Curriculum Vitae

Of

Ala Husein Abdallah Jaber

Email: ala.jaber@ymail.com. **Date and place of birth:** July 29th, 1976, Kuwait. **Marital status:** Single.
Nationality: Jordanian. **Address:** Jaber, Ala H., P.O. Box 567, Amman 11941, Jordan.

EDUCATIONAL BACKGROUND

PhD. Institute of Engineering Thermodynamics, Am Weichselgarten 08, 91058 Erlangen, Germany, Faculty of Engineering, Friedrich-Alexander-University Erlangen-Nuernberg, August, 2013. **Grade: Very Good**.

MSc.* In optics, Graduate School in Advanced Optical Technologies (SAOT), Paul-Gordanstrasse 6, 91052 Erlangen, Germany, Friedrich-Alexander-University Erlangen-Nuernberg, August, 2013. **Successful completion** (a certificate qualifies for PhD studies in the science of optical technology).

MSc. In Mechanical Engineering, Department of Mechanical Engineering, The University of Jordan, Amman 11942, Jordan, September, 2005. **Grade: Excellent. Ranked the first**.

BSc. In Mechanical Engineering, Faculty of Mechanical and Electrical Engineering, Damascus University, Damascus 30621, Syria, November, 2001. **Grade: Good**. **Ranked among the top 15%**.

General Secondary School Certificate, scientific stream, Tawfik Abu El Huda High School, Prince Hasan Camp, Jabal Al Naser, Amman 11140, Jordan.

PROFESSION BACKGROUND

Sep. 2016-present: Assistant Professor, Zarqa University, P.O. Box 132222, Postal Code 13132, Zarqa, Jordan, Faculty of Engineering, Department of Mechanical Engineering.

Sep. 2014-2016: Assistant Professor, The Applied Science Private University, P.O. Box 166, Postal Code 11931, Amman, Jordan, Faculty of Engineering, Department of Mechanical Engineering.

Mar. 2009-Aug. 2013: Research and Development, Institute of Engineering Thermodynamics, Am Weichselgarten 08, 91058 Erlangen, Germany, Faculty of Engineering, Friedrich-Alexander-University Erlangen-Nuernberg.

Mar. 2009-2012: Teaching Assistant, Institute of Engineering Thermodynamics, Am Weichselgarten 08, 91058 Erlangen, Germany, Faculty of Engineering, Friedrich-Alexander-University Erlangen-Nuernberg.

Jul. 2008-Feb. 2009: Research and Development, Institute of Fluid Mechanics, Cauerstrasse 04, 91058 Erlangen, Germany, Faculty of Engineering, Friedrich-Alexander-University Erlangen-Nuernberg.

Jul. 2007-2008: Research and Development, FMP Technology GmbH, Am Weichselgarten 34, 91058 Erlangen, Germany, incorporation with TSE TROLLER-Coating Secret, Aareweg 06, CH-4853 Murgenthal, Switzerland.

Oct. 2005-Jun. 2007: Mechanical Engineering Instructor, Department of Engineering, Al-Quds College, Amman 11118, Jordan.

Sep. 2003-2005: Teaching Assistant, Department of Mechanical Engineering, The University of Jordan, Amman 11942, Jordan.

Sep. 2003-2005: Research Assistant, Department of Mechanical Engineering, The University of Jordan, Amman 11942, Jordan.

TEACHINING EXPERIENCE

Sep. 2016-present: Assistant professor, lecturing on: Heat Transfer (1), Design of Sanitary Systems, Heating Ventilating and Air-Conditioning HVAC (1), Renewable Energy, Applied Mathematics, Fuel Cell Vehicles and Hydrogen Production Technology, Mechanical Vibrations, Thermodynamics (2), Turbines, Internal Combustion Engines, Laboratory of Thermodynamics, Laboratory of Heat Transfer and Laboratory of HVAC (1). Zarqa University, P.O. Box 132222, Postal Code 13132, Zarqa, Jordan, Faculty of Engineering, Department of Mechanical Engineering.

