

JAMEL A. ORFI

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Summary

Dr. Jamel Orfi obtained his PhD Degree from the University of Sherbrooke, Canada in 1995. He worked in Tunisia and Canada as assistant Professor. His research interests focus on desalination processes and thermodynamic analysis of thermal and desalination systems, as well as on renewable energy applications (geothermal and solar). He developed several national and international collaborations and worked on project in power and desalination, solar energy, evaporative cooling systems, and brine discharge problems. He has several publications on solar desalination and systems including a book chapter on modeling of a membrane distillation unit for desalination. Dr. Orfi is a member of KSU's MED (Multiple Effect Distillation) technology transfer team collaborating with SWCC (Saline Water Conversion Corporation). Dr Orfi has been involved in teaching Thermal Sciences and Desalination to undergraduate and graduate students.

EDUCATION

Ph.D. Mechanical Engineering, University of Sherbrooke, Canada (1991-1995)

Advisors: Prof. N. Galanis and C.T. Nguyen

Dissertation: *Mixed Convection inside Inclined Tubes: Simultaneous Development and Bifurcation Phenomena*

M.A.Sc. Mechanical Engineering, University of Sherbrooke, Canada (1989-1991)

Advisors: Prof. N. Galanis and C.T. Nguyen

Thesis: *Numerical Study of Natural Convection Effects in Fully Developed Flow in Circular Tubes*

B.A.Sc. Mechanical Engineering, Laval University, Québec, Canada (1985-1988).

- Full Scholarship: Government of Tunisia (B.A.Sc. and M.A.Sc.); University of Sherbrooke (Ph.D.)
- Post Doctoral diplôme (HDR) «Habilitation à Diriger des Recherches » Faculty of Sciences of Tunis, May 2006.
- Adjunct Professor, University of Sherbrooke, Canada (2007-2010).
- Awarded a ten month grant from the *Abdus Salam International Centre for Theoretical Physics*, Italy - ITCP, Training and Research in Italian Laboratories- TRIL Programme (July 2006, declined - I accepted an academic Position in Canada).
- Participated, under invitation, to the NATO Advanced Research Workshop on “*Solar Desalination for the 21st Century*”, Feb. 23-25 2006, Hammamet, Tunisia.
- Member of KSU technical team collaborating with the Saline Water Conversion Corporation (SWCC) for transferring multiple effect distillation (MED) technology and developing a design guide for MED plants (2011-2013).
- Awarded a Visiting Scholars' Fund, Aston University, Birmingham, UK (1-16 July 2014)
- Best Poster Award, Euro Med 2015, Desalination for Cleat Water and Energy, Palermo, Italy, 10-14 May, 2015.
- Attended Short Courses on:
 - « *New Trends in Membrane Desalination* » Kacst, Riyadh, KSA, Feb 25, 2014.
 - « *Desalination Economics and Cost Evaluation* » Riyadh, KSA, April 9, 2012.
 - « *Application and Optimization of Hybrid Power and Desalination Systems* » Riyadh, KSA, April 23, 2008
 - « *Reverse Osmosis Desalination* » (March 14-18, 2005, Tunis, Partial financial support from *Middle East Desalination Research Center MEDRC*).
 - « *Membrane technologies for water drinking and desalination* » (November 11-15, 2002, Delft, Holland, Full financial support from *MEDRC*).

EXPERIENCE

Research and teaching activities and Interests

- Desalination (Multiple Effect Distillation, Humidification–Dehumidification, Membrane Distillation); Solar/Geothermal Energy; Hybrid Power and Desalination systems)
- Thermodynamic analysis of Energy and Desalination systems
- Convective Heat Mass Transfer with Evaporation-Condensation
- Teaching undergraduate and graduate courses in Thermo-fluid Sciences and Desalination.

1. Associate Professor (30.06.2011 -)

Department of Mechanical Engineering,
King Saud University, Riyadh, Saudi Arabia.

