Production scientifique

Productions scientifiques les plus significatives sur les 10 dernières années

(Liste ci-dessous des 10 publications demandées dans la Fiche-Résumé avec le lien correspondant.)

1. **Revue invitée (exoplanètes): Baraffe, I.**, Chabrier, G., Fortney, J., Sotin, C. 2014 "Planetary Internal Structures" ; Protostars and Planets VI, H. Beuther, R.. Klessen, C. Dullemond, and T. Henning (eds.), University of Arizona Press
   https://arxiv.org/pdf/1401.4738.pdf
2. **Article (dynamique atmosphérique des exoplanètes):** Mayne, N., **Baraffe, I.** et al. 2014, A&A, 561, 1 "The unified model, a fully-compressible, non-hydrostatic, deep atmosphere global circulation model, applied to hot Jupiters. ENDGame for a HD 209458b test case"
   https://www.aanda.org/articles/aa/pdf/2014/01/aa22174-13.pdf
3. **Article (étoiles de faible masse): Baraffe, I.** et al. 2015, A&A, 577, 42 "New evolutionary models for pre-main sequence and main sequence low-mass stars down to the hydrogen-burning limit"
   https://www.aanda.org/articles/aa/pdf/2015/05/aa25481-14.pdf
4. **Article (formation stellaire): Baraffe, I.** et al. 2017, A&A, 597, 19 "Self-consistent evolution of accreting low-mass stars and brown dwarfs"
   https://www.aanda.org/articles/aa/pdf/2017/01/aa29303-16.pdf
5. **Article (hydrodynamique stellaire):** Pratt, J., **Baraffe, I.** et al. 2017, A&A, 604, 125 "Extreme value statistics for two-dimensional convective penetration in a pre-main sequence star"
   https://www.aanda.org/articles/aa/pdf/2017/08/aa30362-16.pdf
6. **Article (Evolution et hydrodynamique stellaire): Baraffe, I.** et al. 2017, ApJL, 845, 6 "Lithium Depletion in Solar-like Stars: Effect of Overshooting Based on Realistic Multi-dimensional Simulations"
   https://iopscience.iop.org/article/10.3847/2041-8213/aa82ff/pdf
7. **Article (modèles d'atmosphère):** Phillips,M., Tremblin, T., **Baraffe, I.** et al. 2020, A&A, 637, 38 "A new set of atmosphere and evolution models for cool T-Y brown dwarfs and giant exoplanets"
   https://www.aanda.org/articles/aa/pdf/2020/05/aa37381-19.pdf
8. **Livre (hydrodynamique stellaire):** Rieutord, M., **Baraffe, I.**, Lebreton, Y. 2020 "Multi-Dimensional Processes In Stellar Physics" M. Rieutord, I. Baraffe and Y. Lebreton (eds) Online at EDP Sciences, 2020.
   https://laboutique.edpsciences.fr/produit/1115/9782759824373/Multi-Dimensional%2520Processes%2520In%2520Stellar%252
9. **Article (astérosismologie)**: Le Saux, A., *Baraffe, I.* et al. 2023, MNRAS, 522, 2835 "Two-dimensional simulations of internal gravity waves in a 5 $M_\odot$ zero-age-main-sequence model"
   https://doi.org/10.1093/mnras/stad1067
10. **Article (hydrodynamique stellaire): Baraffe, I.** et al. 2023, MNRAS, 519, 5333 "A study of convective core overshooting as a function of stellar mass based on two-dimensional hydrodynamical simulations"
    https://doi.org/10.1093/mnras/stad009

Livres, revues et chapitres de livres)

1. Rieutord, M., **Baraffe, I.**, Lebreton, Y. 2020 "Multi-Dimensional Processes In Stellar Physics" M. Rieutord, I. Baraffe and Y. Lebreton (eds) Online at EDP Sciences, 2020.
2. **Baraffe, I.** 2014 in **"50 Years of Brown Dwarfs"**, Astrophysics and Space Science Library, Vol. 401, ed. V. Joergens, Springer *Latest News on the Physics of Brown Dwarfs* (invited conference)
3. **Baraffe, I.**, Chabrier, G., Fortney, J., Sotin, C. 2014, PPVI, eds. H. Beuther, C. Dullemond, T. Henning and R. Klessen, *Planetary internal structures* (invited conference)
4. Fortney, J., **Baraffe, I.**, Militzer, B. 2010, in **"Exoplanets"**, ed. S. Seager, Space Science Series of the University of Arizona Press (Tucson, AZ), *Interior Structure and Thermal Evolution of Giant Planets*