Sep. 2014-2016: Assistant professor, lecturing on: Thermal-Fluid Sciences, Fluid Mechanics (1), Building Utility (1)/Sanitary Systems, Building Utility (2)/ Air Conditioning, Modern Control Systems, Dynamics, Engineering Economy and Management, Strength of Materials (Laboratory), Thermal-Fluid Sciences (Laboratory) and Fluid Mechanics (Laboratory). The Applied Science Private University, P.O. Box 166, Postal Code 11931, Amman, Jordan, Faculty of Engineering, Department of Mechanical Engineering.

Mar. 2009-2012: Teaching Assistant, exercises in Combustion Technology and in Turbulent Flame Speed Numerics/Fluent. Institute of Engineering Thermodynamics, Am Weichselgarten 08, 91058 Erlangen, Germany, Faculty of Engineering, Friedrich-Alexander-University Erlangen-Nuernberg.

Oct. 2005-Jun. 2007: Instructor for Thermal Engineering subjects; all Power and Thermal Machines besides Heating Ventilating and Air Conditioning (HVAC) subjects. Al-Quds College, Amman 11118, Jordan.

Sep. 2003-2005: Teaching Assistant, Thermodynamics Laboratory, The University of Jordan, Amman 11942, Jordan.

Sep. 2003-2005: Teaching Assistant, Thermal and Fluid Laboratory, The University of Jordan, Amman 11942, Jordan.

SCHOLARSHIPS

Sep. 2012-Dec. 2012: Offered by Scholarships and Support Programme (**STIBET**), Schlossplatz 4, 91054 Erlangen, Germany, Friedrich-Alexander-University Erlangen-Nuernberg.

Jan. 2008-Jun. 2012: Offered by German Academic Exchange Service (**DAAD**), Kennedyallee 50, 53175 Bonn, Germany.

Jul. 2007-Dec. 2007: Offered by Chair of Process Technology and Machinery (**İPAT**), Cauerstrasse 4 (Haus 5), 91058 Erlangen, Germany, Faculty of Engineering, Friedrich-Alexander-University Erlangen-Nuernberg.

AWARDS

Nov 8th, 2014: Shield of excellence offered by PRO train academy (PTA) authorised partner for the drive and control company, Jordan, incorporation with Rexroth Bosch Group, Germany.

LANGUAGES AND COMMUNICATION SKILLS

Arabic: Native tongue.

English: Excellent (listening, speaking, reading and writing).

- Scientific English Workshop, *Graduate School in Advanced Optical Technologies* (*SAOT), Paul-Gordanstrasse 6, 91052 Erlangen, Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (January 25th, 2012).
- Scientific English Workshop, *Graduate School in Advanced Optical Technologies* (*SAOT), Paul-Gordanstrasse 6, 91052 Erlangen, Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (December 10th, 2010).
- English Course in Communication Skills for PhD Students (scientific presentations of student's own work, group activities and writing practice), *Erlangen Language Centre, Bismarckstr. 10, 91054 Erlangen,Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (summer semester 2010).

German: Good working knowledge.

- German as a Foreign Language 'Deutsch als Fremdsprache (DaF)' Intermediate Level 2. *Erlangen Language Centre, Bismarckstr. 10, 91054 Erlangen, Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (summer semester 2010).
- German as a Foreign Language 'Deutsch als Fremdsprache (DaF)' Intermediate Level 1. *Erlangen Language Centre, Bismarckstr. 10, 91054 Erlangen, Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (summer semester 2009).
- Basic Level A2. *Language Centre Languages and Culture, Zeppelinstrasse 15, 91052 Erlangen, Germany* (from January 08th, 2009 to February 18th, 2009).
- Basic Level A1. *Language Centre Languages and Culture, Zeppelinstrasse 15, 91052 Erlangen, Germany* (from November 26th, 2007 to December 17th, 2008).

