in Nature Nanotechnology by Prof. Min Chen](#)
- [44] “*Holographic metalens for switchable focusing of surface plasmons*”
D. Witz, P. Genevet, A. Ambrosio, A. Woolf and F. Capasso **Nano Letters**, 15, pp. 3585 (2015)
- [43] “*Achromatic metasurface optical components by dispersive phase compensation*”
F.. Aieta, M. A. Kats, P. Genevet, F. Capasso, **Science** 347 (6228), 1342-1345 (2015)
See press release on [SEAS Harvard news](#)
- [42] “*Optical Metasurfaces for the real world*”
P. Genevet, **invited** commentary in **Nature Nanotechnology**, 10, 11-15 (2015)
- [41] “*Holographic optical metasurfaces: a review of current progress*”
P. Genevet and F. Capasso, **Reports of Progress in Physics**, 78 (2), 024401 (2015)
- [40] “*Electrically pumped semiconductor laser with monolithic control of circular polarization*”
P. Rauter, J. Lin, P. Genevet, S. P Khanna, M. Lachab, A. Giles Davies, E. H Linfield and F. Capasso, **Proceedings of the National Academy of Sciences**, 111, (52) E5623-E5632 (2014)
- [39] “*Twisted Focusing of Optical vortices with Broadband Flat Spiral Zone plates*”
H. Liu , M. Q. Mehmood , K. Huang , L. Ke , H. Ye , P. Genevet , M. Zhang , A. Danner , S. P. Yeo , C.-W. Qiu , and J. Teng”, **Advanced Optical Materials** doi: 10.1002/adom.201400315 (2014)
- [38] “*Breakthroughs in Photonics 2013- Flat Optics: Wavefronts Control With Huygens’ Interfaces*”

P. Genevet and F. Capasso, *IEEE Photonics* 6, 0700404 (2014)

[37] “*Aberrations of flat lenses and aplanatic metasurfaces*”

F. Aieta, P. Genevet, M. A. Kats, F. Capasso, *Optics Express*, 21, 31530-31539 (2013)

[36] “*Vanadium dioxide as a natural disordered metamaterial: perfect thermal emission and large broadband negative differential thermal emittance*”

M. A. Kats, R. Blanchard, S. Zhang, P. Genevet, C. Ko, S. Ramanathan and F. Capasso *Physical Review X*, 3 041004 (2013). See press release on [SEAS Harvard news](#)

[35] “*Enhancement of the color contrast in ultra-thin highly-absorbing optical coatings*”

M.A. Kats, S. Byrnes, R. Blanchard, P. Genevet, M. Kolle, J. Aizenberg and F. Capasso, *Applied Physics Letters* 103, 101104 (2013).

[34] “*Nanostructured-diffractive optical components for broadband manipulation of light*”

J. Lin, P. Genevet, M.A. Kats, N. Antoniou and F. Capasso. *Nano Letters* 13 4269 (2013).

The first two authors **equally contributed** to this work. see the press release on [SEAS Harvard](#) and [phys.org](#)

[33] “*Quantum-Coherence Enhanced Surface Plasmon Amplification by Simulated Emission of Radiation*”

K. Dorfman, J. Pankaj, D. Voronine, P. Genevet, F. Capasso and M. O. Scully. *Physical Review Letters* 111, 043601 (2013).

[32] “*High-power low-divergence tapered quantum cascade lasers with plasmonic collimators*”

R. Blanchard, T. S. Mansuripur, B. Gokden, N. Yu, M. Kats, P. Genevet, K. Fujita, T. Edamura, M. Yamanishi, and F. Capasso, *Applied Physics Letters* 102, 191114 (2013)

[31] “*Generation of two-dimensional plasmonic bottle beams*”

P. Genevet, J. Dellinger, R. Blanchard, A. She, M. Petit, B. Cluzel, M. A. Kats, F. de Fornel and F. Capasso, *Optics Express* 21, 10295 (2013).

This article has been selected by the editors for additional exposure in the Virtual Journal of Biomedical Optics (VJBO).