5. **Baraffe, I.**, Chabrier, G., Barman, T. 2010, Report on Progress in Physics, 73, 016901, *The physical properties of extra-solar planets*
6. Chabrier, G., **Baraffe, I.,** Selsis, F., Barman, T., Hennebelle, P., Alibert, Y. 2007, PPV, eds. B. Reipurth, D. Jewitt, K. Keil, University of Arizona Press, p. 623, *Gaseous planets, protostars and young brown dwarfs: birth and fate*
7. Mathieu, R., **Baraffe, I.,** Simon, M., Stassun, K., White, R. 2007, PPV, eds. B. Reipurth, D. Jewitt, K. Keil, University of Arizona Press, p. 411, *Dynamical mass measurements of pre-main sequence objects: fundamental tests of the physics of young stars*
8. Chabrier, G., **Baraffe**, I. 2000, Annual Review of Astronomy and Astrophysics, 38, 337, *The theory of low mass stars and substellar objects*

Diffusion des connaissances

- **Baraffe, I.** 2012, Chapter in the Report on Research and High Education Excellence, British Parliamentary Yearbook, Edition 2012
- **Baraffe, I.** 2007, NAINES BRUNES dans "La Science au présent", Encyclopaedia Universalis 2007
- **Baraffe, I.** et Chabrier, G. 2001, Article in "Pour la Science", janvier 2001, dossier "Vie et Moeurs des étoiles", *Un monde entre le Soleil et Jupiter*, p. 58
- **Baraffe, I.**, 2000, Participation au livre "Chercher", ed. Autrement, 2000, p. 85

Publications de rang A

1. Sainsbury-Martinez, F. et al. 2023, MNRAS, 524, 1316, *Evidence of radius inflation in radiative GCM models of WASP-76b due to the advection of potential temperature*
2. Le Saux, A., **Baraffe, I.** et al. 2023, MNRAS, 522, 2835, *Two-dimensional simulations of internal gravity waves in a 5 $M_\odot$ zero-age-main-sequence model*
3. **Baraffe, I.** et al. 2023, MNRAS, 519, 5333, *A study of convective core overshooting as a function of stellar mass based on two-dimensional hydrodynamical simulations*
4. Chabrier, G., **Baraffe, I.** et al. 2023, A&A, 671, 119, *Impact of a new H/He equation of state on the evolution of massive brown dwarfs. New determination of the hydrogen burning limit*
5. Snellen, I. et al. 2022, ExA, 54, 1237, *Detecting life outside our solar system with a large high-contrast-imaging mission*
6. Hinkley, S. et al. 2022, PASP, 134, *The JWST Early Release Science Program for the Direct Imaging and Spectroscopy of Exoplanetary Systems*
7. Vlaykov, D., **Baraffe, I.** et al. 2022, MNRAS, 514, 715, *Impact of radial truncation on global 2D hydrodynamic simulations for a Sun-like model*
8. Le Saux, A.,Guillet, T., **Baraffe, I.** et al. 2022, A&A, 660, 51, *Two-dimensional simulations of solar-like models with artificially enhanced luminosity. II. Impact on internal gravity waves*
9. Andrassy, R., et al. 2022, A&A, 659, 193, *Dynamics in a stellar convective layer and at its boundary: Comparison of five 3D hydrodynamics codes*
10. **Baraffe, I.** et al. 2022, A&A, 659, 53, *Local heating due to convective overshooting and the solar modelling problem*
11. Constantino, T., **Baraffe, I.** et al. 2021, A&A, 654, 146, *Suppression of lithium depletion in young low-mass stars from fast rotation*
12. **Baraffe, I.**, Pratt, J., Vlaykov, D., et al. 2021, A&A, 654, 126, *Two-dimensional simulations of solar like models with artificially enhanced luminosity -I. impact on convective penetration*
13. Houllé, M., Vigan, A. et al. 2021, A&A, 652, 67, *Direct imaging and spectroscopy of exoplanets with the ELT/HARMONI high-contrast module*
14. Otten, G., Vigan, A., Muslimov, E. et al. 2021, A&A, 646, 150 *Direct characterization of young giant exoplanets at high spectral resolution by coupling SPHERE and CRIRES+*