2. Assistant Professor (01.08.2006 - 31.06.2007)

Faculty of Engineering, University of Moncton, New Brunswick, Canada

3. Assistant (01.10.97 - 21.12.06), Associate Professor (21.12.06 –30.01.12) and Full Professor

Faculty of Sciences of Monastir, University of Monastir, Tunisia

4. Researcher (01.10.1997 -01.08.2006)

Laboratoire d'Études des Systèmes Thermiques et Énergétiques (LESTE),
National School of Engineering, Monastir, Tunisia

5. Mechanical Engineer (10.96 - 09.97)

Ansaldo Energia, Constructor of thermal plants (350 MW), Tunis

6. Teaching Assistant (1989-1993)

Faculty of Applied Sciences, Sherbrooke University, Canada.

ACTIVITES RELATED TO THE SCIENTIFIC AND SOLCIAL COMMUNITIES

- Member of the Multidisciplinary graduation projects committee, College of Eng, KSU, Since June 2013.
- Member of the steering committee for the MSc in Desalination Engineering, KSU, Since 2011.
- External referee of research grant proposals for a number of local and external academic institutions
- Session chair at national and international scientific conferences.
- External evaluator of several PhD theses from University of Sherbrooke, Canada; Anna University Chennai, India; University of Sfax, Tunisia, etc.
- Reviewer for several journals including: Desalination, Desalination and Water Treatment, International Heat and Mass Transfer, Heat and Mass Transfer.

- Coordinator of the scientific committee of the 'International Conference on Computational Methods in Energy Engineering and Environment' held at Sousse, Tunisia, November, 20-22, 2009.
- Member of the scientific committee of:
 - Cifem 2010, Premier Colloque International Francophone d'énergétique et de Mécanique, 17-19 may, 2010, Dakar, Sénégal.
 - ATM 2010, Colloque de l'Association Marocaine de Thermique, May 2010, Agadir, Morocco.

- Guest editor for a special issue *on Desalination Driven by Renewable Energy* in Advances in Mechanical Engineering, 2012-2013.
- Associate Editor in: International Journal of Advanced ThermoFluid Research , 2012-- <http://ijatr.org/>
- Member in the Editorial Board of Scientific Journal: Mechanical Engineering, 2011- <http://www.twsj.com/>
- Member in the Editorial Board International Journal of Energy and Power Engineering, SciencePG.

- Member of the European Desalination Society (2004 -)
- Coordinator of ME Department Seminars, KSU, (Since Oct 2009).
- Member of several Departmental Committees:
 - Web Site Committee (Sept 2007- July 2008)
 - Graduate studies committee (Since Sept 2008);
 - Capstone Projects Committee (Since Oct. 2009).
- Voluntary judge, youth Canada Sciences, Truro, N.S., 15-17 may 2007.
- Member of the « Société Tunisienne de Physique » (Local section, 2002-2004);
- Member (graduate student) of the Electoral College for the Nomination of the President of the University of Sherbrooke (1992-1993).
- Member of the Executive of the Intercultural Association of the Univ. of Sherbrooke (90- 91).

RESEARCH ACTIVITIES

1. Research Grants-Contracts:

a. Activated Carbon/Methanol Adsorption Cooling System Driven by a Novel Solar-Powered Heat Engine, H. Alansary (PI), A. Mohamad, J. Orfi and H. Zohair, 1,229 kSR, NPST, **Recommended for funding March 2013.**

b. Study of the Technical Feasibility of Geothermal Driven Membrane Distillation for the Desalination of Local Brackish Water, National Projects of Science and Technology NPST, Kacst, Jamel Orfi (CO-I) with E. Ali, A. Ajbar, K. Alhumaizi and M. Boumaza, **Ongoing.**

c. Energy and exergy analysis of a cogeneration power and desalination plant, National Projects of Science and Technology NPST, Kacst, Jamel Orfi (PI) With Drs B. Salim, Z. Al-Suhaibani and H. Al Ansari, **Completed**, 2013.

d. Environmental Impact and Solutions for Desalination Plant Discharge into Shallow coastal regions, National Projects of Science and Technology NPST, Kacst, J. Orfi (CO-I) with Dr S. Sanea (PI), **Final reports submitted.**

e. Transient heat transfer investigation in a vertical flow, Research Center, College of Eng., KSU, with Dr M. Boumaza (PI), **Completed, 2009.**

f. Transport Phenomena in a membrane distillation unit, Research Center, College of Eng., KSU, **Completed**, 2013.

g. Autonomous Solar desalination system) 'Système de dessalement solaire autonome', AUF (Agence Universitaire de Francophonie), with Drs T. Maré (France), O. Sow and M. Adj (PI) (Senegal), 2008-2011, **completed**

h. "Transferts couplés de chaleur et de masse lors du dessalement de l'eau de mer", AUF (Agence Universitaire de la Francophonie), with Drs N Galanis, B. BenHamou, S. Ben Nasrallah, and C.T. Nguyen, **Completed**, 2004.

