



Research and Technology Center of Energy
Thermal Processes Laboratory
Technopole of Borj Cedria
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Curriculum Vitae

Salwa BOUADILA, Dr. Engineer of Energy

https://www.researchgate.net/profile/Salwa_Bouadila

Personal Information

<i>Nationality</i>	Tunisian
<i>Personnel Address</i>	Apartment 196 - street El Maousili of Boumhel 2097- Ben Arous- Tunisia
<i>Marital status</i>	Married
<i>Passport</i>	16-06-2011/17-06-2016

Education

<i>Sep 2011 – Jan 2015</i>	University of Tunis El Manar / Faculties of Science of Tunis Phd defended and awarded with outstanding honors (30 Jan 2015), Ph.D. in Physics entitled: “ <i>latent storage solar energy in low enthalpy application</i> ” realized in the Research and Technologies Center of Energy of Tunisia.
<i>Oct 2008 – Oct 2010</i>	National Institute of Applied Science and Technology, Tunisia Master's Degree in “ <i>Energy and Transfers</i> ”, with honors (Oct 2010).
<i>Sep 2002 – Jun 2005</i>	National Engineering School of Monastir Engineer Degree, Energy Engineering Option: Energy System, with honors mentions (Jun 2005).

Research Experience

- Jan 2006 – present* **Energy engineer**
Research and Technology Centre of Energy, Thermal Processes Laboratory
The Research and Technology Center of Energy is a technological platform where pilot R&D actions play a significant role in the accompaniment and the development of the innovating companies working in the various renewable energy sectors.
- Jan 2010 – Jan 2015* Graduation Phd Project
Research and Technology Centre of Energy, Thermal Processes Laboratory
Ph.D. in Physics entitled: "Latent storage solar energy in low enthalpy applications"
- Jan 2009 – Sep 2010* Graduation Master Project
Research and Technology Centre of Energy, Thermal Processes Laboratory
Master project entitled: "Thermal energy study of latent heat of fusion: Application in the solar water collector"
- Feb 2005 – Jun 2005* Graduation Engineer Project
Research and Technology Centre of Energy, Thermal Processes Laboratory
Graduation project entitled: "Fabrication and characterization of a new type of heat exchanger"
- Jul 2004 – Aug 2004* Technician training
Business-Electric Heating-Cooling (CEF),
Extensive training in heating and cooling.
- Jul 2003 – Aug 2003* First training
Tunisian Company of Electricity and Gas of Rades (STEG)
This is my first internship to discovery company and services: the production, control,...

Teaching experience

- Oct 2012 – Jun 2013* Temporary Assistant: University of Cartage, ISSTE of Borj Cedria; Energy and Environment - Tunisia.
- Oct 2013 – Jun 2014* Temporary Assistant: University of Cartage, ISSTE of Borj Cedria; Energy and Environment - Tunisia.

Awards & Grants

- Dec 2013* **Award:** the 2nd ALESCO Prize for Innovation and Creativity Techniques in 2013, awarded by the Arab Organization for Education, Culture and Science ALECSO young researchers in the Arab world.
- Oct 2013* **Award:** the Desert Energy Best Paper awarded by the DII-EUMENA recognized outstanding academic work in the field of renewable energy in North African and Middle Eastern deserts.

Patents

Ref. TN 2012/0341

FARHAT Abdelhamid, **BOUADILA Salwa**, KOOLI Sami, LAZAAR Mariem, CRTEn – Technopole de Borj Cedria - Tunis (TN).

- Title : (EN) Solar air heater collector with heat storage absorbent: to product hot air, instantaneous for day-use, and delayed for night-use.
- (FR) Capteur solaire à air, avec absorbeur-stockeur de chaleur: production d'air chaud, instantanée pour usage diurne, et retardée pour usage nocturne.

Skills & Activities

- Skills* Renewable energy, Solar Energy, Solar collector, Solar greenhouse, latent storage energy, Energy Efficiency, Exergy Efficiency, Solid/liquid State Physics, Phase Change Materials (PCM), Fluid Dynamics, Heat Exchangers.
- Education /Work fields* Heat Transfer and Mass Transfer, Fluid Flow, Thermodynamics, Renewable Energy Systems, Solar energy, Energy conversion, Dynamics Fluid, Two-phase flows, heat transfer advanced, Numerical analysis, Instability, Turbulence, Scientific computing, Modeling and optimization.

