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PERSONAL DATA

- Born in Alrabitah, Libya January 28, 1971
- Height : 176 cm
- Weight : 78 kg
- Health : excellent

Home address	Industrial State, Tajoura P.O. Box 30414 Tajoura Tripoli -Libya
Office address	Center for Solar Energy Research and Studies P.O. Box 12932 Factories bridge, Km 9. Tajoura – Libya Phone (+218) 21 217260000 Fax (+218) 21 3699322

EDUCATION

Summer 2009	PhD. Solar Energy, Engineering Faculty, Loughborough University, The UK.
Spring 1999	M.Sc. In Mechanical Engineering, Thermal and Fluid sciences program, University of Tripoli (previously Al-Fateh), Tripoli, Libya 1999
Fall 1993	B.Sc. in Mechanical Engineering, power department, University of Tripoli (previously Al- Fateh), Tripoli, Libya 1993

PERSONAL EMPLOYMENT

Full Time

01-08-2022 to Present	Libyan Center for Solar Energy Research and Studies
01-01-2018 to 31-07-2022	General Director of the Center for Solar Energy Research and Studies

1-09-2014 to 31-12-2017	Researcher at the Center for Solar Energy Research and Studies, Head of thermal Energy Conversion Dept
1-1-2014 to 1-09-2014	sabbatical leave
August 2009 To 31-12-2013	Head of thermal Energy Conversion Dept Researcher at the Center for Solar Energy Research and Studies
August 2004 To July 2009	PhD student at Loughborough University
August 1999 To July 2004	Researcher at the Center for Solar Energy Research and Studies ↳ Supervision of installation and testing of solar water heaters ↳ Head of low temperature program
January 1997 To July 1999	Research assistant at the Center for Solar Energy Research and Studies ↳ Solar water heaters (installation and testing) ↳ Operator of test measurements and Data acquisition systems
January 1995 To December 1996	Part-time engineer at Center for Solar Energy Studies (Solar water heaters program)

Affiliations:

- ISES member, 2013.
- SHAMCI network member (Arab SWHs certification).
- Head of testing laboratories in the SHAMCI.
- Editorial Board of JSESD

Scientific activities

- Active in local and international scientific conferences and exhibitions.
- Participating in preparing many Call for tenders (TOR) for many projects
- A member of the scientific committee in many local and international conferences
- Referee in a number of local and international conferences and journals

Part Time

Taught courses (Lecturer at, High institutes, and Universities in Libya)

- Renewable Energy Systems (M.Sc. Course)
- Energy Systems (M.Sc. Course)
- Thermodynamics (B.Sc. Course)
- Heat Transfer (B.Sc. Course)
- Solar Energy (B.Sc. Course)
- Numerical methods (B.Sc. Course)

B.Sc. projects supervisors

- ❖ Experimental test of solar water heater (heat pipe)
- ❖ Study of thermal performance of three flat plate solar collectors with different absorber surfaces
- ❖ Predicted long term performance of solar water heater in Libyan climatic.
- ❖ Modeling the thermal performance of flat plate solar collector.
- ❖ Space solar heating of a typical Libyan house.
- ❖ Operating Tajoura desalination unit through the use of evacuated tube solar collectors
- ❖ Estimation of the hot water consumption of the hotel sector of Tripoli
- ❖ Sizing solar water heating system in Gorgi Pasta factory.
- ❖ Dish Concentrating solar collectors: theoretical and experimental.
- ❖ Performance of 100 MW Parabolic trough solar collectors in Libya
- ❖ Parabolic trough concentrating for industrial heat process

M.Sc. projects supervisors

- ❖ Experimental Validation of Large-Scale Solar water heating systems in TRNSYS and PolySun
- ❖ Solar Energy Potential for Hot Water in the Hotel Sector of Libya, a Case study: Plasma Hotel.
- ❖ Optimization of Active Solar Water heating Systems Using TRNSYS and Genetic Algorithms
- ❖ Analysis of Saharan sand abrasion of CSP collector surfaces
- ❖ Potential of Solar water heating in the industrial sector of Libya Case study: sizing SWHs for Al-Amera factory
- ❖ Design and Simulation of Solar Powered Space Heating and Domestic Hot Water for Elementary School in Libyan.
- ❖ Medium-Term Development plan for Renewable Energy in Libya
- ❖ Potential Savings of Energy through Management Opportunities in the Residential Sector of Libya
- ❖ Enhancing Thermosyphon Solar System Performance using simple and robust tracking system

- ❖ Validating of Thermosyphon Solar Water Heaters Model in TRNSYS Using Real Time Data

Training Courses

- English Language Course, High intermediate, twelve weeks, European Center of English language studies, Malta, 1999.
- English Language Course, eight months, Glasgow University, UK, 2004
- TRNSYS 17 three days training course, TESS, Wisconsin, USA, 2010.
- HOMER and SAM Training Workshop, given by Paul Gilman, CSERS, Libya, 2010.
- Fundamentals of project management workshop, Great Standard Consulting L.T.D, 2013

