Afsaneh Cooper

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Research Supervisor / Online Tutor

Organized, highly motivated, enthusiastic Mechanical Engineer with diverse experience and a unique ability to create new ideas in research projects. Demonstrated strong interpersonal skills, when working with her 80 students and her 8 Research supervisors. Thrive in an atmosphere of challenge and diversity, offering creative solutions, with experience in the following areas:

- Flywheel Energy Storage System
- Project Management Practice
- Research, Design & Manufacturing
- FMEA, Computational Mechanics
- Quality Control, Turbomachines
- eLearning / Training & Assessment
- CFD, Wind/River Turbines, PV
- Dealer Interaction, TESOL
- CAD for Standard Gear Boxes / Space Vehicle

Technical Proficiencies

2D & 3D software: AutoCAD 2017, Solid Works 2017, TurboCAD 2018, CAD Solid Modelling
Operating Systems: Windows 10
Other: Microsoft Word/Project/Excel/Access/Visio/ClickCharts/GanttProject/SimWise-4D/PDF Compressor
Objective: Seeking to work in Research industry [previously was a PhD student at Murdoch University].

Professional Experience

"City Train Home" eFactory Research Centre
[ABN 86 791 185 332] Family Partnership 2005 - 2019

- Developed and organized "Bill of Materials" of "Kitchen Cabinets/Island" in an Excel Worksheet to allow for faster, more accurate tracking of project manufacturing tasks from remote, Trade Assurance, Inspection, and Shipping" of the Kitchen Cabinets I visited in Guangzhou, China in three factories and galleries. Also through WeChat communication with Sales Manager at Predeco Company in China. After shipping was done and I received these kitchen cabinets and Quartz countertops, then we install. March-May 2019
- Conducted all procurement operations-requisitions, purchase orders, price negotiation, quotes and followed up with vendors on product and delivery verification for "City Train Home", 80 Renovation Projects done by tenants, with my online purchases from overseas. Two of these projects were installation of 27 Solar Power panels on the roof of my property and a German DC/AC Invertor and design/installation a 4 m high double gable galvanised Steel Carport from Stratco for Wind Turbine installation. Updated ABN to establish a Research School for Women Engineers in Leeming, WA and supervises them as PhD and Master's students [Course fees, Room and board fees in small business in Renewable Energy Storage]. June 2010-Jan 2019.
- Planned and developed policies and Excel program to manage daily tasks done by my tenants for the 80 home based projects for renovation, extension and maintenance of my property in 6 years. This was to make sure she is able to supervise her future students at her Research School, giving them research projects to work on, charging them fees, rent and two meals and making them to maintain their research school and get paid or they pay other students to maintain the research school for them. June 2010-July 2016.

- Updated/Modified AutoCAD drawings for several projects involving "Retaining Walls/eclosed Workshop/Brick Pier/Drive Way/Double Gable Galvanised Steel Car Port-AutoCAD" for my property "City Train Home" and got 5 building permits from shire. Supervised several contractors and workers to renovate an old house for establishing the "City Train Home" with 7 car park spaces with 100 trees and large bore reticulated green yards. [2005-2013]

Ewindfly [ABN 377 83 059 839]-self employed

- Private Tutor of Mechanical Engineering, SolidWorks & AutoCAD, Physics, Maths, Statics, Dynamics, Solid Mechanics, Essay Writing, through "www.tutorfinder.com.au" for TAFE, University and High School Students.

Australian Government , Western Australia

Lecturer, Tutor, Lab. Demonstrator, 10/1988 - 6/1999

Worked part time as Educator for Australian Universities and TAFE Colleges.

