

## A SELECTION OF RELEVANT PUBLICATIONS IN INTERNATIONAL JOURNALS SINCE 2003

1. C.D. Pérez-Segarra, J. Rigola, A. Oliva, "Modeling and numerical simulation of the thermal and fluid dynamic behavior of hermetic reciprocating compressors. Part 1: Theoretical basis", *Int. Journal of Heating, Ventilating, Air Conditioning and Refrigerating Research*, Vol. 9, Num 2, p.215-235. Abril, 2003.
2. J.Rigola, C.D. Pérez-Segarra, A.Oliva, "Modeling and numerical simulation of the thermal and fluid dynamic behavior of hermetic reciprocating compressors. Part 2: Experimental investigation", *Int. Journal of Heating, Ventilating, Air Conditioning and Refrigerating Research*, Vol. 9, Num 2, p.237-249. Abril, 2003.
3. M. Soria, C.D. Pérez-Segarra, A. Oliva, "A direct Schur-Fourier Decomposition for the solution of Three-dimensional Poisson Equation of Incompressible Flow using Loosely Coupled Parallel Computers", *Numerical Heat Transfer. Part B: Fundamentals*, Vol. 43, p.467 – 488, 2003.
4. J. Cadafalch, A. Oliva, G. van der Graaf, X. Albets, "Natural Convection in a Large Channel with Asymmetric Radiative Coupled Isothermal Plates", *Journal of Heat Transfer*, Vol. 125, n° 5, p.812-820, 2003.
5. R. Cònsul, C.D. Pérez-Segarra, K. Claramunt, J. Cadafalch, A. Oliva, "Detailed numerical simulation of laminar flames by a parallel multiblock algorithm using loosely coupled computers", *Combustion Theory and Modelling*, Vol. 7, p.525 – 544, 2003.
6. D. Faggembauu, M. Costa, M. Soria, A. Oliva, "Numerical analysis of the thermal behaviour of glazed ventilated facades in Mediterranean climates. Part I: Development and validation of a numerical model", *Solar Energy*, Vol. 75, N° 3, p.217 – 228, 2003.
7. D. Faggembauu, M. Costa, M. Soria, A. Oliva, "Numerical analysis of the thermal behaviour of glazed ventilated facades in Mediterranean climates. Part II: Applications and analysis of results", *Solar Energy*, Vol 75, N° 3, p.229 – 239, 2003.
8. J. Castro, L. Leal, C.D. Pérez-Segarra, P. Pozo, "Numerical study of the enhancement produced in absorption processes using surfactants", *International Journal of Heat and Mass Transfer*, Vol. 47, p.3463 – 3476, 2004.
9. G. Colomer, M. Costa, R. Cònsul, A. Oliva, "Three – dimensional numerical simulation of convection and radiation in a differentially heated cavity using the discrete ordinates methods", *International Journal of Heat and Mass Transfer*, Vol. 7, n° 2, p.257 – 269, 2004.
10. O. García-Valladares, C.D. Pérez-Segarra, and J. Rigola, "Numerical simulation of double-pipe condensers and evaporators", *International Journal of Refrigeration*, Vol 27, p.656-670, 2004.
11. M. Soria, X. Trias, C.D. Pérez-Segarra, A. Oliva, "Direct numerical simulation of the three-dimensional natural convection flow in a differentially heated cavity of aspect ratio 4", *Numerical Heat Transfer. Part A: Applications*, Vol 45, 2004.
12. K. Claramunt, R. Cònsul, C.D. Pérez-Segarra, A. Oliva, "Multidimensional Mathematical Modelling and Numerical Investigation of Co-flow Partially Premixed Methane/Air Laminar Flames", *Combustion and Flame Elsevier Science*, Vol. 137, p.444 – 457, 2004.
13. J. Rigola, G. Raush, C.D. Pérez-Segarra, A. Oliva, "Detailed experimental validation of the thermal and fluid dynamics behavior of hermetic reciprocating compressors", *Int. Journal of Heating, Ventilating, Air Conditioning and Refrigerating Research*, Vol. 10, p.291-306, 2004.
14. R. Cònsul, I. Rodríguez, C.D. Pérez-Segarra, M. Soria, "Virtual prototyping of storage tanks by means of three-dimensional CFD and heat transfer numerical simulations", *Solar Energy*, Vol. 77, p.179 – 191, 2004.
15. G. Raush, J. Rigola, C.D. Pérez-Segarra, A. Oliva, "A novel Sigma-Delta ADC application oriented to test hermetic reciprocating compressors. *Measurements Science and Technology*, Vol. 15, p.2207-2214, 2004.
16. C.D. Pérez-Segarra, J. Rigola, M. Soria, A. Oliva, "Detailed thermodynamic characterization of hermetic reciprocating compressors", *International Journal of Refrigeration*, Vol. 28, No.4, p.579-593, 2005.
17. J. Rigola, C.D. Pérez-Segarra, A. Oliva, "Parametric studies on hermetic reciprocating compressors", *International Journal of Refrigeration*, Vol. 28, No.2, p.253-266, 2005.
18. J. Rigola, G. Raush, C.D. Pérez-Segarra, A. Oliva, "Numerical simulation and experimental validation of vapour compression refrigeration systems. Special emphasis on CO<sub>2</sub> trans-critical cycle." *International Journal of Refrigeration*, Vol. 28, No.2, p.1225-1237, 2005.
19. C.D. Pérez-Segarra, C. Farré, J. Cadafalch, A. Oliva, "Analysis of different numerical schemes for the resolution of convection - diffusion equations using finite volume methods on three dimensional unstructured grids. Part I: Discretization schemes.", *Numerical Heat Transfer, Part B: Fundamentals*, 2005(Accepted).
20. C. Farré, C.D. Pérez-Segarra, M. Soria, A. Oliva, "Analysis of different numerical schemes for the resolution of convection - diffusion equations using finite volume methods on three dimensional unstructured grids. Part II: Numerical Analysis.", *Numerical Heat Transfer, Part B: Fundamentals*, 2005(Accepted).
21. F.X. Trias, M. Soria, C.D. Pérez-Segarra, A. Oliva, "A direct Schur-Fourier decomposition for the efficient solution of high - order Poisson equations on loosely coupled parallel computers.", *Numerical Linear Algebra with Applications*, 2005(Accepted).
22. K. Claramunt, R. Cònsul, D. Carbonell, C.D. Pérez-Segarra, "Analysis of the laminar flamelet concept for non-premixed laminar flames.", *Combustion and Flame*, 2005(Accepted).

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