2. Supervision or co-supervision of:

4 MSc Thesis, (King Saud University)

- **Ongoing:** S. Ba-Akeem (with Dr H. AlAnsary); Z. Abdelwahed (with Dr Z. Kaneesamkandi); A. Albeladi (with Dr Z. Kaneesamkandi)
- **Completed:** E. Kerme (Completed, May 2015); M. AlHarbi (Completed, Jan 2015) (with Dr Z. Alsuhaibany); A. Zahrani (Completed, Sept 2013) (with Dr Z. Alsuhaibany)

1 Ph.D. thesis (École Nationale d'Ingénieurs de Monastir, Tunisia, Completed, Sept 2015).

4 Ph.D. thesis (Faculté des Sciences de Tunis 2001 and 2009; University of Sherbrooke, 2005, École Nationale d'ingénieurs de Monastir, Tunisia, 2006);

1 M.Sc.A thesis (University of Sherbrooke, Canada, 2003)

4 M.Sc. thesis (École Nationale d'Ingénieurs de Monastir, 1999, 2001, 2002 and 2006);

3. Publications

3.1 Book chapters

[BC1] S. Al-Sanea, and **J. Orfi**, Concentrated Brine and Heat Dispersion into Coastal Shallow Waters of the Arabian Gulf, Chapter 21, pp. 469-500, in *Intakes and outfalls for seawater reverse osmosis desalination facilities: Innovations and environmental impacts*, Editors T. M. Missimer, B. Jones, and R. G. Maliva, Springer, Berlin, 2015.

[BC2] **J. Orfi** and N. Loussif, Modeling of a Membrane Distillation unit for Desalination, **Book Chapter**, in *Desalination: Methods Costs and Technology*. Editor: I. A. Urboniene, ISBN: 978-1-61668-909-4; pp. 143-174; Nova Science Publishers, NY, 2010.

3.2 Journal papers

[58] Saleh S. Baakeem, **Jamel Orfi**, Hany AlAnsary, Performance of a Typical Simple Gas Turbine Unit under Saudi Weather Conditions, *International Journal of Fluid Mechanics & Thermal Sciences*. Vol. 1, No. 3, **2015**, pp. 59-71.
doi: 10.11648/j.ijfmts.20150103.14, NON ISI

[57] P Byrne, L Fournaison, A Delahaye, YA Ouméziane, L Serres,**J. Orfi**, T. Mare', A review on the coupling of cooling, desalination and solar photovoltaic systems, *Renewable and Sustainable Energy Reviews* 47, 703-717, **2015**, DOI:10.1016/j.rser.2015.03.083 • 5.51 Impact Factor.

[56] HF Öztop, P Estellé, WM Yan, K Al-Salem, **J Orfi**, O Mahian, A brief review of natural convection in enclosures under localized heating with and without nano-fluids, *International Communications in Heat and Mass Transfer* 60, 37-44, **2015**. DOI:10.1016/j.icheatmasstransfer.2014.11.001 • 2.12 Impact Factor.

[55] Esa Dube Kerme and **J. Orfi** , Exergy based thermodynamic analysis of solar driven organic Rankine cycle, *Journal of Thermal Engineering*, Vol. 1, Special Issue 5, pp. 192-202, February, **2015**. 1(5):192. DOI:10.18186/jte.25809 Non ISI.

[J54] N.Loussif and **J. Orfi**, Slip Flow Heat Transfer in Micro-tubes with Viscous Dissipation, *Desalination and Water treatment*, Volume 53, Issue 5, January **2015**, pages 1263-1274.

[J53] A.A. Mohamad, H. Al-Ansary and J. Orfi, Non-Darcy Fluid Flow and Heat Transfer in Conduits Fitted with Porous Media, *Journal of Porous Media*, 18(4):449-453, **2015**. DOI:10.1615/JPorMedia.v18.i4.70 • 0.47 Impact Factor.