- Engineering Drawing Details/Graphics Lecturer, South Metropolitan TAFE, Thornlie, WA [7/1996-6/1999]
- Tutor and Demonstrator of Physics Lab., Murdoch University, Murdoch, WA [2/2008-3/2008]
- Physics Tutor and Lab. demonstrator, Introduction to Mathematics Tutor Murdoch University, Murdoch, WA [2/1990-12/1991]
- Calculus Lecturer, Curtin University, Kalgoorlie, WA [10/1988- 2/1990]

Iranian Government, Tehran, Tehran, Iran

Mechanical Project Engineer, 9/1980 - 9/1985

Worked as Entrepreneur in Developing a CAD Software's for Standard Gear Boxes which lead her to develop a CAD for Space Vehicle in her Master's degree these later on at Shiraz University. Also Entrepreneur in Research, Design & Development of Water Turbine/Exploitation of Water Power from Iranian Water's which lead her to write a research proposal in 2017-2019 for Optimum Design and Construction of a River Turbine for Canning River in Perth, Australia. Entrepreneur in Research, construction and testing of three Solar Air-Conditioners, which lead her in 2012 to install 27 Solar Panels of 5 KW power on "City Train Home" Research Centre. My future research students would have a real mentor for River Turbine, Turbomachines, Solar Power, Wind Turbine and Energy Storage by Flywheel [FESS].

- Project Engineer for "CAD-Standard Gear Boxes", Iranian Research Organization for Science and Technology [IROST], Tehran, Iran. [10/1981-1/1985]
- Wrote a computer program of 1500 lines to develop a software for modelling of Standard Gear Boxes. She turned all calculations in German book written by Nieman about Gear Box Design and Calculation into algorithm and turned all graphs, curves and tables into Subroutines in Fortran language. This task took 1.5 years but it only took 5 minutes to do all those lines of calculations by computer! This work was supervised by Dr Pourabdolrahim. [10/81-2/84]
- Project Manager in Water Turbine & Solar Air Conditioner, Power Ministry, Tehran, Iran, [9/1980-9/1981]
- Translated the text book of Turbomachinery's by Dixon from English to Persian. Visited the Francis Turbine in City of Hamedan with the engineering team. Created a team of engineers to work on Design and manufacturing of Water Turbines. Designed, constructed and tested 3 Solar Air Heater Collectors with different profiles. These works were supervised by Dr Azad, Dr Salehi and Dr Sarmast. [9/80-9/81]
- Designed a Hydraulic Directional Solenoid Valve for the Press Machine. This project was supervised by Dr Deravi at Iranian Research Organization for Science and Technology [IROST]. [1985]

Academic Qualifications

Doctor of Philosophy, Science, 1994

Murdoch University, Murdoch, WA

PhD

2.75 EFTSL [Equivalent to 2 years and 9 months full time Study load out of a 3 years PhD course by research] PhD in Science, Research field: "Optimum Design and Construction of a Flywheel Energy Storage System for the 5 KW Residential Vertical Wind Turbine". Murdoch University, School of Physics and Engineering, Murdoch, WA. Principal Supervisor: Professor Philip Jennings, graduate of Harvard University.
Withdrew for Medical Reason and lack of second mechanical engineering supervisor. Eight semesters with Status: "Good Standing" were recorded in Statement of Academic Records. Progress Report of the 9th Semester is written but not marked. Prof Jennings in his referee report to Australian Universities wrote she among top 20% of his PhD students. She updated her PhD proposals during Feb 2017-Feb 2019 and has applied from most Australian and Iranian Universities for enrolment to complete her PhD course. Four PhD supervisors have agreed to supervise her so far. Enrolment procedure is pending approval of the Universities.

Master of Science, Mechanical Engineering-Applied Design, 7/1988
Shiraz University-School of Engineering, Shiraz - Iran
GPA: 74%, Major GPA: 83% =

M.Sc.
3.5 years full time [2 years course work, 1.5 years Research by thesis and Examination of thesis and seminar] study of a Master's degree in Mechanical Engineering, Applied Design. Shiraz University, Shiraz, Iran, Thesis Topic: "Computation of Aerodynamic Coefficients of Flight Vehicles using semi Empirical Rapid Method". Supervised by Dr M.M. Alishahi, Then Head of the department of Mechanical Engineering at Shiraz University. [Jan 1985-July 1988]-completed