French: Basic knowledge (listening, speaking, reading and writing).

- French Elementary Course II A (beginner without previous knowledge). *Erlangen Language Centre, Bismarckstr. 10, 91054 Erlangen, Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (winter semster 2010).
- French Elementary Course I A (beginner without previous knowledge). *Erlangen Language Centre, Bismarckstr. 10, 91054 Erlangen, Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (summer semster 2009).

COMPUTER SKILLS

Programming: Pascal, MATLAB (5.3-6.5) and MathCAD (11-14).

Environments: MATLAB (5.3-6.5): SIMULINK, PDE toolbox and PDE graphical user interface toolbox. MathCAD (11-14), AutoCAD 14, 2000, MINITAB, Sigma Plot, SPSS, SAS, STATISTICA, TRNSYS 16 (a dynamic thermal system simulation), SpectraSuite ocean optics (a spectrum analyser software), Camware (a program for camera control and image acquisition, recording long sequences and time laps, controlling all digital imaging cameras of portal configuration object PCO imaging), Irfan view software (a very fast, small, compact and innovative graphic viewer for Windows 9x, ME, NT, 2000, XP, 2003, 2008, Vista, Windows 7), Solid Edge (a 3D CAD parametric feature solid modelling software), CFX-Fluent (a computational fluid dynamics CFD simulation programme), FDTD solutions 6.5 (a finite difference time domain solutions simulation programme) and LabVIEW professional v8.2 (a platform and development environment).

Microsoft Office, Operating Systems (9x, Me, XP, 7, 8, 10).

ENGINEERING SOCIETIES AND OTHER SOCIETIES MEMBERSHIP

2016-Present: The Association Jordanian Graduates German Universities 'Der Vereinigung Jordanischer Absolventen Deutscher Universitäten'. *Abdel Mun'im Al Rifa'i St. 5, Jabal Amman, Amman 11118, Jordan*.

2009-Present: Graduate School in Advanced Optical Technologies (SAOT). *Paul-Gordanstrasse 6, 91052 Erlangen, Germany.* Entrance examination subjects: Basic concepts in optics, optical materials and systems, optical metrology (1) and (2), optics in information and communication technologies, computational optics (1) and (2), principles of vision and module basics in medicine. Nov., 23rd - 27th, 2009.

2008-Present: German Academic Exchange Service 'Deutscher Akademischer Austausch Dienst *(DAAD)*'. *Kennedyallee 50, 53175 Bonn, Germany*.

2002-Present: Jordan Engineers' Association. *Complex of professional associations-Shmesani-Amman11194, Jordan*.

HOBBIES AND PERSONAL INTERESTS

Fitness Training: Regular visits to fitness studios (3 times in a week).

Socialising with Friends: Meeting regularly with friends for doing sports, watching football matches and finding resolutions for problems that might arise.

Softwares and Computations: Worked with different softwares and computation programmes as seen in the heading 'Computer Skills'.

Exploring Places and Countries: Many cities in Arab world as well as Europe and Germany were visited.

REFERENCES

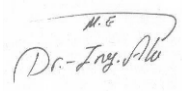
Dr.-Eng. Lars Zigan: (Team leader) Doctor of Engineering, *Institute of Engineering Thermodynamics, Am Weichselgarten 08, 91058 Erlangen, Germany, Faculty of Engineering, Friedrich-Alexander-University Erlangen-Nuernberg.* Tel.: +49-9131-8529770, Fax: +49-9131-8529901, Lars.Zigan@cbi.uni-erlangen.de

Frau Birgit Klaes: German Academic Exchange Service (DAAD), Referat 441 (Nordafrika, Nahost), *Kennedyallee 50, 53175 Bonn, Germany*. Tel.: +49-228-882474, Fax: +49-228-882160, Klaes@daad.de