[J52] M.M. Rahman, Hakan F. Öztop, S. Mekhilef, R. Saidur, **J. Orfi**, Simulation of unsteady heat and mass transport with heatline and massline in a partially heated open cavity, *Applied Mathematical Modelling*, 39 (5), 1597-1615, **2015**.

[J51] A. Dhahri, A. Omri and **J. Orfi**, Numerical Study of a Solar Chimney Power Plant, *Research Journal of Applied Sciences, Engineering and Technology* 8(18): 1953-1965, 2014. Non ISI.

[J50] P.A. Davies and **J. Orfi**, Self-Powered Desalination of Geothermal Saline Groundwater: Technical Feasibility. *Water* 2014, 6(11), 3409-3432; doi:10.3390/w6113409, 2014.

[J49] A.A. Mohamad, H. Alansary and **J. Orfi**, Natural Convection Between a Vertical Wall Exposed to Solar Energy and a Shaded Wall, *Arabian Journal for Science and Engineering*, Vol. 39, Issue 12, pp. 9127-9136, 2014; DOI:10.1007/s13369-014-1462-3 • ISI, 0.37 Impact Factor.

[J48] Nizar Loussif and **Jamel Orfi**, Heat and mass transfer inside micro-tubes with uniform injection, *Computers and Fluids*, 105 (2014) 244-250. DOI:10.1016/j.compfluid.2014.09.030 • **ISI**, 1.53 Impact Factor.

[J47] Muhammad Sadiq Munfath Khan and **Jamel Orfi**, Cooling performance and energy saving analysis of cascade refrigeration system powered by solar energy for Riyadh region (Saudi Arabia), *International Journal of Sustainable Building Technology and Urban Development*, 2014, Vol. 5, No. 1, 41–49, (Scopus, Non ISI).

[J46] A Alzahrani, **J Orfi**, Z Alsuhailani, Performance analysis of a gas turbine unit combined with MED-TVC and RO desalination systems, *Desalination and Water Treatment*, 1-8, 2014,