15. Tremblin, P., Phillips, M., Emery, A. et al. 2020, A&A, 643, 23 *Rotational spectral modulation of cloudless atmospheres for L/T brown dwarfs and extrasolar giant planets*
16. Pratt, J., **Baraffe, I.**, Goffrey, T., et al. 2020, A&A, 638, 15 *Comparison of 2D and 3D compressible convection in a pre-main sequence star*
17. Phillips, M., Tremblin, P., **Baraffe, I.** et al. 2020, A&A, 673, 38 *A New Set of Atmosphere and Evolution Models for Cool T/Y Brown Dwarfs and Giant Exoplanets*
18. Debras, F., Mayne, N., **Baraffe, I.** et al. 2020, A&A, 633, 2 *Acceleration of superrotation in simulated hot Jupiter atmospheres*
19. Sainsbury-Martinez, F., Wang, P., Fromang, S. et al. 2019, A&A, 632,114 *Idealised Simulations of the Deep Atmosphere of Hot Jupiters: Deep, Hot, Adiabats as a Robust Solution to the Radius Inflation Problem*
20. Popov, M., Walder, R., Folini, D. et al. 2019, A&A, 630, 129 *A well-balanced scheme for the simulation tool-kit A-MaZe : implementation, tests, and first applications to stellar structure*
21. Tremblin, P., Padioleau, T., Phillips, M. et al. 2019, ApJ, 876, 144 *Thermo-compositional Diabatic Convection in the Atmospheres of Brown Dwarfs and in Earth?s Atmosphere and Oceans*
22. Mayne, N., Drummond, B., Debras, F. et al. 2019, ApJ, 871, 56 *The Limits of the Primitive Equations of Dynamics for Warm, Slowly Rotating Small Neptunes and Super Earths*
23. Drummond, B., Mayne, N., Manners, J. et al. 2018, ApJ, 869, 28 *The 3D Thermal, Dynamical, and Chemical Structure of the Atmosphere of HD 189733b: Implications of Wind-driven Chemistry for the Emission Phase Curve*
24. **Baraffe, I.**, & Chabrier, G. 2018, A&A 619, 177 *A closer look at the transition between fully convective and partly radiative low-mass stars*
25. Constantino, T., & **Baraffe, I.** 2018, A&A, 618, 177 *Significant uncertainties from calibrating overshooting with eclipsing binary systems*
26. Drummond, B., Mayne, N., **Baraffe, I.** et al. 2018, A&A, 612, 105 *The effect of metallicity on the atmospheres of exoplanets with fully coupled 3D hydrodynamics, equilibrium chemistry, and radiative transfer*
27. Goyal, J., Mayne, N., Sing, D. et al. 2018, MNRAS, 474, 5158 *A library of ATMO forward model transmission spectra for hot Jupiter exoplanets*
28. Drummond, B., Mayne, N., Manners, J. et al. 2018, ApJ Letter, 855, 31 *Observable Signatures of Wind-driven Chemistry with a Fully Consistent Three-dimensional Radiative Hydrodynamics Model of HD 209458b*
29. **Baraffe, I.**, Pratt, J., Goffrey, T. et al. 2017, ApJ Letter, 845, L6 *Lithium depletion in solar-like stars: effect of overshooting based on realistic multi-dimensional simulations*
30. Tremblin, P., Chabrier, G., **Baraffe, I.** et al. 2017, ApJ, 850, 46 *Cloudless Atmospheres for Young Low-gravity Substellar Objects*
31. Mayne, N., Debras, F., **Baraffe, I.** et al. 2017, A&A 604, 79 *Results from a set of three-dimensional numerical experiments of a hot Jupiter atmosphere*
32. Tremblin, P., Chabrier, G., Mayne, N. et al. 2017, 841, 30 *Advection of Potential Temperature in the Atmosphere of Irradiated Exoplanets: A Robust Mechanism to Explain Radius Inflation*
33. Pratt, J., **Baraffe, I.**, Goffrey, T. et al. 2017, A&A, 604, 125 *Extreme value statistics for two-dimensional convective penetration in a pre-main sequence star*
34. Goffrey, T., Pratt, J., Viallet, M. et al. 2017, A&A 600, 7 *Benchmarking the Multidimensional Stellar Implicit Code MUSIC*
35. Amundsen, D., Tremblin, P., Manners, J. et al. 2017 A&A, 598, 97 *Treatment of overlapping gaseous absorption with the correlated-k method in hot Jupiter and brown dwarf atmosphere models*
36. **Baraffe, I.**, Elbakyan, V., Vorobyov, E., Chabrier G. 2017, A&A, 598, 97 *Self-consistent evolution of accreting low-mass stars and brown dwarfs*
37. Amundsen, D., Mayne, N., **Baraffe, I.**, et al. 2016, A&A, 595, 36 *The UK Met Office GCM with a sophisticated radiation scheme applied to the hot Jupiter HD 209458b*
38. Drummond, B., Tremblin, P., **Baraffe, I.**, et al. 2016, A&A, 594, 69 *The Effects of Consistent Chemical*