Prof. M. A. Hamdan: Professor, *Faculty of Engineering and Technology, The University of Jordan, Amman 11942, Jordan*. Tel.: +962-65355000-ext. 3098, Fax: +962-65355588, mhamdan@ju.edu.jo

Prof. N. Al-Huniti: Professor, *Faculty of Engineering and Technology, The University of Jordan, Amman 11942, Jordan*. Tel.: +962-65355000-ext. 2768, Fax: +962-65355588, alhuniti@ju.edu.jo

Prof. Y. H. Zurigat: (MSc. Thesis Advisor) Visiting Professor, *Mechanical Engineering Department, American University of Sharjah, United Arab Emirates (UAE)*. Tel.: +971-65152822, yzurigat@aus.edu



Amman, March 25th, 2024

Place, Date

Signature of Ala Husein Abdallah Jaber

Appendices

RESEARCH EXPERIENCE

1. Surface Temperature Measurements in a Porous Media Burner using a New Laser-induced Phosphorescence Intensity Ratio Technique (**PhD. Dissertation**).
2. Performance of a Gas Turbine Cogeneration with Inlet Air Cooling using Absorption Refrigeration Powered by Exhaust Gas (**MSc. Thesis**).
3. Thermal and Audition Calculation for Steam Generator with Six Ton per Hour Production Rate (**BSc. Graduation Project**).
4. Heated-Rollers for Coating Applications using Porous Media Line Burners.
5. Investigations of Possibility of Applying Slot Flow Splitter Coating for Wood Finishing. Project for BauschLinnemann GmbH Co.'*Untersuchungen der Moeglichkeit der Schlitzfliesserbeschichtung fuer eine Holzdekorbeschichtung der Firma BauschLinnemann GmbH*'.
6. Fluid Mechanics of Film Coating and Optimisation of Fluid Characteristics for Curtain Coating '*Stroemungsmechanik der Filmbeschichtung und Optimierung der Fluideigenschaften fuer die Vorhangbeschichtung*'.
7. The Coating Window of Slide Coaters Operating in their Curtain Coating Mode.
8. The Coating Window of Slot Coaters Operating in their Curtain Coating Mode.
9. Dip Coating versus Bead Coating for Zinc Layers on Steel Sheets.
10. The Layout of Ring Type Slot Coaters.
11. Film Flows on Slides of Cascade Slide Coaters.
12. Extension of Computer Program ASC-B-100 and ASC-B-200 for Influences of the Gravity Acceleration.
13. Non-dimensionalised Mathematical Model of Slot Coaters.
14. The Influence of Finite Diameters on the Coating Window of Slot Bead Coaters.
15. The Influence of Contact Angles on the Coating Windows of Slot Bead Coaters.
16. A Study of Modelling and Simulation of Energy Systems using MathCAD.
17. A Study of MathCAD Software, Version. 5 to 12, Best of each and Requirements.
18. A Study of PIPE FLO Software in Design, Evaluation and Optimisation of Piping systems, Advantages and Disadvantages.
19. A Study of Hardy Cross Technique in Solving Piping Networks Problems.
20. A Study of Flow Meters Kinds Sizing and Usages.
21. A Study of Water Hammer Phenomenon and the Avoiding Techniques.
22. A Study of the Selection Criteria of Heat Exchangers.
23. A Study of the Selection Criteria of Prime Movers Pumps and Fans.
24. A Study of Energy Conservation in Houses.
25. A Study of the Characteristics of Five Working Fluids.
26. A Study of Passengers' Thermal Comfort in Commercial Airplanes.
27. A Study of Microwaves Oven Design.
28. Torsional Vibration in Electrical Induction Motor Drives during Start-up.
29. The Available Techniques for Utilization of Renewable Energy Resources. Current Studies and Data Collection Procedures.
30. Anaerobic Digestions-Methane Gas Harnessing.
31. Indigenous Tracking System Analysis for Solar Energy.
32. Automated Parking System for Multi Storey Buildings.
33. Design of Multi Dimensional Joy Ride for Luna Park.

