



Université des Sciences et de la Technologie d'Oran
Mohamed Boudiaf

USTO-MB

Laboratoire des Sciences & Ingénierie Maritimes



Amina SABEUR , Professor Curriculum Vitae

Name : **Amina SABEUR**
Address : **Département de Génie Maritime, Faculté de Génie Mécanique, USTO-MB,
B.P. 1505 Oran El M'naouer, 31000 Oran, Algérie**
Telephone : **00 213 (0) 556 714 129**
Email Address : sabeuramina@hotmail.com & amina.sabeur@univ-usto.dz
Google Scholar : <https://scholar.google.fr/citations?user=krwnjW0AAAAJ&hl=fr>

Academic Degrees

- Ph.D., Energetic, University of Science and Technology in Oran, Algeria, March 2006.
- Master, Applied Mathematics and Computer Sciences, University of Science and Technology in Oran, Algeria, June 1997.
- Optimisation and Functional Analysis Graduate Diploma, University of Science of Oran, Algeria, June 1993.

Research Interest

- CFD Modelling
- Heat Transfer
- Entropy Generation

Teaching Experience

- Professor, December 2011 – Present, Marine Engineering Department, University of Science and Technology in Oran, Algeria.
- Senior Lecturer, March 2006 – December 2011, Marine Engineering Department, University of Science and Technology in Oran, Algeria.
- Lecturer, December 1997-March 2006, Marine Engineering Department, University of Science and Technology in Oran, Algeria.

Teaching Areas

- Mathematics and Applied Mathematics
- Numerical Methods
- Heat Transfer
- Turbulence Modelling

Administrative Activities:

President of the Scientific Council of the Faculty of Mechanical Engineering for two terms: First term: from May 26, 2011, to May 25, 2015; Second term: from May 25, 2015, to March 17, 2020."