Computer Skills	<p><u>Good knowledge of:</u> Microsoft Word, Microsoft Excel, Microsoft Front Page, Microsoft PowerPoint, Access, Publisher</p> <p><u>Programming languages:</u> C, turbo Pascal, MATLAB, MAPLE, Visual C++, HPVEE, FORTRAN, Transys</p> <p><u>Software:</u> Fluent, AUTO CAD, C++, VB, Solo</p> <p><u>Multimedia:</u> Dreamweaver, Flash MX, Front page</p>
Languages	<p><i>Arabic:</i> mother tongue</p> <p><i>English:</i> fluent, written and spoken</p> <p><i>French:</i> fluent, written and spoken</p>
Scientific Memberships	Research and Technology Centre of Energy of Tunisia

Publication Highlights

Journal Publications (13)

1. **Salwa Bouadila**, Sami Kooli, Mariem Lazaar, Safa Skouri, Abdelhamid Farhat: *Performance of a new solar air heater with packed-bed latent storage energy for nocturnal use*. **Applied Energy** 110:267–275.
2. **Salwa Bouadila**, Mariem Lazaar, Safa Skouri, Sami Kooli, Abdelhamid Farhat: *Assessment of the greenhouse climate with a new packed-bed solar air heater at night, in Tunisia*. **Renewable and Sustainable Energy Reviews** 2014; 35:31–41.
3. **Salwa Bouadila**, Mariem Lazaar, Safa Skouri, Sami Kooli, Abdelhamid Farhat: *Improvement of the greenhouse climate using a solar air heater with latent storage energy*. **Energy** 2014; 64:663–672.
4. **Salwa Bouadila**, Mehdi Fteiti, Mohamed Mehdi Oueslati, Amenallah Guizani, Abdelhamid Farhat: *Enhancement of latent heat storage in a rectangular cavity: Solar water heater case study*. **Energy Conversion and Management** 2014; 78:904–912.
5. **Salwa Bouadila**, Mariem Lazaar, Safa Skouri, Sami Kooli, Abdelhamid Farhat: *Energy and exergy analysis of a new solar air heater with latent storage energy*. **International Journal of Hydrogen Energy**, 27:1–9.
6. **Salwa Bouadila**, Safa Skouri, Sami Kooli, Mariem Lazaar, Abdelhamid Farhat: *Solar energy storage application in Tunisian greenhouse by means of phase change materials*. **IEEE** 978-1-4799-2516-2/14/\$31.00 ©2014.
7. **Salwa Bouadila**, M Fteiti, M M Ouslati, A A Guizani, S Ben Nasrallah: *Study of storage thermal energy of latent heat Application to the solar collector*. **Revue des Energies Renouvelables** 2011;Vol. 14 N°1:13–20

8. Mariem Lazaar, **Salwa Bouadila**, Sami Kooli, Abdelhamid Farhat: *Conditioning of the tunnel greenhouse in the north of Tunisia using a calcium chloride hexahydrate integrated in polypropylene heat exchanger. Applied Thermal Engineering* 2014; 68:62–68.
9. Sami Kooli, **Salwa Bouadila**, Mariem Lazaar, Abdelhamid Farhat: *The effect of nocturnal shutter on insulated greenhouse using a solar air heater with latent storage energy. Solar Energy* 2015; 115: 217–228.
10. Safa Skouri, **Salwa Bouadila**, Mohieddine Ben Salah, Sassi Ben Nasrallah: *Comparative study of different means of concentrated solar flux measurement of solar parabolic dish. Energy Conversion and Management* 2013; 76:1043-1052.
11. Safa Skouri, Mohieddine Ben Salah, **Salwa Bouadila**, Moncef Balghouthi, Sassi Ben Nasrallah: *Optical, geometric and thermal study for solar parabolic concentrator efficiency improvement under Tunisia environment: A case study. Energy Conversion and Management* 2013; 75:366–373.
12. Safa Skouri, **Salwa Bouadila**, Mohieddine Ben Salah, Sassi Ben Nasrallah: *Experimental study of two types of solar heat exchanger used to determine concentrated solar energy in solar parabolic concentrator. IEEE* 978-1-4799-2516-2/14/2014.
13. Safa Skouri, **Salwa Bouadila**, Sassi Ben Nasrallah: *Economical and efficient automatic sun tracking system used to handle solar parabolic concentrator. International Journal of Scientific Research & Engineering Technology* Vol.2, ISSN: 2356-5608.