PUBLICATIONS

1. N Beithou, M Mansour, N Abdellatif, S Alsaqoor, S Tarawneh, **A Jaber**, A Andruszkiewcz, M Alsqour, G Borowski, A Alahmer and J Siderska (2023). Effect of the Residential Photovoltaic Systems Evolution on Electricity and Thermal Energy Usage in Jordan. *Advances in Science and Technology Research Journal, Politechnika Lubelska*, **ISSN:** 2299–8624, **Vol.** 17, **No.** 2, **pp.** 1–9.

2. A Jaber (2015). Temperature Calibration Measurements Based on Laser-Induced Phosphorescence Technique for Combustion Applications. *International Journal of Thermal and Environmental Engineering*, *International Association for Sharing Knowledge and Sustainability* (IASKS), **ISSN Print:** 1923-7308, **ISSN Online:** 1923-7316, **Vol.** 10, **No.** 01, **pp.** 37-45.

3. A Jaber (2015). Influence of Applying Inlet Air Cooling Technique on Performance of Gas Turbine Combined and Cogeneration Power Cycles. *International Institute of Refrigeration, Refrigeration Science and Technology Proceedings*, **No.**08, **ISSN:** 01511637, **ISBN:** 9782362150098. **pp.** 1-10.

4. A Jaber, L Zigan, A Sakhrieh and A Leipertz (2013). Surface Temperature Measurements in a Porous Media Burner using a New Laser-induced Phosphorescence Intensity Ratio Technique. *Measurement Science and Technology*, *Institute of Physics*, **ISSN:** 09570233, **Vol.** 24, **No.** 07, **pp.** 1-8.

5. A Jaber, L Zigan, A Sakhrieh and A Leipertz (2013). Laser-induced Phosphorescence Applications in Surface Temperature Measurements of a Porous Media Burner. *The 6th European Combustion Meeting (ECM 2013), Lund University, Lund, Sweden, June 25th-28th, 2013*. Proceedings of the European Combustion Meeting 2013. **ISBN:** 9789163721519. **pp.** 1-6.

6. A Jaber, L Zigan, A Sakhrieh and A Leipertz (2013). High Surface Temperature Measurements using Thermographic Phosphors. *The 18th International SAOT Workshop on Optical Metrology, Optical Engine Diagnostics, Friedrich-Alexander-University Erlangen-Nuernberg, Germany, March 18th-19th, 2013.* **Presentation**.

7. A Jaber, Y Zurigat and Y Najjar (2012). Performance of a Gas Turbine Cogeneration with Inlet Air Cooling Using Absorption Refrigeration Powered by Exhaust Gas. *The 34th International Symposium on Combustion, Warsaw University of Technology, Warsaw, Poland, July 29th-August 03rd, 2012*. **Abstract and Poster**.

8. A Jaber, L Zigan, A Sakhrieh and A Leipertz (2012). Surface Temperature Distribution Remote Phosphor Thermometry of a Porous Media Burner using Laser-induced Phosphorescence. *The 34th International Symposium on Combustion, Warsaw University of Technology, Warsaw, Poland, July 29th-August 03rd, 2012*. **Abstract and Poster**.

9. A Jaber, L Zigan, A Sakhrieh and A Leipertz (2012). Laser-Induced Phosphorescence in Combustion Diagnostics: Calibration at Extremely High Temperatures. *The 11th International Conference on Combustion and Energy Utilization (ICCEU), Coimbra, Portugal, May 09th-13th, 2012.* **pp.** 1-8.

10. G Jovicic, A Jaber, L Zigan, S Pfadler and A Leipertz (2010). Application of Thermographic Phosphors for Temperature Determination in Gas Flows and on Surfaces. *Thermodynamik und Ingenieurdaten Expertenforum, Organisiert vom Verein Deutscher Ingenieure, Bayreuth Univesity, Germany, October 04th -06th, 2010.* **Poster**.