Journal Papers

1. Boussoufi Mustapha, **Amina Sabeur**, Entropy analysis of convective nanofluid flow with Brownian motion in an annular space between confocal elliptic cylinders, International Journal of Numerical Methods for Heat & Fluid Flow 2025 DOI : [10.1108/HFF-07-2024-0516](https://doi.org/10.1108/HFF-07-2024-0516)
2. Farah .Zemani **Amina Sabeur**, Omar Ladjedel, Amira Chelih, Natural convective heat transfer in a square cavity with a curved hot wall partially heated from below, Physics of Fluids 2025 37(1) DOI: 10.1063/5.0244480
3. Ikram Mostefa Tounsi, **Amina Sabeur**, Mohammed El Ganaoui, Souad Morsli, Insights on the Air Quality Story, Standard's Evolution, and IoT's Role to Monitor IAQ for an Appropriate Indoor Environment, Chapter In book: Urban Pollution - Environmental Challenges in Healthy Modern Cities 2025, DOI: 10.5772/intechopen.1008551
4. Naima Krarraz, **Amina Sabeur**, Khadidja Safer, Ahmed Ouadha, Numerical Simulation of Turbulent Diffusion Flames of a Biogas Enriched with Hydrogen, Fluid Dynamics & Materials Processing 2024, 20(1), 79-96. <https://doi.org/10.32604/fdmp.2023.026238>
5. Ikram Belmehdi, Beladjine Boumedienne, Djermouni Mohammed, **Amina Sabeur**, Mohammed El Ganaoui, Steam Methane Reforming (SMR) Combined with Ship Based Carbon Capture (SBCC) for an Efficient Blue Hydrogen Production on Board Liquefied Natural Gas (LNG) Carriers, Fluid Dynamics & Materials Processing 2024, DOI: [10.32604/fdmp.2024.058510](https://doi.org/10.32604/fdmp.2024.058510)
6. Ikram Mostefa Tounsi, Mustapha Boussoufi, **Amina Sabeur**, Mohammed El Ganaoui, Impact of the Inlet Flow Angle and Outlet Placement on the Indoor Air Quality, Fluid Dynamics & Materials Processing 2024, DOI: [10.32604/fdmp.2024.050641](https://doi.org/10.32604/fdmp.2024.050641)
7. Lina Wafaa Belhadj Senini, Amina Sabeur, Enhanced heat transfer performance of sic/water and MWCNT/water nanofluids in micro-cylinder groups, Numerical Heat Transfer, Part A: Applications, (2023), <https://doi.org/10.1080/10407782.2023.2229514>
8. Lina Wafaa Belhadj Senini, Boussoufi Mustapha **Amina Sabeur** (2023) Analysis of the Heat Transfer Performance of Nanofluids in Micro-Cylinder Groups. EAST EUROPEAN JOURNAL OF PHYSICS. 4. 109-119 (2023), DOI:10.26565/2312-4334-2023-4-11
9. Zemani, F., Ladjedel, O. **Sabeur, A.** Simulation of CuO-water nanofluid natural convection in a U-shaped enclosure with a T-shaped baffle. J. Eng. Appl. Sci. 70, 99 (2023). <https://doi.org/10.1186/s44147-023-00257-x>
10. Houda Soufi, **Amina Sabeur**, Numerical simulation of oscillating cylinder in a mean flow at low Keulegan-Carpenter and Stokes numbers, Ocean Engineering Volume 281, 1 August 2023, 114551 <https://doi.org/10.1016/j.oceaneng.2023.114551>
11. Khaled Said, Ahmed Ouadha, **Sabeur-Bendehina Amina**, CFD-based analysis of entropy generation due to mean and fluctuating fields during turbulent natural convection in a square enclosure. September 2022 Heat Transfer 52(1) DOI: 10.1002/htj.22686
12. Khaled Said, Ahmed Ouadha, **Sabeur-Bendehina Amina**, Turbulent double-diffusive convection and implementation of entropy production rate due to the mean and the fluctuating flow field. December 2022 International Communications in Heat and Mass Transfer 139(4):106462 DOI: 10.1016/j.icheatmasstransfer.2022.106462
13. Farah Zemani, **Sabeur Amina**, Numerical Study of Natural Convective Heat Transfer in an Air Filled Square Cavity Heated from Below and Symmetrically Cooled from the Sides with a Partition in the Hot Wall. August 2022 Fluid Dynamics and Materials Processing 19(2): 513-539
14. Boussoufi Mustapha, **Sabeur Amina**, Natural convective nanofluid flow characteristics with Brownian motion effect in an annular space between confocal elliptic cylinders. August 2022 Numerical Heat Transfer Applications DOI: 10.1080/10407782.2022.2102396