Kinetics Calculations on the Pressure-Temperature Profiles and Emission Spectra of Hot Jupiters
39. Pratt, J., **Baraffe, I.**, Goffrey, T., et al. 2016, A&A, 593, 121 *Spherical-shell boundaries for two-dimensional compressible convection in a star*
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41. Lacour, S., et al. 2016, A&A, 590, 90 *An M-dwarf star in the transition disk of Herbig HD 142527. Physical parameters and orbital elements*
42. Geroux, C., **Baraffe, I.**, Viallet, M., et al. A&A, 588, 85 *Multi-dimensional structure of accreting young stars*
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44. Viallet, M., Goffrey, T., **Baraffe, I.**, et al. 2016, A&A, 586, 153 *A Jacobian-free Newton-Krylov method for time-implicit multidimensional hydrodynamics. Physics-based preconditioning for sound waves and thermal diffusion*
45. McAllister, M., Littlefair, S., **Baraffe, I.**, et al. 2015, MNRAS, 451, 114 *PHL 1445: an eclipsing cataclysmic variable with a substellar donor near the period minimum*
46. Hinkley, S., et al. 2015, ApJ, 805, L10 *Early Results from VLT SPHERE: Long-slit Spectroscopy of 2MASS 0122-2439 B, a Young Companion Near the Deuterium Burning Limit*
47. Tremblin, P., Amundsen, D., Mourier, P., **Baraffe, I.**, et al. 2015, ApJ, 804, L17 *Fingering Convection and Cloudless Models for Cool Brown Dwarf Atmospheres*
48. **Baraffe, I.**, Homeier, D., Allard, F., Chabrier, G. 2015, A&A, 577, 42 *New evolutionary models for pre-main sequence and main sequence low-mass stars down to the hydrogen-burning limit*
49. Matt, S., Brun, S., **Baraffe, I.**, et al. 2015, ApJ, 799, L23 *The Mass-dependence of Angular Momentum Evolution in Sun-like Stars*
50. Amundsen, D., **Baraffe, I.**, Tremblin, P. et al. 2014, A&A, 564, 59 *Accuracy tests of radiation schemes used in hot Jupiter global circulation models*
51. Mayne, N. J., **Baraffe, I.**, Acreman, D. M. et al. 2014, A&A, 561, 1 *The unified model, a fully-compressible, non-hydrostatic, deep atmosphere global circulation model, applied to hot Jupiters*
52. Mayne, N. J., **Baraffe, I.**, Acreman, D. M. et al. 2013, Geoscientific Model Development Discussions, 6, 3681 *Using the UM dynamical cores to reproduce idealised 3-D flows*
53. Vorobyov, E., **Baraffe, I.**, Harries, T, Chabrier, G. 2013, A&A, 557, 35 *The effect of episodic accretion on the phase transition of CO and CO_2 in low-mass star formation*
54. Viallet, M., **Baraffe, I.**, Walder, R. 2013, A&A, 555, 81 *Comparison of different nonlinear solvers for 2D time-implicit stellar hydrodynamics*
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56. Viallet, M., **Baraffe, I.** 2012, A&A, 546, 113 *Scenarios to explain extreme Be depletion in solar-like stars: accretion or rotation effects?*
57. Knigge, C., **Baraffe, I.**, Patterson, J. 2011, ApJS, 194, 26 *The Evolution of Cataclysmic Variables as Revealed by Their Donor Stars*
58. Viallet, M., **Baraffe, I.**, Walder, R. 2011, A&A, 531, 86 *Towards a new generation of multi-dimensional stellar evolution models: development of an implicit hydrodynamic code*