- [45] S. Al-Sanea, **J. Orfi**, A. Najib, Numerical study of flow, temperature, and salinity distributions of a brine discharge problem, *Desalination and Water Treatment*, 55/12, 3218-3230, 2015.
- [J44] Nizar Loussif and Jamel Orfi, Effects of slip velocity on air gap membrane distillation process, *Membrane Water Treatment*, Vol. 5, No. 1 (2014) 57-71. Non ISI
- [J43] N. Loussif and J. Orfi, Simultaneously developing laminar flow in an isothermal micro-tube with slip flow models, *Heat and Mass Transfer*, (2014) 50:573–582.
- [J42] O. Phillips Agboola, I. S. Al-Mutaz, Jamel Orfi and Fuat Egelioglu, Economic Investigation of Different Configurations of Inclined Solar Water Desalination Systems, *Advances in Mechanical Engineering*, Volume 2014, Article ID 925976, 7 pages, <http://dx.doi.org/10.1155/2014/925976>
- [J41] H. A. Al-Ansary, **J. A. Orfi**, M. E. Ali, Impact of the use of a hybrid turbine inlet air cooling system in arid climates, *Energy Conversion and Management*, Volume 75, November 2013, Pages 214-223.
- [J40] A.A. Mohamad, **J. Orfi** and H. Al-Ansary, Heat Losses from Parabolic Trough Solar Collectors, *International Journal of Energy research*, DOI: 10.1002/er.3010, 2013.
- [J39] A. Al Zahrani, **J. Orfi**, H. Al Ansary, B. Salim and Z. Al Suhaibani "Thermodynamic analysis of a cogeneration gas turbine and desalination plant", *Desalination and Water Treatment*, Vol. 51, Issue 7-9, pp. 1908-1914, 2013.
- [J38] N. Loussif, **J. Orfi** and A. Omri, Slip flow effect on laminar convection inside micro-tubes with permeable walls, *Desalination and Water Treatment*, Vol. 51, Issue 7-9, pp. 1973-1979, 2013.
- [J37] A. Belhadj Mohamed and **J. Orfi**, Evaporation of water/ammonia binary liquid film by mixed convection inside isothermal vertical plates, *Desalination and Water treatment*, Vol. 51, Issue 7-9, pp. 1966-1972, 2013.
- [J36] M.M. Rahman, Hakan F. Öztop, A. Ahsan and **J. Orfi**, Natural convection effects on heat and mass transfer in a curvilinear triangular cavity *International Journal of Heat and Mass Transfer*, 55, pp. 6250-6259, 2012.
- [J35] G. Boulama, N. Galanis and **J. Orfi**, Thermo-solutal mixed convection and flow-reversal in an inclined parallel-plate channel, *Heat and mass Transfer*, DOI 10.1007/s00231-012-1007-9, 2012.
- [J34] A. Al-Zahrani, **J. Orfi**, Z. Al-Suhaibani, B. Salim, H. Al-Ansary "Thermodynamic Analysis of a Reverse osmosis Desalination Unit with Energy Recovery System", *Procedia Engineering*, Vol. 33, pp. 404-414, 2012.
- [J33] O. Sow, T. Maré, **J. Orfi** and M. Adj, Modeling and simulation in dynamic mode of a triple effect desalination system coupled to a plane solar collector, *Desalination and Water Treatment*, Vol. 22, pp. 91-99, 2010.
- [J32] H. Marmouch, **J. Orfi** and S. Ben Nasrallah, Experimental study of the performance of a cooling tower used in a solar distiller, *Desalination*, Vol. 250, Issue 1, pp. 456-458, 2010.
- [J31] N. Bouzayani, N. Galanis and **J. Orfi**, "Thermodynamic Analysis of Combined Electric Power Generation and Water Desalination plants", *Applied Thermal Engineering*, Vol. 29, Issue 4, pp. 624-633, 2009.
- [J30] H. Marmouch, **J. Orfi** and S. Ben Nasrallah, "Effect of a cooling tower on a solar desalination system", *Desalination*, Vol. 238, Issues 1-3, pp. 281-289, 2009.
- [J29] A. Nasr, C. Debissi, **J. Orfi**, A. Mohamed and S. Ben Nasrallah, "Evaporation of water by free convection inside two partially wetted heated vertical plates", *Journal of Engineering and Applied Sciences*, Vol. 4, Issue 1, pp. 51-59, 2009.
- [J28] Nasr, C. Debissi, **J. Orfi**, A. Mohamed and S. Ben Nasrallah, "Evaporation of a thin binary liquid film covering one plate of a vertical channel", *Revue des Énergies Renouvelables*, Vol. 11 n°4, 611 – 622, 2008.
- [J27] A. Belhadj Mohamed, **J. Orfi**, C. Debissi and S. Ben Nasrallah, "Heat and mass transfer during condensation in a vertical channel under mixed convection", on line, *Heat and Mass Transfer*, 2007.