15. Farah Zemani, **Amina Sabeur**, CFD-Based Analysis of Entropy Generation on Laminar Natural Convection in Enclosures with Partitioned Walls and for Different Heating Positions. February 2022 Journal of Heat Transfer 144(6) DOI: 10.1115/1.4053938
16. Khaled Said, Ahmed Ouadha, **Sabeur-Bendehina Amina**, Turbulent Double-Diffusive Natural Convection and Entropy Generation within an Inclined Square Cavity. January 2022 Fluid Dynamics and Materials Processing 18(6):1619-1629
17. Khaled Said, Ahmed Ouadha, **Sabeur-Bendehina Amina**, CFD-based analysis of entropy generation in turbulent double diffusive natural convection flow in square cavity. December 2020 MATEC Web of Conferences 330(15):1-5
18. Souad Morsli, **Sabeur-Bendehina Amina**, H. Ramenah, Rachid Bennacer, Thermo-Fluid Simulation for Indoor Air Quality and Buildings Thermal Comfort, January 2020 MATEC Web of Conferences 307(1):01032
19. Amel Remache, Yacine Addad, **Sabeur Amina**, Ahmed Ouadha, « Thermal design optimization of passive cooling capability in a dry-storage system by adding wall undulations or semi- circular fins. June 2019 Nuclear Engineering and Design 347(4):140-150
20. Souad Morsli, **Amina Sabeur**, Mohammed El Ganaoui, H.Ramenah, "Computational Simulation of Entropy Generation in a Combustion Chamber Using a Single Burner" December 2018 Entropy 20(12):922
21. Souad Morsli, Mustapha Boussoufi, **Amina Sabeur**, Mohammed El Ganaoui, Rachid Bennacer " Small To Large Scall Mixed Turbulent Convection: Buildings Application", International Journal of Numerical Methods for Heat and Fluid Flow , Vol. 28 Issue: 1, pp.188-205 (2018)
22. Souad Morsli, **Amina Sabeur**, and Mohammed El Ganaoui, "Influence of aspect ratio on the natural convection and entropy generation in rectangular cavities with wavy-wall" Energy Procedia 2017
23. Souad Morsli, **Amina Sabeur**, and Mohammed El Ganaoui, "Simulation of a burner with different fuels and analysis based on entropy generation". Energy Procedia 2017.
24. M. Boussoufi, **A. Sabeur-Bendehina**, M. El-Ganaoui, S. Morsli, , Numerical simulation of the flow field in the mixing twin jets, Energy Procedia, 139, 2017, pp. 161-166.
25. M. Boussoufi · **A. Sabeur-Bendehina** · A. Ouadha · S.Morsli · M. El Ganaoui, Numerical analysis of single and multiple jets , · Eur. Phys. J. Appl. Phys. (2017) 78: 34814
26. W.Boudaoud **A. Sabeur-Bendehina** · S.Morsli · Numerical analysis of Al₂O₃ /water nano-fluids natural convection and entropy generation in enclosures, · Eur. Phys. J. Appl. Phys. (2017) 78: 34802
27. Farah Zemani, **Amina Sabeur-Bendehina**, Unsteady natural convection in a water filled cavity with hot partitioned wall, August 2017 Modelling, Measurement and Control B 86(1)
28. Souad Morsli, **Amina Sabeur**, and Mohammed El Ganaoui, " Numerical simulation of entropy generation in hydrogen-air burner", Fluid Dynamics & Materials Processing FDMP20141201481, Nov 2015
29. M.Sehaba, **A.Sabeur-Bendehina**, B.Azemi, Effect of orifice geometry on the development of a slightly heated turbulent jet, Journal of Fluid Engineering NOVEMBER 2015, Vol. 137
30. S.Morsli, **A.Sabeur-Bendehina**, Numerical study on natural convection and Entropy generation in squares and corrugated cavities , Journal of Physics: Conference Series 574 (2015) 012113
31. Farah Zemani, **Amina Sabeur-Bendehina**, Mustapha Boussoufi, Numerical Investigation of Natural Convection in Air Filled Cubical Enclosure with Hot Wavy Surface and Partial Partitions Procedia Computer Science Volume 32, 2014, Pages 622–630



32. S. Morsli, M. El Ganaoui, **A. Sabeur-Bendehina** Numerical investigation of diffusion turbulent propane/air flame Energy, Environment, Biology and Biomedicine ISBN: 978-1-61804-232-3 , 2014
33. S.Morsli, **A.Sabeur-Bendehina** Entropy generation and natural convection in square cavities with wavy wall Journal of Applied Mechanics and Technical Physics Vol 54 , 913-920 (2013)
34. **Sabeur-Bendehina**, O. Imine, L. Adjlout Laminar free convection in undulated cavity with non uniform boundary conditions Comptes Rendus Mécanique, Volume 339, Issue 1, January 2011, Pages 42-57 (Accadémie des Sciences)
35. **A.Sabeur-Bendehina**, M. Aounallah L. Adjlout, and O. Imine Influence of boundary conditions on free convection in inclined rectangular cavity with a wavy wall ,International Journal of Heat and Technology; 131-137 Volume 23, n. 1, 2005
36. **A.Sabeur-Bendehina**, M. Aounallah L. Adjlout, and O. Imine Effect of sinusoidal distribution of the temperature on laminar natural convection in wavy rectangular enclosures Journal of applied Sciences (2005)
37. **A.Sabeur-Bendehina**; L. Adjlout, and O. Imine Optimization of the heat transfer rate in undulated cavities with multiples partitions Journal of applied Sciences (2006)
38. B. Imine, **A. Sabeur-Bendehina**, O. Imine and M.H. Gazzah, " Effects of a directed co-flow on a non-reactive turbulent jet with variable density", International Journal of Heat and Mass Transfer, Springer-Verlag, (2005)