59. **Baraffe, I.**, Chabrier, G. 2010, A&A, 512, 44 *Effect of episodic accretion on the structure and the lithium depletion of low-mass stars and planet-hosting stars*
60. Morales, J-C, Gallardo, J, Ribas, I. et al. 2010, ApJ, 718, 502 *The Effect of Magnetic Activity on Low-Mass Stars in Eclipsing Binaries*
61. Leconte, J., Summer, R., Hinkley, S. et al. 2010, ApJ, 716, 1151*The Lyot Project Direct Imaging Survey of Substellar Companions: Statistical Analysis and Information from Nondetections*
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evolution of the first CoRoT exoplanets: Probing the Brown Dwarf/Planet overlapping mass regime
64. Alibert, Y., Pont, F., **Baraffe, I.**, et al. 2009, A&A, in 506, 391 *Planet formation by nucleated instability, comparison with the two first CoRoT runs*
65. Mulet-Marquis, C., **Baraffe, I.**, Aigrain, S., F.Pont. 2009, A&A, 506, 153 *Accuracy of stellar parameters of exoplanet-host stars determined from asteroseismology*
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67. Liu, Q., de Grijs, R. Deng, L. C. Hu, Y., **Baraffe, I.**, Beaulieu, S. F. 2009, MNRAS, 396, 1665 *The initial mass function of the rich young cluster NGC 1818 in the Large Magellanic Cloud*
68. Pinfield, D.J. et al. 2008, MNRAS, 390, 304 *Fifteen new T dwarfs discovered in the UKIDSS Large Area Survey*
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70. Bouvier, J. et al. 2008 A&A, 481, 661 *Brown dwarfs and very low mass stars in the Hyades cluster: a dynamically evolved mass function*
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72. Chabrier, G.; Gallardo, J.; **Baraffe, I.** 2007, A&A Let., 472, 17 Evolution of low-mass star and brown dwarf eclipsing binaries
73. Littlefair, S. P.; Dhillon, V. S.; Marsh, T. R.; Gaensicke, B. T.; **Baraffe, I.;** Watson, C. A. 2007, MNRAS, 381, 827 *SDSS J150722.30+523039.8: a CV formed directly from a detached white dwarf/brown dwarf binary?*
74. Chabrier, G., **Baraffe, I.** 2007, ApJ Let., 661, 81 *Heat Transport in Giant (Exo)planets: A New Perspective*
75. Kendall, T.R., et al. 2007, A&A, 466, 1059 *Two T dwarfs from the UKIDSS early data release*
76. Lodieu, N. et al. 2007, MNRAS, 379, 1423 *Eight new T4.5-T7.5 dwarfs discovered in the UKIDSS Large Area Survey Data Release 1*
77. Mulet-Marquis, C.; Glatzel, W.; **Baraffe, I.**; Winisdoerffer, C. 2007, A&A, 465, 937 *Nonradial oscillations in classical Cepheids: the problem revisited*
78. Levrard, B., Correia, A., Chabrier, G., **Baraffe, I.**, Selsis, F., Laskar, J. 2007, A&A Let., 462, 5 *Tidal dissipation within hot Jupiters: a new appraisal*
79. Alibert, Y., **Baraffe, I.,** Benz, W., et al. 2006, A&A Let., 455, 25 *Formation and structure of the three Neptune-mass planets system around HD 69830*
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89. Martin, E.L., Navascues, D., **Baraffe, I.**, Bouy, H., Dahm, S. 2003, ApJ, 594, 525 *A Hubble Space Telescope Wide Field Planetary Camera 2 Survey for Brown Dwarf Binaries in the α Persei and Pleiades*