CONFERENCES, ACADEMIES, WORKSHOPS, FORUMS, SYMPOSIUMS, SHORT AND INTENSIVE COURSES CONTRIBUTIONS

1. The 2nd Engineering International Conference on Electrical, Energy and Artificial Intelligence. Zarqa University, Zarqa, Jordan (December 27th-28th) 2023.

2. The 1st Engineering International Conference on Electrical, Energy and Artificial Intelligence. Zarqa University, Zarqa, Jordan (December 6th-8th) 2022.

3. German-Jordanian Symposium on Waste Management and Recycling: Opportunities and Challenges for the Waste and Recycling Industry in Jordan. *Amman Chamber of Industry, Amman, Jordan* (Sep., 9th 2019).

4. International Workshop-Jordan, Tamayouz Excellence Award in Architecture Graduation Projects Worldwide. *The Applied Science Private University, Amman, Jordan* (Apr., 25th -26th) 2016.

5. A Jaber (2015). Temperature Calibration Measurements Based on Laser-Induced Phosphorescence Technique for Combustion Applications. *International Conference of Young Scientists on Innovative Applied Renewable Energy Researches (ICYS- ARE 2015), the German Jordanian University, Amman, Jordan,* (May 18th-20th) 2015.

6. A Jaber (2015). Influence of Applying Inlet Air Cooling Technique on Performance of Gas Turbine Combined and Cogeneration Power Cycles. *The 5th Jordanian IIR International Conference on Refrigeration and Air Conditioning, Aqaba, Jordan* (Jan., 12th-14th) 2015.

7. The 1st International Engineering Conference on New Advances in Engineering Research and their Impact on Engineering Education. *The Applied Science Private University, Amman, Jordan* (Dec., 29th-30th) 2014.

8. Guest ceremony (2014). Professor Ali Nayfeh the esteemed was invited to honor outstanding degree doctoral (**A. Jaber** was one of them), masters and bachelor of mechanical engineering students and a discussion of theses and projects in the presence of a significant number of people interested in the field of mechanics and doctors universities, Amman. Chamber of Industry and Engineers Association Jordanians, *Amman, Jordan* (Nov., 8th) 2014.

9. A Jaber, L Zigan, A Sakhrieh and A Leipertz (2013). Laser-induced Phosphorescence Applications in Surface Temperature Measurements of a Porous Media Burner. *The 6th European Combustion Meeting (ECM 2013), Lund University, Lund, Sweden* (Jun., 25th-28th) 2013.

10. A Jaber, L Zigan, A Sakhrieh and A Leipertz (2013). High Surface Temperature Measurements using Thermographic Phosphors. *The 18th International SAOT Workshop on Optical Metrology, Optical Engine Diagnostics, Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (Mar., 18th-19th) 2013.

11. A Jaber, Y Zurigat and Y Najjar (2012). Performance of a Gas Turbine Cogeneration with Inlet Air Cooling using Absorption Refrigeration Powered by Exhaust Gas. *The 34th International Symposium on Combustion, Warsaw University of Technology, Warsaw, Poland* (Jul., 29th-Aug., 03rd) 2012.

12. A Jaber, L Zigan, A Sakhrieh and A Leipertz (2012). Surface Temperature Distribution Remote Phosphor Thermometry of a Porous Media Burner using Laser-induced Phosphorescence. *The 34th International Symposium on Combustion, Warsaw University of Technology, Warsaw, Poland* (Jul., 29th-Aug., 03rd) 2012.

13. A Jaber, L Zigan, A Sakhrieh and A Leipertz (2012). Laser-Induced Phosphorescence in Combustion Diagnostics: Calibration at Extremely High Temperatures. *The 11th International Conference on Combustion and Energy Utilization (ICCEU), Coimbra, Portugal* (May 09th-13th) 2012.