- [J26] **J.Orfi**, N. Galanis and M. Laplante, "Air Humidification-Dehumidification for Water Desalination System Using Solar Energy", *Desalination* 203, 471-481, 2007 (Special Issue devoted to selected papers presented in Euro Med 2006: Desalination strategies in Southern Mediterranean countries, Montpellier, France 21-25 May 2006).
- [J25] N.Bouzayani, N. Galanis and **J. Orfi**, "Comparative study of power and water cogeneration systems", *Desalination* 205, 243-253, 2007 (Special Issue devoted to selected papers presented in Euro Med 2006: Desalination strategies in Southern Mediterranean countries, Montpellier, France 21-25 May 2006).
- [J24] A. Belhadj Mohamed, **J. Orfi**, C. Debissi and S. Ben Nasrallah, "Condensation of water vapour in a vertical channel by mixed convection of a humid air with the presence of a liquid film flowing down", *Desalination* 204, 2007, 471-481 (Special Issue devoted to selected papers presented in Euro Med 2006: Desalination strategies in Southern Mediterranean countries, Montpellier, France 21-25 May 2006).
- [J23] H. Marmouch, **J. Orfi** and B. Benhamou, "Study of a solar humidifier intended for the cooling of air", *Int. Journal of Heat and Technology*, vol. 24,2, 2006.
- [J22] K. Boulama, N. Galanis and J. Orfi, Entropy generation in a binary gas mixture in the presence of thermal and solutal mixed convection, *Int. Journal of thermal Sciences*, vol. 45, pp. 51-59, 2006.
- [J21] S. El Alimi, **J.Orfi** and S. Ben Nasrallah, A time dependent transition phenomenon of mixed convection heat and mass transfer in a vertical duct with sudden expansions, *Int. Journal of Heat and Technology*, vol. 23, 2, 2005.
- [J20] A. Belhadj Mohamed, **J. Orfi**, C. Debissi and S. Ben Nasrallah, Evaporation of a liquid film into a humid air by mixed convection in a vertical channel and the inversion temperature, *Int. Journal of Heat and Technology*, vol. 23, 2, pp. 101-108, 2005.
- [J19] **J. Orfi**, and N. Galanis, Mixed convection with heat and mass transfer in horizontal tubes, *Int. Communications in Heat and Mass Transfer*, vol 32, n° 3-4, pp. 511-519, 2005.
- [J18] A.Omri, **J.Orfi** and S.Ben Nasrallah, Natural convection effects in solar stills, *Desalination*, vol.183, n°1-2, pp.173-178, 2005.
- [J17] S. El Alimi, **J.Orfi** and S. Ben Nasrallah, Buoyancy effects on mixed convection heat and mass transfer in a duct with sudden expansions, *Heat and Mass Transfer*, vol. 41, pp. 559-567, 2005.
- [J16] K. Boulama, N. Galanis and **J. Orfi**, Heat and mass transfer between gas and liquid streams in direct contact, *Int. Journal of Heat and Mass Transfer*, vol. 47, pp. 3669-3681, 2004.
- [J15] **J.Orfi**, M. Laplante, H. Marmouch, N. Galanis, B. Benhamou, S. Ben Nasrallah and C.T. Nguyen, Experimental and theoretical study of a humidification-dehumidification water desalination system using solar energy, *Desalination* , vol. 168, pp. 151-159, 2004.
- [J14] **J.Orfi**, C. Debissi, A. Belhaj Mohamed and S. Ben Nasrallah, Air humidification by free convection in a vertical channel, *Desalination* , vol. 168, pp. 161-168, 2004.
- [J13] Z. Ait Hammou, B. Benhamou, N. Galanis and **J. Orfi** , Laminar mixed convection of humid air in a vertical channel with evaporation or condensation, *Int. Journal of Thermal Sciences*, vol. 43, pp. 531-539, 2004.
- [J12] C. Debbissi, **J. Orfi**, and S. Ben Nasrallah, Evaporation of water by free or mixed convection into humid air or superheated steam, *Int. Journal of Heat and Mass Transfer* ,vol.46, pp. 4703-4715, 2003.
- [J11] **J. Orfi** and N. Galanis , Developing laminar mixed convection with heat and mass transfer in horizontal and vertical tubes, *Int. Journal of Thermal Sciences*, vol. 41, pp. 319-333, 2002.
- [J10] C. Debbissi, **J. Orfi** and S. Ben Nasrallah, Evaporation of water by free convection in a vertical channel including the effects of wall radiative properties, *Int. Journal of Heat and Mass Transfer*, vol. 44, pp.811-826, 2001.
- [J9] **J.Orfi**, N.Galanis & C.T.Nguyen, Bifurcation Steady Laminar Mixed Convection In Uniformly Inclined Tubes, *Int. Journal of Numerical Methods for Heat and Fluid Flow*, Vol. 9, N° 5, pp. 543-567, 1999.

[J8]Debbissi, C., **Orfi, J.** and Ben Nasrallah, S.' Evaporation par Convection Naturelle dans un Canal Vertical', *Les Annales Magrébines de l'Ingénieur*, vol.12, pp.499-504, 1998.

[J7] **J.Orfi**, N.Galanis & C.T.Nguyen," Développement simultané d'un écoulement laminaire dans un tube incliné en régime de convection mixte", *Revue Générale de la Thermique (Now International Journal of Thermal Sciences)*, Vol. 36, N° 2, pp.417-428, 1998.

[J6] **J.Orfi**, N. Galanis & C.T. Nguyen," Laminar Mixed Convection in The Entrance Region of Inclined Pipes With High Uniform Heat Fluxes", *ASHRAE Transactions*, Vol. 104, Pt. 2, pp.417-428, 1998.