[30] “*Electrically tunable plasmonic resonances with a single layer of graphene*”

Y. Yao, M. A. Kats, P. Genevet, N. Yu and F. Capasso. *Nano Letters* DOI: 10.1021/nl3047943 (2013).

[29] “*Flat Optics: Controlling Wavefronts with Optical Antenna Metasurfaces*”

N. Yu, P. Genevet, F. Aieta, M. A. Kats, R. Blanchard, G. Aoust, J-P. Tetienne, Z. Gaburro, and F. Capasso *IEEE Journal of Selected Topics in Quantum Electronics*, DOI:10.1109/JSTQE.2013.2241399 (2013).

[28] “*Thermal tuning of mid-infrared plasmonic antenna arrays using a phase change material*”

M. A. Kats, R. Blanchard, P. Genevet, Z. Yang, M. M. Qazilbash, D. Basov, S. Ramanathan and F. Capasso *Optics Letters* 38, 368(2013).

[27] “*Holographic Detection of the Orbital Angular Momentum of light with plasmonic photodiodes*”

P. Genevet, J. Lin, M. A. Kats and F. Capasso. *Nature Communications* 3:1278 doi:10.1038/ncomms2293 (2012).

See the press release on the [SEAS Harvard](#) and [Photonics.com](#)

[26] “*Bifurcation Diagram and Control of Localized Laser Structures*”

P. Genevet, M. Turconi, S. Barland, M. Giudici and J. R. Tredicce. *Journal of Nonlinear Optical Physics and Materials* Vol. 21, No. 3, 1250029 (2012).

[25] “*Reflection and refraction of light from metasurfaces with phase discontinuities*”

F. Aieta, A. Kabiri, P. Genevet, N. Yu, M. A. Kats, Z. Gaburro and F. Capasso *Journal of Nanophotonics* 6, 063532 (2012).

[24] “*A Broadband, background free quarter-wave plate based meta-interfaces*”

N. Yu*, F. Aieta*, P. Genevet, M. A. Kats, Z. Gaburro, and F. Capasso. **Nano Letters** DOI: 10.1021/nl303445u (2012). *Three first authors have **equally contributed**.

[23] *“Ultra-thin reconfigurable perfect absorber”*

M.A. Kats, D. Sharma, J. Lin, P. Genevet, R. Blanchard, Z. Yang, M. M. Qazilbash, D. Basov, S. Ramanathan, F. Capasso. **Applied Physics Letters** **101**, 221101 (2012).

Featured on the cover of [APL](#) and on [Physics Today Website](#)

[22] *“Strong optical interference effects in highly-absorptive media: coloring metals with nanometer-thickness optical films”*

M.A. Kats, R. Blanchard, P. Genevet, F. Capasso **Nature Materials** doi:10.1038/nmat3443 (2012).

See the press release on the [Huffington Post](#)

[21] *“Aberration-free ultra-thin flat lenses and axicons at telecom wavelengths based on plasmonic metasurfaces”*

F. Aieta, P. Genevet, M. A. Kats, N. Yu, R. Blanchard, Z. Gaburro, and F. Capasso **Nano Letters** DOI: 10.1021/nl302516v (2012).

This article has been featured in several websites like [Engadget](#). See also the press release on the [Harvard gazette](#) and [The Economist](#)

[20] *“Cosine-Gauss plasmon beam: a localized long-range non-diffracting surface wave”*

J. Lin, J. Dellinger, P. Genevet, B. Cluzel, F. De Fornel, F. Capasso **Physical Review Letters** **109**, 093904 (2012).

This article has been featured in several websites including [Harvard SEAS website](#) and [Photonics.com](#)

The work was also featured by [Nature Photonics News and Views](#)

[19] *“Giant birefringence in plasmonic arrays with widely tailorable optical anisotropy”*

M. A. Kats, P. Genevet, G. Aoust, R. Blanchard, Z. Gaburro, F. Capasso **Proceedings of the National Academy of Sciences** 10.1073/pnas.1210686109 (2012).

[18] *“Modelling nanoscale V-shaped antennas for the design of optical phased arrays”*

R. Blanchard, G. Aoust, P. Genevet, N. Yu, M.A. Kats, Z. Gaburro, F. Capasso, **Physical Review B**, **85**, 155457 (2012).