14. Short Course of Combustion Technology, Fundamentals and Modern Applications of Combustion Engineering, *Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (Mar., 13th-16th) 2012.

15. Fibre Lasers, Sensors and Materials Workshop, *Graduate School in Advanced Optical Technologies (SAOT), Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (Jul., 27th-29th) 2011.

16. Nonlinear Optics and Interfaces Workshop, *Graduate School in Advanced Optical Technologies* (*SAOT), Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (Apr., 26th-27th) 2011.

17. Engine Diagnostics Workshop, *Graduate School in Advanced Optical Technologies (SAOT), Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (Mar., 28th-29th) 2011.

18. A Jaber (2011). Laser-induced Phosphorescence Applications in Highly Precise Temperature Measurements. *Graduate School in Advanced Optical Technologies* (*SAOT) Winter Academy, Hintertux, Austria* (Feb., 19th-26th) 2011.

19. Laser Based Manufacturing Workshop, *Graduate School in Advanced Optical Technologies* (*SAOT), Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (Jan., 10th-11th) 2011.

20. Optical Metrology '*Spray Diagnostics*' Workshop, *Graduate School in Advanced Optical Technologies* (*SAOT), Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (Oct., 12th-13th) 2010.

21. G Jovicic, A Jaber, L Zigan, S Pfadler and A Leipertz (2010). Application of Thermographic Phosphors for Temperature Determination in Gas Flows and on Surfaces. *Thermodynamik und Ingenieurdaten Expertenforum, Organisiert vom Verein Deutscher Ingenieure, Bayreuth Univesity, Germany* (Oct., 04th-06th) 2010.

22. Advanced THz Applications and Systems Workshop, *Graduate School in Advanced Optical Technologies* (*SAOT), Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (Jun., 11th) 2010.

23. Short Course in FDTD Solutions 6.5 (finite difference time domain solutions simulation programme), *Graduate School in Advanced Optical Technologies* (*SAOT), Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (May, 7th and 21st) 2010.

24. Development and Simulation of Advanced Laser Systems Workshop, *Graduate School in Advanced Optical Technologies* (*SAOT), Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (Apr., 19th-20th) 2010.

25. Short Course of Combustion Technology, Fundamentals and Modern Applications of Combustion Engineering, *Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (Mar., 2nd-5th) 2010.

26. A Jaber (2010). Human Perception and Signal Processing. *Graduate School in Advanced Optical Technologies* (*SAOT) Winter Academy, Hintertux, Austria* (Feb., 20th-27th) 2010.

27. Nano-Photonics Intensive Course, *Graduate School in Advanced Optical Technologies* (*SAOT), Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (Dec., 15th-19th) 2009.

28. Autumn Academy, *Graduate School in Advanced Optical Technologies* (*SAOT), Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (Nov., 23rd-27th) 2009.

29. The Absorption and Emission Spectroscopy Workshop, *Graduate School in Advanced Optical Technologies* (*SAOT), Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (Jul., 15th-16th) 2009.

30. Intercultural Communication Arabic-German Cooperation Short Course, *Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (May, 29th-30th) 2009.

31. Optical Diagnostics for Engine Combustion Research Workshop, *Graduate School in Advanced Optical Technologies* (*SAOT), Friedrich-Alexander-University Erlangen-Nuernberg, Germany* (Mar., 23rd-24th) 2009.

32. The International Workshop on Advanced Polymer Science and Turbulent Drag Reduction, *Abdus Salam International Centre for Theoretical Physics, Trieste, Italy* (Mar., 10th-20th) 2008.

33. A Jaber. Aerodynamic Studies of Flows around Bluff Bodies. The 1st Jordanian German Winter Academy in Fluid Mechanics, *University of Jordan, Amman, Jordan* (Feb., 4th -11th) 2006.