Bachelor of Science, Mechanical Engineering-Solids Design, 2/1984
Sharif University of Technology - School of Mechanical Engineering, Tehran - Iran
GPA: 72%, Major GPA: 77.1%=Last Semester 1984 GPA
B.Sc.
5.5 years full time study [plus 2.5 years universities shut down after revolution for cultural revolution and extra 1.5 years for universities shut down by monarsh regime before revolution 1978] of Bachelor's degree in Mechanical Engineering-Solids Design. Sharif University of Technology, Tehran, Iran. Two of my Units was transferred from San Diego State University [SDSU] in California during 1978-1979 and I passed TOEFL with 517 score in San Diego testing centre and studied a course in ESL to prepare for TOEFL in San Diego. Also I passed a good score in GRE. I stayed 9 months in San Diego and studied one semester in B.Sc. degree course in Mechanical Engineering. Then I transferred back to Sharif University. During Cultural Revolution Shut down, since Universities were closed, I worked as a Project Engineer for several research centres in Tehran-Iran. Completed

Graduate School Coursework

Graduate Certificate & Diploma in Education-TESOL/Computing, 2018
Edith Cowan, Murdoch & Curtin Universities, Mount Lawley, Murdoch & Bentley
GPA: 61%
Completed study of 8 Units in "Graduate Diploma in Education-Secondary Computing" and "Graduate Certificate in Education-TESOL" which is about equivalent to a Grad. Dip. Ed. in Computing and English. This study in Education was excellent training in eLearning to gifted and talented students [PhD/MSc] and can help me teach mechanical engineering units by eLearning, using video conferencing technology. These two courses were at Murdoch University [Jan 2000-Aug 2001] and at Edith Cowan University [Feb 2017-May 2018]. Studied one Unit at Curtin University then transferred it to Murdoch University.

Certificates

Diploma in Engineering Technical-Mechanical CAD, 1/2010
North Metropolitan TAFE, Subiaco and Thornlie Campuses
GPA: 100%
I have studied 5 Units of Competency in CAD in course: Diploma in Engineering Technical [Mechanical CAD] at Metropolitan TAFE. These units are in AutoCAD, SolidWorks 2D-3D and also in Microsoft Office

[Word, Excel, Project, Access, Databases, PowerPoint]. [Feb-Sept 2010] and [1998-1999].

Certificate IV in Training and Assessment, 1/2016

South Metropolitan TAFE, Beaconsfield, WA

GPA: 100%

Certificate IV

6 months full time study in Certificate IV in Training and Assessment and completed this certificate IV at South Metropolitan TAFE, Beaconsfield Campus, WA. Feb-July 2016. Ten Units studied.

Certificate IV in Project Management Practice, 1/2017

South Metropolitan TAFE, Thornlie Campus

GPA: 100%

Units of Competency

I have completed 7 out of 9 units of Certificate IV in Project Management, at South Metropolitan TAFE, Thornlie Campus and attended classes of the remained 2 units in this course, but have not been assessed yet for these two units because of my busy time in research task for my PhD course. July 2016-Dec 2018.

Thesis

"Computation of Aerodynamic Coefficients of Flight Vehicles Using Semi Empirical Rapid Methods"

Shiraz, Iran, Shiraz University, July 1988, 320

This Thesis book has 185 pages texts about the theories uses in developing the software in Computational Mechanics and how data were extracted and used to find the algorithm for writing the FORTRAN Computer Program. It also has 2839 lines of computer program including many charts which were computerised to be able to use them as subroutines for computations used in this thesis Book. All together the book has 320 pages including two pages thesis abstract and list of the professors who examined her as part of thesis committee. Then she achieved degree of Master's in Mechanical Engineering. The work required to research and write this book took her 1.5 years full time. Master's course was 2 years course work and 1.5 years research. This thesis was the research component of this Master's degree.

Writing Activities

To see the list of writing activities by Afsaneh Cooper, which can be published as her own original works, please type: BT42 in search box of www.ewindfly.net then click on HDR08 Form: Writing Activities/Existing Research Output..in accordion you see. Then choose File: 120.Publication..pdf For Referees, PhD proposals, also do similar thing, and click on relevant HDR Accordion on same "My HDR Forms" web page you just opened.