Fédération Doeblin FR 2800 CNRS

Publications Fédération Doeblin

Directeur : Thomas Frisch

Directeur adjoint : Dario Vincenzi

Administratrice : Magali Varlet-Dusaucy

Publications des projets de la Fédération Doeblin (2018-2019-2020-2021)

(Les noms des porteurs de projets sont en bleu)

J.-P. Rivet, F. Vakili, O. Lai, D. Vernet, M. Fouché, W. Guerin, G. Labeyrie, R. Kaiser, Optical long baseline intensity interferometry: prospects for stellar physics, *Exp. Astron.* **46**, 531, (2018), LAGRANGE-INPHYNI

A. Eloy, Z. Yao, R. Bachelard, W. Guerin, M. Fouché, R. Kaiser, Diffusing-wave spectroscopy of cold atoms in ballistic motion, *Phys. Rev. A.* **97**, 013810, (2018), INPHYNI

G.W. Fernandez Lorenzo, M. P. Santisi d'Avila, A. Deschamps, E. Bertrand, D. Mercerat, L. Foundotos, F. Courboulex, Numerical and empirical seismic response simulation of buildings: the case study of Nice prefecture, *Earthquake spectra*, **34**, 169-196, (2018) LJAD-GEOAZUR

M. P. Santisi d'Avila, F. Lopez Caballero, Analysis of nonlinear Soil-Structure Interaction effects: 3D frame structure and 1-Directional propagation of a 3-Component seismic wave, *Computers and Structures,* **207**, 83-94, (2018), LJAD

G. Libourel, A. M. Nakamura, P.Beck, S. Potin, C. Ganino, S. Jacomet, R. Ogawa, S. Hasegawa, P. Michel, Hypervelocity impacts as a source of deceiving surface signatures on iron-rich asteroids, S*cience Advances*, **5**, 8, 3971, (2019), LAGRANGE-CEMEF-GEOAZUR

C. Ganino, G. Libourel, A. M. Nakamura, P. Michel, Are hypervelocity impacts able to produce chondrule-like ejecta? *Planetary and Space Science*, **177**,104684, (2019) GEOAZUR-LAGRANGE

R. Fares, M.P. Santisi d'Avila, A. Deschamps, Soil-Structure Interaction analysis using a1DT-3C : wave propagation model, *Soil Dyn. Earthq. Eng*, **120**, 200-213, (2019), LJAD-GEOAZUR

J.-P. Rivet, A. Siciak, E. S. G. de Almeida, F. Vakili, A. Domiciano de Souza, M. Fouché, O.Lai, D. Vernet, R. Kaiser, W. Guerin, Intensity interferometry of P Cygni in the Hα emission line: towards distance calibration of LBV supergiant stars*, Monthly Notices of the Royal Astronomical Society*, **494**, 218-227, (2020), LAGRANGE-INPHYNI

G. Schifani, T. Frisch, J. Brault, P. Vennéguès, S. Matta, M. Korytov, B. Damilano, J. Massies, and J.-N. Aqua, Wetting-Layer-Free AlGaN Quantum Dots for Ultraviolet Emitters,*ACS Appl. Nano Mater.*, **3**, 4054, (2020), CRHEA-INPHYNI

T. Roca Filo, B. Marcos, Classical Goldstone modes in long-range interacting systems, *Phys. Rev. E **102***, 3, 032122, (2020), LJAD-INPHYNI

J. Su, B. Suo, P. Cassam-Chenai, Theoretical Study of the Anisotropy Spectra of the Valine Zwitterion and Glyceraldehyde, *J. Phys. Chem.* A,**124,** 34,6824-6833, (2020), LJAD-INPHYNI

I. Lior, A. Sladen, S. Sambolian, Strain to ground motion conversion of distributed acoustic sensing data for earthquake magnitude and stress drop determination, *Solid Earth* **12** (6) ,1421-1442, (2021) GEOAZUR-INPHYNI

I. Lior, A. Sladen, C. Markou, On the Detection Capabilities of Underwater Distributed Acoustic Sensing, *Journal Geophysical Research-Solid Earth* **126**, e2020JB020925, GEOAZUR-INPHYNI, (2021)

Publications issues du programme de chercheurs invités

CNRS INP (2018 - 2019 – 2020 -2021)

Chercheurs invités sur des supports CDD CNRS d'un mois.