TRAINING COURSES TAKEN

- Technology Integration (TI) 9th educational seminar in cooperation with national instruments (NI) Arabia, ENOVAS and ACROME. Topics covered: Communications system design for prototyping RF and communications systems, robotics-mechatronics systems development and innovation, telecommunications and electronic boards for analogue electronics, one compact form factor integrated with 12 of the most commonly used instruments in the laboratory, industry-standard reconfigurable I/O (RIO) technology, vibration fundamentals, faults diagnostics and power quality monitoring, machine vision applications and alternative energy using fuel cells and solar PV, *Bristol hotel, Amman, Jordan*. June 16th, 2015.
- Combined Seminar, Theory and Praxis with Topics of: Basics in Valves (selection, specification, troubleshooting and repair of valve components for fluidics) and Safety at Work (function, fit and proper processing of double ferrule compression fittings in conjunction with seamless stainless steel pipes and tubes), *Institute of Engineering Thermodynamics, Am Weichselgarten08, 91058 Erlangen, Germany, Faculty of Engineering, Friedrich-Alexander-University Erlangen-Nuremberg*. January 27th, 2012.
- Fire Protection Training Short Course: Theory, *Sachgebiet Arbeitssicherheit, Brandschutz-Schulungszentrum (BSZ), Schlossplatz 4, 91054 Erlangen, Erlangen University Clinic, Friedrich-Alexander-University Erlangen-Nuernberg, Germany*. November 26th, 2010.
- Basic Training Course in FDTD Solutions 6.5 (finite difference time domain solutions simulation programme), *Graduate School in Advanced Optical Technologies (SAOT), Paul-Gordanstrasse 6, 91052 Erlangen, Friedrich-Alexander-University Erlangen-Nuernberg, Germany*. May, 7th and 21st, 2010.
- Fire Protection Training Short Course: Theory and Praxis, *Sachgebiet Arbeitssicherheit,Brandschutz-Schulungszentrum (BSZ), Schlossplatz 4, 91054 Erlangen, Erlangen University Clinic, Friedrich-Alexander-University Erlangen-Nuernberg, Germany*. July 24th, 2009.
- Basic Course in ANSYS-FLUENT: CFD-FIDAP by Fluent Germany GmbH, *FMP Technology GmbH, Am Weichselgarten 34, 91058 Erlangen, Germany.* November 20th, 2007.
- Refrigeration and Air Conditioning Maintenance, *AL-Ma'moun International Centre, Damascus, Syria.* 2000.
- AutoCAD 14, 2000 Training, *AL-Ma'moun International Centre, Damascus, Syria.* 2000.

POSTGRADUATE MODULES STUDIED (MSc.)

Research Methodology, Continuum Mechanics, Advanced Engineering Mathematics, Advanced Heat Transfer, Advanced Convective Heat Transfer, Advanced Mechanical Vibration, Advanced Combustion Theory and Advanced Thermal Power Systems Design.

SOME OF UNDERGRADUTE MODULES STUDIED (BSc.)

Fluid Mechanics (1) and (2), Thermodynamics (1) and (2), Internal Combustion Engines Theory (1) and (2), Internal Combustion Engines Design Theory, Hydraulic Machines, Gas Turbine Theory, Steam Turbine Theory, Steam Generators, Electric Power Stations, Heat Transfer, Gas Dynamics, Refrigeration Machines, Heating, Ventilation and Air Conditioning (HVAC), Energy Conversion, Machines Elements Design (1) and (2), Theory of Machines, Mechanical Vibrations, Machines Dynamics, Strength of Materials (1) and (2), Materials Science and Properties, Metallurgy, Industrial Organization and Management, Production Engineering (1-3), Measurements and Mechanical Measurement Instruments, Engineering Drawing (1) and (2), Electrical Engineering (1) and (2), Electronic Engineering, Machines and Electrical Drive, Measurements and Automatic Control and Exploitation of Electrical Equipments.