Seminars

1. Towards Strategic Plan for Wide Spread of Solar Water Heaters in Libya, *workshop of Energy and Building*, Tripoli, 25-01-2010.
2. Solar water heaters project- field experience, CSERS, Tripoli, 03-06-2010.
3. Renewable energy in Libya, current situation and future prospective, *The new and renewable energy seminar for north Africa countries*, Tokyo, Japan, Feb,2010.
4. Centre for Solar Energy Research and Studies: mission, current projects and Facilities, *CRST, Loughborough University*, UK, Feb, 2010.
5. Solar Water heaters field test project, *Centre for Solar Energy Research and Studies*, Libya, 2010
6. Solar water heaters in Libya: National programme, *Libyan-German Renewable Energy and Energy Efficiency Workshop*, Radisson Blu Al Mahary Hotel, Tripoli, Libya, 21-22 May 2012
7. Minimum requirements of testing Labs, *ARSOL Network second meeting*, Cairo, Egypt, Aug, 29-30, 2012.
8. The role of solar energy in providing part of energy requirement in residential and service sectors, *1st Engineering Conference in Zawia*, Zawia, 2012.
9. Thermal energy Conversion Department, *Workshop on current and future prospective*, CSERS, Libya, Mar, 2013
10. Solar water Heating Systems in Libya, REOAL and World Bank workshop, Tripoli, Libya, 2013
11. Benefits of renewable energy in agricultural applications, Ministry of Agriculture and Livestock, Tripoli, Libya, May,2014.
12. Solar Energy Thermal Conversion, Renewable Energy Workshop, Libyan Academy, Tripoli, Libya, 21-Dec-2014.
13. Potential of Renewable Energy sources in Ghadames Municipality, The First Forum for Spatial Development in Ghadames city, Oct, 2021.

14. The Role of the Centre in exploiting Solar Energy in Libya, Libyan Renewable Energy Conference and Exhibition, Libyan Council for Oil, gas and Renewable energy. Mar, 2022.

PUBLISHED PAPERS

(in Arabic)

- 1- **Abdunnabi M.**, Solar water heaters applications in field project, *Proceeding of Solar energy scientific workshop*, Brake, Libya, 1999.
- 2- **Abdunnabi M.**, and Benaje, M, Aljarah A., Thermal performance of three flat plate solar collectors with different absorber surfaces, *Proceeding of solar energy in hot regions*, Hoon, Libya, 2002
- 3- **Abdunnabi M.**, and Abdulrahman M., One year test field study in Libya of domestic solar water heater, *AL-Nawah Journal*, Vol(8), Dec 2004
- 4- **Abdunnabi, M.** and Berwian B, Economic and environmental benefits of the replacement of Solar water heaters instead of electric heaters in Libya, *Scientific Journal of Science*, Vol(13), July 2005.
- 5- **Abdunnabi M.**, Algmami, F.M, Alrgehi, A, Climatic design year of Tajoura, *Journal of Solar Energy and Sustainable Development, JSESD*, No 1, Vol,1,CSERS, 2012

(in English)

- 6- **Abdunnabi M.** and Loveday D, Towards an Automated Technique for Optimising the Design of Thermosyphon Solar Water Heaters, *I3CON Proceedings*, pp 297-307, Loughborough University UK, 14-16 May 2008.
- 7- **Abdunnabi M.**, D.L. Loveday and J.A. Wright, A Design tool for thermosyphon solar water heaters using TRNSYS and Genetic Algorithms, *Universitas 21, Conference on Energy Technologies and Policy*, 7-10 Sept. Birmingham, UK.
- 8- **Abdunnabi M.** and Loveday, DL., Optimisation of Thermosyphon Solar Water Heaters Using TRNSYS. Part1: Improved Model Development and Validation, *ICFEE proceedings*, pp, 26-28th Feb, Singapore, 2012.
- 9- **Abdunnabi M.** and Loveday, DL., Optimisation of Thermosyphon Solar Water Heaters Using TRNSYS. Part2: Parametric Study of a Thermosyphon system using the Modified TRNSYS Model, *ICFEE proceedings*, pp , 26-28th Feb, Singapore, 2012.
- 10- **Abdunnabi M.**, and Loveday, DL., 2010, In –Situ Measurements of the Performance of Thermosyphon Solar Water Heating Systems in Libya, *ICRE Proceedings*, 2010, 5-8/4/2010, Syria.
- 11- **Abdunnabi M.**, D.L. Loveday and J.A. Wright, Development of a Design Tool for Sizing and Optimizing Thermosyphon Solar Water Heater Systems: A Case Study for Libya, *The Sharjah International*