[17] *“Out-of-plane reflection and refraction of light by anisotropic optical antenna metasurfaces with phase discontinuities”*.

F. Aieta, P. Genevet, N. Yu, M. A. Kats, Z. Gaburro and F. Capasso. **Nano Letters**, **12** (3), pp 17021706 (2012).

[16] *“Ultra-thin plasmonic optical vortex plate based on phase discontinuities”*

P. Genevet, N. Yu, F. Aieta, J. Lin, M. A. Kats, R. Blanchard, M. O. Scully, Z. Gaburro and F. Capasso. **Applied Physics Letters**, **100**, 13101 (2012).

This article has been selected for the [cover of APL on January, 2, 2012](#).

For its 50th anniversary, APL selected this paper [as one of the fiftieth notable APL articles published in recent years](#)

[15] *“Multi-wavelength mid-infrared plasmonic antennas with single nanoscale focal point”*.

R. Blanchard, S. V. Boriskina, P. Genevet, M. A. Kats, J.P. Tetienne, N. Yu, M. O. Scully, L. Dal Negro, F. Capasso. **Optics Express** Vol.19, 22113 (2011).

This article has been selected by the editors for additional exposure in the Virtual Journal of Biomedical Optics (VJBO).

[14] *“Effect of radiation damping on the spectral response of plasmonic components”*

M. A. Kats, N. Yu, P. Genevet, Z. Gaburro, and F. Capasso, **Optics Express** Vol. 19, 21748 (2011).

[13] *“Enhancement of optical processes in coupled plasmonic nanocavities”*

P. Genevet, J.P. Tetienne, R. Blanchard, M. A. Kats, J.P. B. Muller, M. O. Scully and F. Capasso, **Invited paper, Applied Optics**, **50**, G56, (2011).

[12] *“Light Propagation with Phase Discontinuities: Generalized Laws of Reflection and Refraction”*.

N. Yu, P. Genevet, M. A. Kats, F. Aieta, J.P. Tetienne, F. Capasso, and Z. Gaburro, *Science* 334, 333-337 (2011)

This article has been selected for the [cover of Science](#). See the [commentary article by Prof. Engheta](#) and [the Physics Today search and discovery commentary](#). See also the [Harvard press release](#).

- [11] *"Dipolar modeling and experimental demonstration of multi-beam plasmonic collimators"*
J-P Tetienne, R. Blanchard, N. Yu, P. Genevet, M. A. Kats, J. A. Fan, T. Edamura, S. Furuta, M. Yamanishi and F. Capasso, *New Journal of Physics* **13**, 053057 (2011)
- [10] *"Large enhancement of nonlinear optical phenomena by plasmonic nanocavity gratings"*
P. Genevet, JP Tetienne, E Gatzogiannis, R Blanchard, MA Kats, MO Scully, F. Capasso, *Nano Letters* **10** (12), 4880-4883 (2010)
- [9] *"Theoretical description of the transverse localized structures in a face to face VCSEL configuration"*
L. Columbo, L. Gil and P. Genevet *European Physical Journal D* **59**, 97-107 (2010).
- [8] *"Mutual coherence of laser solitons in coupled semiconductor"*
P. Genevet, M. Turconi, S. Barland, M. Giudici and J.R. Tredicce, *European Physical Journal D* **59**, 109-114 (2010).
- [7] *"Bistable and addressable localized vortices in semiconductor lasers"*
P. Genevet, S. Barland, M. Giudici and J.R. Tredicce, *Physical Review Letters*, **104**, 223902 (2010).
- [6] *"Multistable monochromatic laser solitons"*
P. Genevet, L. Columbo, S. Barland, M. Giudici, L. Gil, and J. R. Tredicce, *Physical Review A* **81**, 053839 (2010).
- [5] *"Stationary Localized Structures and Pulsing Structures in Cavity Soliton Laser"*
P. Genevet, S. Barland, M. Giudici and J.R. Tredicce, *Physical Review A* **79**, 033819 (2009).
- [4] *"Microresonator Defects as Sources of Drifting Cavity Solitons"*
E. Caboche, F. Pedaci, P. Genevet, S. Barland, M. Giudici, J.R. Tredicce, G. Tissoni and L. A. Lugiato, *Physical Review Letters* **102**, 163901 (2009).
- [3] *"Cavity Soliton Laser based on mutually coupled semiconductor microresonators"*
P. Genevet, S. Barland, M. Giudici, J.R. Tredicce, *Physical Review Letters* **101**, 123905 (2008).
[This article has been highlighted as exceptional research by Phys. Rev. Lett. "Soliton Starter"](#)
- [2] *"All-optical delay line using semiconductor cavity solitons"*
F. Pedaci, S. Barland, E. Caboche, P. Genevet, M. Giudici, and J. R. Tredicce, T. Ackemann, A. J. Scroggie, W. J. Firth, G.-L. Oppo G. Tissoni, R. Jager, *Applied Physics Letters* **92**, 011101 (2008).
This article has been selected for the [cover of APL on January, 7, 2008](#)
- [1] *"Positioning cavity solitons with a phase mask"*
F. Pedaci, P. Genevet, S. Barland, M. Giudici, J.R. Tredicce, *Applied Physics Letters* **89** 221111 (2006).

