

Liste des productions (Août 2024)

Articles dans des revues internationales avec comité de lecture

- [63] F. Correia, G. Jara-Schulz, G. Madiot, S. Barbay, and R. Braive, “Coherent interferometric control of strongly-coupled nano-electromechanical resonators”, *Commun. Phys.* **7**, 10.1038/s42005-024-01726-2 (2024).
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- [61] V. Pammi, M. Clerc, S. Coulibaly, and S. Barbay, “Extreme events prediction from nonlocal partial information in a spatiotemporally chaotic microcavity laser”, *Phys. Rev. Lett.* **130**, 223801 (2023).
- [60] S. Terrien, B. Krauskopf, N. G. R. Broderick, V. A. Pammi, R. Braive, I. Sagnes, G. Beaudoin, K. Pantzas, and S. Barbay, “Merging and disconnecting resonance tongues in a pulsing excitable microlaser with delayed optical feedback”, *Chaos* **33**, (Featured), 10.1063/5.0124693 (2023).
- [59] G. Madiot, F. Correia, S. Barbay, and R. Braive, “Random number generation with a chaotic electromechanical resonator”, *Nanotechnology* **33**, 475204 (2022).
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- [53] A. Chowdhury, M. G. Clerc, S. Barbay, I. Robert-Philip, and R. Braive, “Weak signal enhancement by nonlinear resonance control in a forced nano-electromechanical resonator”, *Nat. Commun.* **11**, 10.1038/s41467-020-15827-3 (2020).
- [52] V. A. Pammi, K. Alfaro-Bittner, M. G. Clerc, and S. Barbay, “Photonic computing with single and coupled spiking micropillar lasers”, *IEEE J. Sel. Topics Quantum Electron.* **26**, 1 (2020).
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Livres et chapitres de livres

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Brevets

1. Italian patent n. ITFI20000029 A, publication date 16-08-2001, Inventors : [Sylvain Barbay](#), Giovanni Giacomelli, Francesco Marin, Depositors : Univ. Firenze (IT); Istituto Nazionale di Ottica (IT)

Communications orales invitées dans des conférences et workshops, nationaux et internationaux

(oral presenter marked by *)

36. [S. Barbay*](#), Neuromorphic dynamics in excitable micropillar lasers, Workshop on Frontiers in Applied Dynamical Systems in honour of Prof. Bernd Krauskopf, UCC Cork, June 18th-20th 2024.
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24. [S. Barbay*](#), F. Selmi, I. Sagnes, G. Beaudoin, S. Coulibaly, M.G. Clerc, *Extreme events and spatiotemporal chaos in an extended microcavity laser*, XVI Workshop on Instabilities and Non Equilibrium Structures, 50 years of Prigogine’s Dissipative Structures, Valparaiso, Chile, Dec 4th-8th 2017.
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8. F. Selmi, S. Haddadi, R. Braive, I. Sagnes, R. Kuszelewicz, A. Yacomotti, and [S. Barbay*](#), *Localized states, self-pulsing and excitability in VCSELs and microlasers with saturable absorber* 14th International Conference on Transparent Optical Networks (ICTON), July 2 – 5, 2012, Coventry (England)
7. [Sylvain Barbay](#), Tiffany Elsass, Alejandro Yacomotti, and Robert Kuszelewicz* *Cavity solitons and non-linear dynamical regimes in semiconductor microcavities*, Photonics West - SPIE OPTO Conference on Quantum Sensing and Nanophotonics Devices IX -21 - 26 January 2012 San Francisco (USA).
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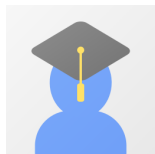
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Neuromorphic photonics
spatio-temporal complexity
nonlinear dynamics
semiconductor lasers
nonlinear optomechanics

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