- Conference on Nuclear & Renewable Energy-SHJ-NRE11*, University of Sharjah, Sharjah, UAE, 3-5, April, 2011.
- 12- **Abdunnabi M.**, Effect of hot water load pattern in the design parameters of thermosyphon solar water heaters, *Proceedings of REVET*, Tunisia, March, 26-28th, 2012.
 - 13- **Abdunnabi M.**, 2012, Optimum Values of Tank Volume to Collector Area Ratios of Thermosyphon Solar Water Heaters for Libyan Families, *Journal of Solar Energy and Sustainable Development, JSESD*, No 1, Vol,1,CSERS, 2012
 - 14- **Abdunnabi M.**, Ramadan, A., 2012,Simulation Study of the Thermal Performance of MSF Desalination Unit Operating by Solar Vacuum Tube Collectors, *IASTED Proceedings*, Las Vegas, 12-14, Nov, 2012.
 - 15- **Abdunnabi M.**, Mussa, M, Towards Strategic Plan for Wide Spread of Solar Water Heaters in Libya, *JSESD*, No 1, Vol,2, CSERS, 2013.
 - 16- Mohamed A.M.A., Al-Habaibeh A., Abdo H. and **Abdunnabi M. J.R.**, The Significance of Utilising Renewable Energy Options into the Libyan Energy Mix, *Energy Research Journal* 4 (1): 15-23, 2013.
 - 17- **Abdunnabi M.**, Alakder k, Alkishriwi N A. and, Abughres S M, Experimental Validation of Forced Circulation of Solar Water Heating Systems in TRNSYS, *Energy Procedia*, Volume 57, 2014, Pages 2477-2486
 - 18- **Abdunnabi M.** Idweeb A. and Ramadan A., Potential of hot water in the Hotel Sector of Libya, 6th International Renewable Energy Congress (IREC), 2015.
 - 19- **Abdunnabi M.**, Mrehel O. R., Shamekh N., and Dadeh K., Effect of Wide Spread Implementation of Solar Water Heaters on the Electricity Peak Load in Libya, *JSESD*, Vol 5, 2, pp 33-48, 2015.
 - 20- Basim Belgasima, Yasser Aldali, Mohammad J.M. **Abdunnabi**, Gamal Hashem, Khaled Hossin, *The potential of concentrating solar power (CSP) for electricity generation in Libya, Renewable and Sustainable Energy Reviews* 90 (2018) 1–15
 - 21-**Abdunnabi M.**, Ibrahim Rohuma and Essam Endya, Esmaeel Bela, Review of Solar water Heaters in Libya, *JSESD*, Vol 7, Special Issue, pp 1-28, 2018.
 - 22-**Abdunnabi,M.**, Basim belgasim, Abdulganhi Ramadan, Review on Solar Thermal Desalination in Libya, *JSESD*, Vol 7, Special Issue, pp 1-28, 2018.
 - 23-Endaya E., Sansom C., Comley P., Almond H., **Abdunnabi M.**, Dekam E. I., Simulation of the effect of Libyan sand on the reflectance surface of CSP, *JSESD*, Vol 8, 2, pp 33-46, 2019.
 - 24-Mohammed Abdunnabi, Basim Belgasim, Mokhtar BenAbead, Faisal Mohamed, Performance analysis of solar heat generation system for multi-purpose applications, 11th International Renewable Energy Congress (IREC), 2020.

- 25-Basim Belgasim, Omar Behar, **Abdunnabi M.**, Faisal Mohamed, Modeling and simulation of a large-scale hybrid solar gas turbine with pressurized air receiver, 11th International Renewable Energy Congress (IREC), 2020.
- 26-Y. Nassar, **M. Abdunnabi**, M. Sbeta, A. Hafez, K. Ali, A. Ahmed, B. Belgasim ‘’ Dynamic analysis and sizing optimization of a pumped hydroelectric storage-integrated hybrid PV/Wind system: A case study’’ Energy Conversion & Management, vol (229), 113744, 2021
DOI: <https://doi.org/10.1016/j.enconman.2020.113744>
- 27-Abdulmaged Algareu, **Abdunnabi M.**, Maged Mabruk, Adel M. Elmaghrabi, Legionella Bacteria Activity investigation in Domestic Water Heating Systems Tripoli-Libya as a case study, JSESD, Vol 10, 2, pp 11-20, 2021.
- 28-**Abdunnabi M.**, M., Ben-Abied, Ibrahim Twial, Mohamed Belhaj, F. Mohamed. Design of Solar Powered Space Heating and Domestic Hot Water System for Libyan Common House, 12th International Renewable Energy Congress (IREC), 2021.
- 29-**Abdunnabi M.**, Solar Water Heaters Test Field Project Final Report, Libyan Center for Solar Energy Research and Studies, 2021.