Conference Papers

1. Amel Remache, Yacine Addad, **Amina Sabeur-Bendehina** , "Numerical investigation of the eddy-viscosity models ability to predict heat transfer within the dry storage for nuclear waste" , International Conference on Materials
2. Morsli, **A.Sabeur-Bendehina**, H.Ramenah, R.Bennacer " Thermo-fluid simulation for indoor air quality and buildings thermal comfort" International Conference on Materials & Energy / 30 April to 04 May 2018 San Sebastian, Spain
3. Boudaoud Warda, Souad Morsli, **Amina Sabeur-Bendehina**, M. El Ganaoui, «An analysis on free convection flow, heat transfer and entropy generation in undulated cavity filled with nanofluids», International Conference on Materials & Energy / July 06-09, 2017, Tianjin, Chine
4. Souad Morsli, **Amina Sabeur-Bendehina**, M. El Ganaoui, « Small to large scall mixed turbulent convection », International Conference on Materials & Energy / July 06-09, 2017, Tianjin, Chine.
5. Farah Zemani –Kaci, **Amina Sabeur-Bendehina**, "Numerical simulation of unsteady natural convection in an air filled cavity with partitions" , Congrès Français de Mécanique / 28 aout au 1er Septembre 2017 <http://cfm2017.sciencesconferences.org>
6. Souad Morsli, **Amina Sabeur-Bendehina**, M. El Ganaoui, « Numerical Investigation of Entropy Generation In A Propane-Air Burner », International Conference on Materials & Energy / May 17-20, 2016, la Rochelle, France.
7. Boudaoud Warda, **Sabeur Amina**, Morsli Souad, El Ganaoui Mohammed, Numerical simulation of flows in square cavity heated from below including nano-fluids ICOME 2016 la Rochelle France
8. Souad Morsli, **A.Sabeur-Bendehina**, « Influence of Aspect Ratio on The Natural Convection And Entropy Generation In Rectangular Cavities With Wavy-Wall », International Conference on Materials & Energy / May 19-22, 2015, Tetouan, Morocco.



