

CURRENT AFFILIATION

Assistant Professor
The Polytechnic School
Ira A. Fulton Schools of Engineering
Arizona State University
Mesa, Arizona, 85212

RESEARCH INTERESTS

Model-based automotive system integration
Hybrid electric powertrain control and design
Autonomous driving and advanced driver assistant systems applications
Smart mobility and smart cities
Thermal management design and optimization for electrified vehicles
Human centric design for inter-active vehicle safety systems

EDUCATION

DEC. 2010 Clemson University, Clemson, SC.
International Center for Automotive Research
Ph.D. /Automotive Engineering

MAY. 2006 Yarmouk University, Jordan
M.S., Computer Engineering/Embedded Systems

MAY. 1996 Mu'uta University, Jordan
B.S., Mechanical Engineering/Automotive

SUMMARY OF PUBLICATIONS

Total (41), leading and corresponding author in (21)

(21) papers were published in peer-reviewed journals; (2) conference proceedings, (1) book chapter, (1) patent, (9) invited talks and presentations for professional audiences, (5) papers submitted to peer reviewed journals and (2) research papers are still in preparation.

Description of the general order of author recognition and SJR indicator

The importance of each journal is characterized by the SCImago Journal Rank (SJR) indicator, which takes into consideration both the number of citations received by a journal and the prestige of the journal from which those citations come. The approach is detailed in the article: González-Pereira, B., Guerrero-Bote, V.P., & Moya-Anegón, F. (2010).

Q1 = Journal in the top 25%; Q4 = Journal in bottom 25%

Current H-Factor (based on Google Scholars Citation Index): 8

Current Google Scholar i10-Index: 8

Current RG Score (Based on Research Gate): 13.61

Number of Citations Google Scholar since 2012: 352

Description of the general order of author recognition

The contributions of Students are recognized first; Advisors/Mentors/Collaborators are recognized second. In general, the contribution level decreases with descending order of the name in the article reference for the same category of collaborators (students, faculty or external collaborators).

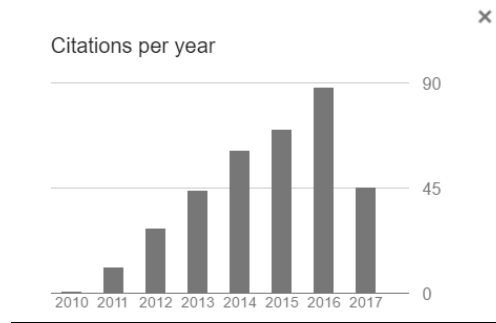
*describes corresponding/leading author responsible for envisioning and formulating the research idea, and contributing more than 50% towards completion of the publication including writing of the manuscript.

†describes PhD student.

Underlined name describes a graduate student who is/was mentored by me as a sole advisor/committee chair.

Double underlined name describes an undergraduate student who is/was mentored by me as an undergraduate research advisor.

My own name is presented in **bold** in all publications as (**Mayyas, A. R.**)



Citations per calendar year since 2010 to present

Journal publications (published, in press, and /or accepted from ASU)

1. Badami, P.*, Opitz, A., Shen, L., Vaidya, R., **Mayyas, A. R.**, Knoop, K., & Kannan, A. M. (2017). Performance of 26650 Li-ion cells at elevated temperature under simulated PHEV drive cycles. *International Journal of Hydrogen Energy*. Q1

The International Journal of Hydrogen Energy publishes articles on topics related to documented advances covering all aspects of hydrogen energy. It has (3.33) impact-factor and **ranked #6** in energy engineering and power technology. My position as a co-author on this publication indicates that I had a significant role in directing the research component and the generation of the presented findings.

2. Carroll, J. K., †Alzorgan, M., Page, C., & **Mayyas, A. R.*** (2016). Active Battery Thermal Management within Electric and Plug-In Hybrid Electric Vehicles. (No. 2016-01-2221). *SAE Technical Paper*.Q1

The SAE Technical Paper is a peer-reviewed journal and is one of the top 25% in the field of automotive engineering. It is **ranked #8** in energy and fuel technology. This journal serves an outlet for EcoCAR research outcome. I initiated the idea and provided guidance with regard to the positioning the ideas included in the paper. I also assisted with the writing and editing of the manuscript itself.

3. †Alzorgan, M., Carroll, J., †Al-Masalmeh, E., **Mayyas, A. R.*** (2016). Look-Ahead Information Based Optimization Strategy for Hybrid Electric Vehicles (No. 2016-01-2226). *SAE Technical Paper*.Q1

The SAE Technical Paper is **ranked #10** in automotive engineering. This journal serves an outlet for EcoCAR research outcome. The lead author on this paper is a PhD student who received funds through the EcoCAR grant where I am listed as a (PI). I initiated the idea and my role in this paper was to provide guidance with regard to the positioning/ideas included in the paper and I assisted with the writing and editing of the manuscript itself.

4. Mohammad Omar, Ahmad Mayyas*, **Mayyas A. R.**, Mohammad Hayajneh. (2016). Vehicle's Lightweight Design vs. Electrification from Life Cycle Assessment Perspective. (2016). *International Journal of Lifecycle Assessment*. Q1

The International Journal of Life Cycle Assessment is the first journal devoted entirely to Life Cycle Assessment. It has an H-Index of 69 and **ranked #1** in Germany in environmental engineering and sciences. As a co-author, I assisted with writing the manuscript provided guidance with regard to the positioning/ideas included in the paper and assisted with the writing and editing of the manuscript itself.