2.2. CHAPTERS IN REFERRED BOOKS

- [Chap4] *"Observation of True Optical Vortices in a laser system"*
S. Barland, E. Caboche, P. Genevet, X. Hachair, M. Giudici, F. Pedaci, J.R. Tredicce. Springer Series in Optical Sciences, Nonlinear Photonics and Novel Optical Phenomena, Vol. 170 (2012)
- [Chap3] *"Controlling light propagation using phase discontinuities"*
N. Yu, P. Genevet, M.A. Kats, J.-P. Tetienne, F. Aieta, Z. Gaburro, F. Capasso. Active plasmonics and tuneable metamaterials, Wiley (2012)
- [Chap2] *"Cavity Solitons in Vertical Cavity Surface Emitting Lasers and their Applications"*
M. Giudici, F. Pedaci, E. Caboche, P. Genevet, S. Barland, J. R. Tredicce, G. Tissoni and L. Lugiato. Localized States in Physics: Solitons and Patterns, Springer (2011)

[Chap1] "Cavity Soliton Laser based on coupled micro-resonators"

P. Genevet, S. Barland, M. Giudici and J. R. Tredicce. *Localized States in Physics: Solitons and Patterns*, Springer

2.3. PLENARY PRESENTATIONS AND KEYNOTES

[PleP1] "*Broadband Wavefront Engineering with Optical Resonator Arrays*", Optical

MEMS and Nanophotonics Conference, 6 - 9 August 2012, Banff, Alberta, Canada, speaking on behalf of Prof. Capasso.

[Key1] "Achromatic Metasurface Optical Components and Metagratings for Efficient Broadband and Polarization Sensitive Light Routing", ICMAT 2015 Singapore, Keynote presented on the behalf of prof. Capasso.

2.4. PERSONAL INVITATIONS FOR ORAL PRESENTATIONS

[I20] "Optics at interfaces"

Seminar organized by "Nikon and Essilor International Joint Research Center Co., Ltd.", French Embassy in Japan, Tokyo, June 3rd 2015 P. Genevet.

[I19] "Dispersion management at interfaces"

University of Glasgow, Scotland, 20th March 2015, P. Genevet.

[I18] "Controlling light with Huygens'-like interfaces: application to surface holography"

MRS Boston, 01 December, 2014. P. Genevet.

[I17] "Folding optical space with Huygens' interfaces"

A*star Investigatorship Symposium Singapore, October 31, 2014. P. Genevet.

[I16] "*Controlling light with Huygens' interfaces*"

Meta'14 Singapore, May 20-23 2014, P. Genevet.

[I15] "*Holographic Metasurfaces*"

SPIE Optics and Photonics 2013 San Diego, USA Aug. 25 - 28, 2013. P. Genevet.

[I14] "*Holographic Metasurfaces*"

ICCES'13 Seattle, USA May 24 - 28, 2013. P. Genevet.

[I13] "*Plasmonic couplers for vortex beams and non-diffracting surface waves*"

SPIE PhotonicWest, 2-7 February 2013, San Francisco, USA, P. Genevet, J. Lin, J. Dellinger, B. Cluzel, F. De Fornel, M. A. Kats, F. Capasso.