9. Mustapha Boussoufi, Amina Sabeur-Bendehina, M. El Ganaoui, Souad Morsli A.Ouadha , « Numerical Simulation Of The Flow Field Analysis In The Mixing Twin Jets », International Conference on Materials & Energy / May 19-22, 2015, Tetouan, Morocco.
10. S.Morsli, **A.Sabeur**, Numerical study on natural convection and entropy generation in corrugated cavities 3rd International Conference on Mathematical Modeling in Physical Sciences, Madrid, Spain 2014
11. Farah Zemani, Amina Sabeur-Bendehina, Mustapha Boussoufi, Numerical Investigation of Natural Convection in Air Filled Cubical Enclosure with Hot Wavy Surface and Partial Partitions The 4th International Conference on Sustainable Energy Information Technology June 2-5 2014, Hasselt, Belgium <http://cs-conferences.acadiau.ca/seit-14/>
12. S.Morsli, A.Sabeur-Bendehina Simulation Numérique de la Génération d'Entropie dans un Bruleur Hydrogène-Air Journées Internationales de Thermique Marrakech Maroc 13-15 Novembre 2013 <http://jith2013.uca.ma/JITH2013/index.html>
13. S. Morsli, A. Sabeur-Bendehina, Investigation numérique de la combustion turbulente du mélange Propane-Air dans un brûleur, 21ème Congrès Français de Mécanique CFM2013, Bordeaux, 26 au 30 août 2013 www.cfm2013.org
14. N. Krarraz, A. Sabeur-Bendehina, simulation numérique d'une flamme turbulente de prémélange pauvre appliquée aux turbines à gaz, Conférence internationale de l'aéronautique, 2013 Oran Algérie.
15. N. Krarraz, A. Sabeur-Bendehina, contribution à l'étude numérique de la combustion turbulente prémélangée de méthane-air conférence internationale de l'aéronautique, 2013 Oran Algeria
16. S. Morsli, A. Sabeur-Bendehina, Numerical Study of Methane-Air Mixture in Combustion Chamber , 1st International Conference on Aeronautical Sciences 27th - 28th May 2013 Oran Algeria
17. S. Morsli, A. Sabeur-Bendehina, Optimisation of Entropy Generation in a Burner with Various Fuels(H₂-C₂H₄-C₆H₆) 1st International Conference on Aeronautical Sciences 27th - 28th May 2013 Oran Algeria
18. M. Boussoufi, A. Sabeur-Bendehina, Modélisation Tridimensionnelle de la Formation du Mélange de Combustion dans un Moteur Diesel à Injection Directe 1st International Conference on Aeronautical Sciences 27th - 28th May 2013 Oran Algeria
19. S. Morsli, A. Sabeur-Bendehina, M. Boussoufi, N. Krarraz, Numerical Simulation of Entropy Generation in Combustion Chamber with various fuels, Journées AUM/AFM 2012 Rouen, France.
20. N. Krarraz, A. Sabeur-Bendehina, M.Boussoufi, S.Morsli, CFD analysis of turbulent lean premixed combustion using fast chemistry model, Journées AUM/AFM 2012 Rouen, France.
21. F. Zemmani, A. Sabeur-Bendehina Radiation—natural convection heat transfer in square cavity with wavy wall, Journées AUM/AFM 2012 Rouen, France
22. N. Krarraz, A. Sabeur-Bendehina, M. Boussoufi, S. Morsli, Numerical Simulation of Turbulent Reacting Flows stabilized by bluff-body premixed combustor, 1st International Conference on Numerical Physics, October 13-15, 2012 Oran Algeria.
23. N.Krarraz, A. Sabeur-Bendehina, M. Boussoufi, S.Morsli , Numerical simulation of dynamic and thermal fields of a premixed turbulent flame in a Bunsen burner 7th International Conference on Computational Heat and Mass Transfer July 18-22 , 2011, Istanbul Turkey
24. S.Morsli, A.Sabeur-Bendehina, M.Boussoufi, N.Krarraz Numerical Simulation of Entropy Generation in Combustion Chamber, 7th International Conference on Computational Heat and Mass Transfer July 18-22 , 2011, Istanbul Turkey



25. D. Hamlet, **A. Sabeur-Bendehina**, Z. Serier, Vibrations non linéaires forcées de la coque à double courbure multicouche par la méthode des échelles multiples ACMA 2010 May 12-14, 2010 Marrakech, Morocco.

26. D. Hamlet, **A. Sabeur-Bendehina**, Z. Serier Analyse des Vibrations non linéaires des coques sphériques peu profondes en stratifiées croisées Par la méthode des perturbations 1^{ère} Conférence Internationale sur les Matériaux et les Structures en Composites Oran Algeria 2009

27. A. Merzoug, F. Billard, **A. Sabeur-Bendehina**, Y. Addad "A Numerical Study of Flow Parallel To Tube Bundles Using Different Rans Models" International Symposium on Convective Heat and Mass Transfer in Sustainable Energy, Tunis 2009

28. **A. Sabeur-Bendehina**, O. Imine, L. Adjlout, B. Imine Effect of the hot surface geometry on laminar Natural Convection in Cubical Air Filled Enclosures International Conference on thermal Engineering : Theory and Applications- ICTE (2007) Amman Jordan