Open Clusters
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101. Chabrier, G., **Baraffe**, I, Allard, F., Hauschildt, P.H. 2000, APJ Let., 542, 119 *Deuterium-burning in substellar objects*
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104. Kolb, I., 2000, NewAR, 44, 99 *Secondary stars in CVs: the theoretical perspective*
105. Kolb, U., **Baraffe**, I. 1999, MNRAS, 309, 1034 *Brown dwarfs and the cataclysmic variable period minimum*
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119. Aubert O., Prantzos N., **Baraffe** I., 1996 A&A, 312, 845 *Evolution and Nucleosynthesis of a 20 $M_\odot$ Star, up to Oxygen Ignition*
120. **Baraffe** I., Chabrier G., 1996 ApJ Let., 461, 51 *Mass-Spectral Class Relationship for M Dwarfs*
121. Chabrier G., **Baraffe** I., Plez B., 1996 ApJ Let., 459, 91 *Mass-Luminosity Relationship and Lithium Depletion for Very Low Mass Stars*
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123. Chabrier G., **Baraffe** I. et Méra D., 1995, Space Science Review, 74, 355 *Evolution of Low-Mass Stars. Implications for the Dark Matter Distribution in the Halo.*
124. Chabrier G., **Baraffe** I., 1995, ApJ Let., 451, 29 *CM Draconis and YY Geminorum: Agreement Between Theory and Observation*
125. **Baraffe** I., Chabrier G., Allard F., Hauschildt P.H., 1995, ApJ Let., 446, 35 *New evolutionary tracks for very low-mass stars*
126. Lee U. et **Baraffe** I. 1995, A&A, 301, 419 *Pulsational stability of rotating main sequence stars: the second order effect of rotation on the non adiabatic oscillations*
127. Käppeler F., Wiescher M., Giesen U., J. Görres, **Baraffe** I., et al. 1994, ApJ, 437, 396 *Reaction rates for $^{18}O(\alpha,\gamma)^{22}Ne$, $^{22}Ne(\alpha,\gamma)^{262}Mg$ and $^{22}Ne(\alpha,n)^{25}Mg$ in stellar helium burning*
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129. **Baraffe** I., El Eid M. F. et Prantzos N. 1992, A&A, 258, 357 *S-process in massive stars of variable composition*
130. **Baraffe** I. et El Eid M. F. 1991, A&A, 254, 548. *Evolution of massive stars with variable compositions*
131. Descouvemont P. et **Baraffe** I. 1990, Nuclear Physics, A514, 66 *Microscopic cluster study of the ^{12}B and ^{12}N systems and application to a hot pp chain in zero-metal stars*
132. Langer N., El Eid M. F. et **Baraffe** I. 1989, A&A Let., 224, 17 *Blue supergiant supernova progenitor*