[I12] "*Holographic plasmonic couplers for light with complex wavefronts*"

January 6-10, **PQE-2013** conference Snowbird, Utah., USA

P. Genevet, J. Lin, J. Dellinger, B. Cluzel, F. De Fornel, M.A. Kats and F. Capasso.

[I11] "*Manipulating light with optical metasurfaces*", August 02 (2012),

University of Ottawa, ON, Canada.

P. Genevet

[I10] "*Manipulating complex beams with optical metasurfaces*", July 26 (2012),

University of Sydney, NSW, Australia,

P. Genevet

[I9] *"Ultra-thin plasmonic optical phased array based on phase discontinuities and application to the generation of optical vortex beam"*

January 9-12, TAMU Physics of Quantum Electronics Workshop, Texas., USA

P. Genevet, N. Yu, F. Aieta, J. Lin, M. A. Kats, R. Blanchard, M.O. Scully, Z. Gaburro and F. Capasso.

[I8] *"Ultra-thin plasmonic optical phased array based on phase discontinuities and application to the generation of optical vortex beam"*

January 2-6, **PQE-2012** conference Snowbird, Utah., USA

P. Genevet, N. Yu, F. Aieta, J. Lin, M. A. Kats, R. Blanchard, M.O. Scully, Z. Gaburro, and F. Capasso.

[I7] *" Nonlinear plasmonics with nanocavity gratings"*,

SPIE San Diego 21-25 August 2011, Ca, USA.

P. Genevet and F. Capasso.

[I6] *"New plasmonic structures for nonlinear optics and spectroscopy"*,

July 25-29 (2011) **Summer School of the Institute for Quantum Science and Engineering**, Jackson Hole, WY, USA.

P. Genevet, J.P. Tetienne, R. Blanchard, M. O. Scully and F. Capasso.

[I5] *"Plasmonic nanocavity gratings enhance nonlinear optical phenomena"*,

July 18-31, 2010 **Summer School of Quantum Optics and Electronics**, Casper, WY, USA.

P. Genevet, J.P. Tetienne, R. Blanchard, Marlan O. Scully and F. Capasso.

[I4] *"Localized vortices in semiconductor Lasers"*,

January 12-13, 2010, **TAMU Physics of Quantum Electronics Workshop**, TX, USA.

P. Genevet, S. Barland, M. Giudici, J.R. Tredicce.

[I3] *"Experimental observation of Localized vortices in semiconductor Lasers"*,

January 3-7, **PQE-2010** conference Snowbird, UT, USA.

P. Genevet, S. Barland, M. Giudici, J.R. Tredicce.

[I2] *"Laser solitons and localized Vortices"*,

Seminar November 17, 2010, Texas A&M University, TX, USA.

P. Genevet, S. Barland, M. Giudici, J.R. Tredicce.

[I1] *"Cavity soliton laser: localized structures and clusters"*

Localized States workshop in Chile, Santiago, september 22-25 2008 (www.dfi.uchile.cl/lsworkshop08/).

P. Genevet, S. Barland, M. Giudici, J.R. Tredicce.

More than 25 conference proceedings and 30 contributed conferences

2.5. PATENTS, INCLUDING PROVISIONALS

[pp4] *"Achromatic metasurface optical components by dispersive phase compensation"*, US provisional patent application, to be filed on 10 December 2014, HU6542, hu-5642pro.

[PP3] *"Amplitude, Phase and Polarization Plate for Photonics"*,

Awarded US patent WO2013033591 A1, publication date Mars, 7, 2013. Licensed in June 2015.

[PP2] *" ULTRA-THIN OPTICAL COATINGS AND DEVICES AND METHODS OF USING ULTRA-THIN OPTICAL COATINGS"*,

U.S. Serial No. 61/655,898, provisional patent filed on June 5, 2012.

[PP1] *"Method and apparatus for tuning radiation absorption and emission"* U.S. Serial No. 61/655,905, provisional patent filed on June 5, 2012.

2.6. INVITED WEBINAR

I gave an invited webinar for photonics.com