[J5] Nguyen, C.T., **J.Orfi** & H. Bazzi, " Transient Behavior of a NaNO_3 Float Zone Operating at High Marangoni Number under μ -g Conditions", *Numer. Heat Transfer, Part A: Applications*, Vol. 28, pp.299-320, Editor: W.J.Minkowycz, Pergamon Press, 1995.

[J4] Nguyen, C.T., H.Bazzi & **J.Orfi**, " Numerical Investigation of the Effects of Rotation on a Germanium Float Zone under μ -g Conditions", *Numerical Heat Transfer, Part A: Applications*, Editor: W.J. Minkowycz, Pergamon Press, Vol. 28, pp.667-685, 1995.

[J3]**J.Orfi**, N.Galanis & C.T.Nguyen,"Laminar Fully Developed Incompressible Flow With Mixed Convection in Inclined tubes", *Int. Journal of Numerical Methods for Heat and Fluid Flow*, Vol.3,pp.341-355,1993.

[J2] **J.Orfi**, N.Galanis & C.T.Nguyen," Natural Convection Effects in Fully Developed Laminar Flow Inside J2-Uniformly Heated Inclined Tubes", *ASHRAE Transactions*, Vol. 100, pt 1,pp.616-630. Presented in.WorkShop on Advances in Flow and Heat Transfer in Heat Exchangers, ASHRAE Winter Meeting, Janv.1994.

[J1]**J.Orfi**, N.Galanis & C.T.Nguyen," Convection Mixte dans une Conduite Circulaire Chauffée Uniformément ", *Revue de l'Université de Moncton*, V. 26, n° 1, Moncton, N. B., pp.115-134, 1993.

3.2. International Conferences

[c32] R. Nebbali and **J. Orfi** Mixed convection from an isolated heat source in an inclined parallel plate channel with porous medium, Presented at the 7 th Intern. Conf on Computational Heat and Mass transfer, Istanbul, 18-22, 2011.

[c31] N. Loussif, J. Orfi, A. Omri, Slip Velocity and temperature Jump boundary conditions for a simultaneously developing Laminar Flow in Isothermal and Isoflux microtubes, Presented at the 7 th Intern. Conf on Computational Heat and Mass transfer, Istanbul, 18-22, 2011.

[c30] H. Trabelsi, N. Galanis and **J. Orfi**, Simulation of Forced Convection Ice Slurry Flow in a Heated Tube, International Heat Transfer Conference, IHTC14, ASME, Poster #, Washington, 8-13 Aug. 2010.

[c29] M.Boumazza, A. Omara and **J.Orfi**, Effects of transport phenomena properties on transient heat transfer in a vertical pipe flow, Proceedings of 2009 International Conference on Computational Methods for Energy Engineering and Environment: ICCM3E, *Sousse, Tunisia, 20-22 November, 2009*, pp.576-582.

[c28] **J. Orfi**, Numerical study of a basic humidification-dehumidification cycle used for desalination, *Proc. International Conference on Desalination for the Environment, Organized by the European Desalination Society, 17-20 May 2009, Baden-Baden, Germany.*

[c27] A. Nasr, C. Debbissi, **J. Orfi**, A. Mohamed and S. Ben Nasrallah, Evaporation by free convection of a binary liquid film and the inversion temperature, *International Conference on Desalination for the Environment, Organized by the European Desalination Society, 17-20 May 2009, Baden-Baden, Germany.*

[c26] **J. Orfi** and N. Loussif, Numerical study of convective heat and mass transfer in a membrane distillation unit, *Proc. of the Fourth International Conference on Thermal Engineering: Theory and Applications*, January 12-14, 2009, Abu Dhabi, UAE.

[c25] **J. Orfi**, Convective heat and mass transfer with phase change from a wetted isothermal tube wall to a laminar gas stream, *Proc. of the Fourth International Conference on Thermal Engineering: Theory and Applications*, January 12-14, 2009, Abu Dhabi, UAE.

[c24] H. Marmouch, **J. Orfi** and S. Ben Nasrallah, "Experimental and theoretical study on the effect cooling tower on Solar Desalination System", Presented at (Première conférence internationale sur la conversion et la maîtrise de l'énergie) Monastir, Tunisia, 9-11 April, 2008.

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