Présentations invitées à des conférences, ateliers et écoles

1. **Baraffe, I. 2023** "Fluid Mechanics of planets and stars", Ecole d'Udine, April 2023
2. **Baraffe, I. 2022** "Magnetic field evolution in low density or strongly stratified plasmas", Nordita program, Stockholm, Juin 2022
3. **Baraffe, I. 2022** "Mathematical aspects of turbulence: where do we stand?", Isaac Newton Institute for Mathematical Sciences, Cambridge, May 2022 (Invited talk: Turbulent convection, penetration and waves in stellar interiors: the challenges of multi-dimensional hydrodynamical simulations)
4. **Baraffe, I. 2021** "Transport in Stellar Interiors", KITP conference Sant-Barbara, November 2021 (Invited review: An Overview of 3D Modeling of Stellar Interiors)
5. **Baraffe, I. 2021** "From Moon to Mars: Alexander Kemurdzhian 100", Armenia, October 2021 (invited talk: From Mars to Exoplanets: a journey beyond our Solar System)
6. **Baraffe, I. 2021** "Sagan Summer Workshop", July 2021
7. **Baraffe, I. 2019** "Physics at the equator: from the lab to the stars", Lyon, October 2019
8. **Baraffe, I. 2019** "Astrophysical Dynamics", Shanghai, July 2019
9. **Baraffe, I. 2019** PASC19 "Multidimensional stellar evolution: bridging the modelling and computational challenges", Zurich, June 2019
10. **Baraffe, I. 2018** Division Days of the IAU General Assembly, Vienna, August 2018
11. **Baraffe, I. 2018** "Exoplanet II", Cambridge, July 2018

12. **Baraffe, I. 2018** ”Rotating Convection: from the Lab to the Stars”, Leiden, May 2018
13. **Baraffe, I. 2017** ”Astrosim: Ecole numérique pour l’astrophysique”, Lyon, July 2017
14. **Baraffe, I. 2017** ”Stellar Hydrodynamics IV”, Victoria BC, May 2017
15. **Baraffe, I. 2017** ”Carving through the Codes: Challenges in Computational Astrophysics”, Davos, February 2017
16. **Baraffe, I. 2016** Exoplanets I conference, Davos, July 2016
17. **Baraffe, I. 2015** Wetton Workshop on ”Realising the Astronomy of the Future”, Oxford, April 2015
18. **Baraffe, I. 2015** ”Matter in Extreme Conditions: from Material science to Planetary physics”, Montgenevre, February 2015
19. **Baraffe, I. 2014**, Premier atelier PLATO, Marseille, October 2014
20. **Baraffe, I. 2014**, CoRoT Symposium 3, Kepler KASC-7 joint meeting ”The Space Photometry Revolution ”, Toulouse, Juillet 2014
21. **Baraffe, I. 2014**, ”Oort 2014 Workshop on Episodic Accretion”, Leiden, Mai 2014
22. **Baraffe, I. 2014**, ”International conference in the Rencontres du Vietnam series”, Vietnam, Avril 2014
23. **Baraffe, I. 2013**, ”Protostar & Planet”, Heidelberg, juillet 2013
24. **Baraffe, I. 2013**, RAS meeting ”Characterising exoplanets: detection, formation, interiors, atmospheres and habitability”, Londres, Mars 2013
25. **Baraffe, I. 2012**, ”50 years Birthday of Brown Dwarfs”, Ringberg Tegernsee, octobre 2012
26. **Baraffe, I. 2012**, ”The Origins of Stars and Their Planetary Systems” MacMaster University, Hamilton, juin 2012
27. **Baraffe, I. 2012**, ”Cool stars 17”, splinter session ”Measuring the ages of low-mass stars and brown dwarfs”, Barcelone, juin 2012
28. **Baraffe, I. 2012**, NAM meeting, Manchester, Exoplanet session
29. **Baraffe, I. 2011**, ”Formation and early evolution of very low mass stars and brown dwarfs”, Garching, 2011
30. **Baraffe, I. 2 011**, ”New horizons in time domain”, IAU Symposium 285, Oxford, September 2011
31. **Baraffe, I. 2010**, ”The Origin of Stellar masses”, Tenerife, October 2010
32. **Baraffe, I. 2010**, Cool stars 16, Seattle, August 2010
33. **Baraffe, I. 2009**, ”Origins of Solar Systems” Gordon Research Conference, Mt Holyoke College, July 2009
34. **Baraffe, I. 2009**, ”Young stars, brown dwarfs, and protoplanetary disks”, IAU XXVII General Assembly, Rio de Janeiro 2009
35. **Baraffe, I. 2008**, Cool stars 15, Splinter session ”Fundamental properties of Low-Mass Stars and Brown dwarfs” , St Andrews, July 2008
36. **Baraffe, I. 2008**, ”Extra-solar Super-Earths”, Nantes, june 2008
37. **Baraffe, I. 2007**, ”Extreme Solar Systems”, Santorini june 2007
38. **Baraffe, I. 2007**, ”Structure formation in the Universe”, Chamonix June 2007
39. Mathieu, R., **Baraffe, I.,** Simon, M., Stassun, K., White, R. 2007, Protostar and Planets V, Hilo 2005 *Dynamical mass measurements of pre-main sequence objects: fundamental tests of the physics of young stars*
40. Mohanty, S., **Baraffe, I.**, Chabrier, G. 2007 IAU Symp. 239, 197 *Convection in brown dwarfs*
41. **Baraffe, I. 2006**, ”From Stars to Galaxies: building the Pieces to build the Universe”, Venise octobre 2006
42. **Baraffe, I. 2006**, ”Planetary Science: challenges and discovery”, XVIIIemes Rencontres de Blois, Mai 2006
43. **Baraffe, I. 2005**, Space Science Reviews, 116, 67 *Structure and Evolution of Giant Planets*
44. **Baraffe, I. 2004**, ”Astrophysics of Planetary Systems”, The Third Harvard-Smithsonian Conference on Theoretical Astrophysics, Harvard University, mai 2004
45. **Baraffe, I. 2004**, ”A Comparative Study of the Outer Planets before the Exploration of Saturn by Cassini-Huygens”, ISSI workshop, Bern, january 2004
46. **Baraffe, I.** , Chabrier, G., Allard, F., Hauschildt, P. 2003, ”Brown dwarfs”, IAU symposium, Vol. 211, ed. E. Martin, Astronomical Society of the Pacific, p. 41