(Les noms des invitants sont en bleu et des invités sont en rouges)

A.V. Kovalev, E. A. Viktorov, N. Rebrova, A.G. Vladimirov, G. Huyet, Theoretical study ofmode-locked lasers with loop mirrors, *Semiconductor Lasers and Laser Dynamics VIII*, Proceedings of SPIE,**10682**, 1068226, (2018), Laboratoire *INPHYNI*

S.S. Ray, D. Vincenzi, Droplets in isotropic turbulence: deformation and breakup statistics, *J. Fluid Mech.* **852**, 313-328, (2018), Laboratoire *LJAD*

A.V. Kovalev, E.A. Viktorov, N. Rebrova, U. Gowda, A.G. Vladimirov , G. Huyet, Saturation effects in nonlinear loop mirror lasers: square wave operation, *Physics and Simulation of Optoelectronic devices XXVII*, Proceedings of SPIE **10912**, 109121M, (2019), Laboratoire *INPHYNI*

A.G. Vladimirov, A.V. Kovalev, E.A. Viktorov, N. Rebrova, G. Huyet, Dynamics of a class-A nonlinear mirror mode-locked laser, *Phys. Rev.* E **100**, 012216, (2019), Laboratoire *INPHYNI*

S. Slepneva, B. O'Shaughnessy, A.G. Vladimirov, S.Rica, E.A.Viktorov, G. Huyet, Convective Nozaki-Bekki holes in a long cavity OCT laser, *Optics Express* **27**, 16395-16404,(2019), Laboratoire *INPHYNI*

U. Giuriato, G. Krstulovic & D. Proment, Clustering and phase transitions in a 2D superfluidwith immiscible active impurities, *J. Phys.* A: *Math. Theor.* **52**, 305501, (2019), Laboratoire *LAGRANGE*

S. Richter, H. G. Zirnstein, J. Zúñiga-Pérez, E. Kruger, C. Deparis, L. Trefflich, C. Sturm, B. Rosenow, M. Grundmann, R. Schmidt-Grund, Voigt exceptional points in an anisotropicZnO-based planar microcavity: Square-root topology, polarization vortices, and circularity, *Phy. Rev. Lett.* **123,** 227401, (2019), Laboratoire CRHEA

S.V. Nazarenko, V.N. Grebenev, S.B. Medvedev, S. Galtier, The focusing problem for the Leith model of turbulence: a self-similar solution of the third kind, *J. Phys.* A: *Math. Theor.* **52**,155501, (2019), Laboratoire INPHYNI

Z. Gao, S. Golla, R. Sawant, V. Osipov, G. Briere, S. Vezian, B. Damilano, P. Genevet, K. Dorfman, Revealing topological phase in Pancharatnam-Berry metasurfaces using mesoscopic electrodynamics, *Nanophotonics*, **9**,16, 4711-4718, (2020), Laboratoire CRHEA

D. Proment, G. Krstulovic, Matching theory to characterize sound emission during vortex reconnection in quantum fluids, *Phys. Rev. Fluids* **5**, 10,104701, (2020), Laboratoire LAGRANGE

V. Grebenev, SB Medvedev, S Nazarenko, B Semisalov, Steady states in dual-cascade wave turbulence, *J. Phys.* A: *Math. Theor.* **53**, 36, 365701, (2020), Laboratoire INPHYNI

M. Grundmann, Universal relation for the orientation of dislocations from prismatic slip systems in hexagonal and rhombohedral strained heterostructures, *Appl. Phys. Lett.*,**116,** 8 , 082104, (2020), Laboratoire CRHEA

M. Grundmann, M. Lorenz, Anisotropic strain relaxation through prismatic and basal slip in alpha-(Al, Ga)(2)O-3 on R-plane Al2O3, *APL Materials*, **8**, 2, 021108, (2020), Laboratoire CRHEA

A Villois, D Proment, G Krstulovic, Irreversible dynamics of vortex reconnections inquantum fluids, *Phys. Rev. Lett.* ***125****, 164501, (2020),* *Laboratoire Lagrange*

R. Karsthof, H. von Wenckstern, J. Zúñiga-Pérez, C. Deparis, M. Grundmann, Nickel Ox-ide-based heterostructures with large band offsets, *Phys. Status Solidi B* **257**,1900639, (2020), Laboratoire CRHEA

B.V. Semisalov, V.N. Grebenev, S.V. Nazarenko
Numerical analysis of a self-similar turbulent flow in Bose-Einstein condensates, *Communication in non-linear science and numerical simulation* **102,** 105903 (2021), Laboratoire INPHYNI

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