Conference Proceedings (13)

1. **Salwa Bouadila**, Safa Skouri, Sami Kooli, Mariem Lazaar, Abdelhamid Farhat; Oral Communication in the International Conference on Composite Materials & Renewable Energy Applications, (ICCMREA'2014), January 2014, Sousse, Tunisia, *"Solar energy storage application in Tunisian greenhouse by means of phase change materials"*.
2. **Bouadila Salwa**, Skouri Safa, Kooli Sami, Mariem Lazaar, Abdelhamid Farhat; Oral Communication in the International Conference on Renewable Energy (CIER'13), December 2013 Sousse, Tunisia, *"Energy analysis of a New Solar Air Heater with Latent Storage Energy"*.
3. **Salwa Bouadila**, Sami Kooli, Safa Skouri, Abdelhamid Farhat; Communication in the 12th Tunisian Japanese Symposium on Science, Society and Technology, (TIJAST 2013) November 2013, Hamammet – Tunisia, *"The effect of nocturnal shutter on insulated greenhouse microclimate"*.
4. **Salwa Bouadila**, Sami Kooli, Mariem Lazaar, Safa Skouri, Abdelhamid Farhat ; Communication in the 4th Dii DESERT ENERGY CONFERENCE, 30-31 Octobre 2013 à Rabat – Maroc. *"Performance of a New Solar Air Heater with Packed-Bed Latent Storage Energy for Nocturnal Use"*.

5. **Salwa Bouadila**, Mohamed Mehdi Oueslat, Mehdi Fteït, Amenallah Guizani, Abdelhamid FARHAT; Oral Communication in the 4th International Renewable Energy Congress (IREC 2012), December 2012 Sousse, Tunisia, "*Experimental and numerical investigation of a solar water heater with latent storage cavity*".
6. **Bouadila Salwa**, Lazaar Mariem, Farhat Abdelhamid ; Communication in the 13ème congrès de la Société Française de Génie des Procédés SFGP du 29/11 au 01/12 2011, Lille grand palais – France, "*Etude expérimentale du stockage thermique par chaleur latente dans un capteur solaire sous vide*".
7. **Bouadila Salwa**, Fteiti Mehdi, Ouslati Mouhamed mehdi, Guizani amen Allah, Ben Nasrallah Sassi ; Communication in the 7èmes Journées Tunisiennes sur les Ecoulements et les Transferts, du 20 au 22 Décembre 2010 à Tozeur, Tunisie, "*Etude de stockage de l'énergie thermique par chaleur latente: application capteur solaire*".
8. **Salwa Bouadila**, Safa Skouri, Sami Kooli, Meriem Lazaar, Abdelhamid Farhat; 16èmes Journées Internationales de Thermique (JITH 2013), Marrakech , Maroc; 11/2013, "*Experimental investigation of a new solar air heater with packed-bed latent storage energy*".
9. Safa Skouri, **Salwa bouadila**, Sassi Ben Nasrallah; Communication in the International Conference on Composite Materials & Renewable Energy Applications, (ICCMREA'2014), January 2014, Sousse, Tunisia, "*Experimental study of two types of solar heat exchanger used to determine concentrated solar energy in solar parabolic concentrator*".
10. Skouri Safa, **Bouadila Salwa**, Sassi Ben Nassrallah; Communication in the International Conference on Renewable Energy (CIER'13), December 2013 Sousse, Tunisia, "*Economical and efficient automatic sun tracking system used to handle solar parabolic concentrator*".
11. Safa Skouri, **Salwa Bouadila**, Mohieddine Ben Salah, Sassi Ben Nasrallah; Communication in the 12th Tunisian Japanese Symposium on Science, Society and Technology, (TIJAST 2013) November 2013, Hamammet – Tunisia, "*Optical and photogrammetry study of parabolic dish concentrator*".
12. Safa SKOURI, **Salwa BOUADILA**, Mohieddine BEN SALAH , Sassi BEN NASRALLAH, 16èmes Journées Internationales de Thermique (JITH 2013), Marrakech, Maroc; 11/2013, "*Optical and photogrammetry study of parabolic dish concentrator*".
13. Rania RAMZI, **Salwa BOUADILA**, Amen Allah GUIZANI, Ridha ABID ; Vème Congrès International sur les Energies Renouvelables et l'Environnement, 04-06 Novembre, 2010, Sousse, Tunisie "*Stockage thermique par chaleur latente dans un capteur solaire sous vide*".

Other Interests & Activities

Registered member of the Tunisian Association of Engineers (OIT).

Hobbies: Travel, music, sport.