47. **Baraffe, I. 2002**, ”The Physics of Cataclysmic Variables and Related Objects”, ASP Conference Proc., Vol. 261. Eds. B. T. Gänsicke, K. Beuermann, and K. Reinsch, p. 2
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49. **Baraffe, I. 2002**, ”GAIA: A European Space project”, Eds O. Bienaymé and C. Turon, EDP Sciences, 2002, pp.191-197
50. **Baraffe, I.**, Chabrier, G., Allard, F., Hauschildt, P.H. 2001 ”From darkness to light: origin and evolution of young stellar clusters”, ASP Conf Series, Vol. 243, ed. T. Montmerle and P. André, p. 571
51. **Baraffe, I.**, Chabrier, G., Allard, F., Hauschildt, P.H. 2001, ”The Formation of Binary Stars”, IAU Symp. 200, ed. H. Zinnecker and R. Mathieu, Astronomical Society of the Pacific, p. 483
52. **Baraffe, I. 2001**, Ecole de Goutelas 23, eds D. Egret, J.-L. Halbwachs, and J.-M. Hameury. Publisher: Societe Francaise d'Astronomie et d'Astrophysique (SF2A), p. 307
53. **Baraffe, I.**, Alibert,Y. 2000, ”The Impact of Large-Scale Surveys on Pulsating Star Research”, ASP Conference Series, Vol. 203; Ed. L. Szabados and D. Kurtz, p.193
54. **Baraffe I.**, Chabrier,G. 2000, ”Very Low-Mass Stars and Brown Dwarfs”, ed. R. Rebolo and M. R. Zapatero-Osorio, Cambridge University Press, UK, p.186
55. **Baraffe, I. 1999**, ”Stellar Structure: Theory and test of Convective Energy Transport”, ASP Conference Series, Vol. 173, eds. A. Gimenez, E.F. Guinan, p.111
56. **Baraffe, I. 1999**, ”From giant planets to cool stars”, Flagstaff, Arizona, june 1999
57. **Baraffe, I.**, Allard, F. 1998, ”Fundamental Stellar Properties: the Interaction between Observations and Theory”, eds T.R Bedding, A.J Booth and J. Davis, IAU Symp. 189, p. 227
58. **Baraffe I.**, Chabrier G., 1997, ”Brown Dwarfs and Extra-solar Planets”, Ed. R. Rebolo et al., ASP Conference Series, 134, p. 345
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