29. **A. Sabeur-Bendehina**, M. Aounallah, L. Adjlout, O. Imine Laminar free convection in wavy square cavity with non uniform boundary conditions The 4th European Thermal Sciences Conference Birmingham 2004

30. **A. Sabeur-Bendehina**, M. Aounallah, L. Adjlout, O. Imine Non Uniform Boundary Conditions in Wall Curved Cavities for Free Convection International Symposium on Advances in Computational Heat Transfer, Norway 2004

31. M. Aounallah, **A. Sabeur-Bendehina** L. Adjlout, O. Imine M. "Influence of boundary conditions on free convection in inclined rectangular cavity with a wavy wall *Congrès Français de Thermique, SFT 2004, Presqu'île de Giens, 25-28 mai 2004*

32. **Sabeur-Bendehina** A, Aounallah M., Adjlout L., Imine O., Imine B., Influence of non uniform boundary conditions on laminar free convection in wavy square cavity with partial partitions. 7th Biennial ASME Conference Engineering Systems Design and Analysis, Manchester, UK. July 19-22

Diploma Reports

- **Sabeur A**; Simulation Numérique de la Convection Naturelle dans les Cavités, **Ph.D. Thesis**, University of Sciences and Technology in Oran, March 2006. **Sabeur A.**, Contribution à la résolution des équations de Navier Stokes par la méthode des éléments finis **Master Thesis**, University of Sciences and Technology in Oran, June 1997

National Research Activity

- Head of the Laboratory Maritime Sciences & Engineering, University of Sciences and Technology in Oran, Algeria
- Head of Research Group " Machines Thermiques" in LSIM Laboratory, University of Sciences and Technology in Oran, Algeria
- Research Project Chief CNEPRU J 3101/03/05/05 entitled Convection naturelle dans les cavités.
- Research Project Chief CNEPRU J0301920070041 entitled: Interaction Fluide structure dans les coques hydro et aérodynamiques
- Research Project Chief CNEPRU J03019201248 entitled: Simulation Numérique des Flammes Prémélangées
- Research Project Chief PRFU A01L06UN310220180005 entitled Confort Thermique: Qualité de l'air dans les ambiances



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- Research Project Chief PNR entitled Transferts Thermiques et Optimisation des Parois de Bâtiments
- President of Scientific Council of Mechanical Engineering Faculty USTO MB Oran Algeria
- Research Project Chief PRFU A01L06UN310220220006 entitled Caractérisation des propriétés thermo-physiques et d'échanges de chaleur des nanofluides.

International Research Activity

- Research Project Chief **TASSILI 2020** in Collaboration with **Lorraine University France**

Reviewing

Reviewer for: Physics of Fluids, Heat and Mass Transfer , Progress in Computational Fluid Dynamics, Ocean Engineering, Entropy, International Journal of numerical methods for Heat and fluid Flow , Heat Transfer

Supervising

- Ph.D. Thesis

1. **BELHADJ Sennini Lina Wafaa** Investigation numérique sur les caractéristiques de l'écoulement et du transfert de chaleur des nano-fluides dans des cylindres, defended on July 2024
2. **Said Khaled**, Thesis-Thermo-Aeraulic Simulation in a Closed Enclosure, defended on July 2024.
3. **Warda Boudaoud**, Simulation numérique de la convection naturelle dans des cavités remplies de nanofluides, defended on November 2019.
4. **Mustapha Boussoufi**, Simulation Numérique des Jets Multiples, defended on July 2018.
5. **Zemani Farah**, Simulation numérique de la convection naturelle dans des cavités cubiques partitionnées, defended on June 2018.
6. **Morsli Souad**, Simulation numérique de la convection naturelle et de la génération d'entropie dans les cavités, defended on March 2015.

Committees

Expert Member in Selection Committee on Erasmus Program **Mare Nostrum** (Undergraduate-Master-Doctorate-Post Doctorate-Staff)

First Cohort (Murcia 2012)

Second Cohort (Cartagena 2013)

Third Cohort (Algeria 2014)