5. **Mayyas A. R.***, Ramani Dilip, Kannan, A. M., Hsu, King, & Schwenn, Tony. (2014). Cooling Strategy for Effective Automotive Power Trains: 3D Thermal Modeling and Multi-Faceted Approach for Integrating Thermoelectric Modules into Proton Exchange Membrane Fuel Cell Stack. *International Journal of Hydrogen Energy*, 39(30), 17327-17335. Q1

The International Journal of Hydrogen Energy publishes articles on topics related to documented advances covering all aspects of Hydrogen Energy. It has 3.33-impact factor and **ranked #6** in energy engineering and power technology. My position as a co-author on this publication indicates that I had a significant role in directing the research component and the generation of the presented findings.

6. **Mayyas, A. R.**, Mayyas, A*, Qattawi, A., & Omar, M. A. (2012). Sustainable lightweight vehicle design: a case study of eco-material selection for body-in-white. *International Journal of Sustainable Manufacturing*, 2(4), 317-337.Q3

The International Journal of Sustainable Manufacturing has an H-Index of 10 in industrial and manufacturing engineering and **ranked #3** in industrial engineering. As a co-author, I assisted with writing of the manuscript and provided guidance with regard to the positioning/ideas included in the paper and assisted with the writing and editing of the manuscript itself.

7. Mayyas, A.*, Omar, M. A., **Mayyas, A. R.**, Qattawi, A., Shen, Q. (2014). Knowledge-based system, equipped with cluster analysis for eco-material selection: an automobile structure case study. *International Journal of Sustainable Engineering*, 7(3), 200-213. Q1

The International Journal of Sustainable Engineering publishes articles on topics related to Engineering design for sustainable development. It has H-Index of 17 and it is **ranked** among **top 50** journal in sustainable engineering and power technology. My position as a co-author in this publication indicates that I had a significant role in directing the research component and the generation of the presented findings.

8. **Mayyas, A. R.**, Prucka, R., Haque, I., Pisu, P. (2013). Model-based automotive system integration: using vehicle hardware in-the-loop simulation for an integration of advanced hybrid electric powertrain. *International Journal of Electric and Hybrid Vehicles*, 5(3), 215-232. Q2

The International Journal of Hybrid and Electric Vehicles provides a high quality, fully refereed international forum in the field of electric and hybrid automotive systems. It is **ranked** among **top 20** journals in renewable energy, sustainability and the environment. My position as corresponding author on this publication indicates that I had a significant role in directing the research component and the generation of the presented findings and assisted with the writing and editing of the manuscript itself.

9. **Mayyas, A. R.***, Prucka, R., Pisu, P., Haque, I. (2013). Chassis Dynamometer as a Development Platform for Vehicle Hardware In-the-Loop “VHiL”. *SAE International Journal of Commercial Vehicles*, 6(2013-01-9018), 257-267. Q2

The SAE International Journal of Commercial Vehicles provides a high quality, fully refereed international forum in the field of automotive engineering systems. It is ranked among **top 10** journals in renewable energy, sustainability and environment. My position as a corresponding author on this publication indicates that I had a significant role in directing the research component and the generation of the presented findings.

10. **Mayyas, A. R.***, Omar, M., Pisu, P., & Kannan, A. M. (2013). Thermal Modeling and Analysis of an On-Board Internal Combustion Engine Based Powertrain. *International Journal of Modern Engineering*, 13, 17-24. Q2

The International Journal Modern Engineering is a highly selective, peer-reviewed journal covering topics that appeal to a broad readership of various branches of engineering and related fields. It has an impact factor of 3.0 and it is one of the **top 100** Engineering Journals. My position as a corresponding author on this publication indicates that I had a significant role in directing the research component and the generation of the presented findings and assisted with the writing and editing of the manuscript itself.

Journal publications prior to ASU (all published)

- 1- Mayyas, A.*, Qattawi, A., **Mayyas, A. R.**, & Omar, M. (2013). Quantifiable measures of sustainability: a case study of materials selection for eco-lightweight auto-bodies. *Journal of Cleaner Production*, 40, 177-189. Q1

The Journal of cleaner Production is ranked# 47 in Energy Engineering. It has an H-Index of 96 in energy engineering. As a co-author, I assisted with writing the manuscript and provided guidance with regard to the positioning/ideas included in the paper. Specifically, I contributed to the optimization using linear programming.

- 2- **Mayyas, A. R.***, Omar, M., Pisu, P., Mayyas, A., Alahmer, A., & Montes, C. (2013). Thermal modeling of an on-board nickel-metal hydride pack in a power-split hybrid configuration using a cell-based resistance–capacitance, electro-thermal model. *International Journal of Energy Research*, 37(4), 331-346. Q1

The International Journal Energy Research has an H-Index of 61 in energy engineering and is ranked among top 50 in energy engineering and power technology. My position as a corresponding author on this publication indicates that I had a significant role in directing the research component and the generation of the presented findings and assisted with the writing and editing of the manuscript itself.

- 3- Mayyas, A. T.*, **Mayyas, A. R.**, Qattawi, A., & Omar, M. A. (2012). Sustainable lightweight vehicle design: a case study of eco-material selection for body-in-white. *International Journal of Sustainable Manufacturing*, 2(4), 317-337. Q1

The International Journal of Sustainable Manufacturing has an H-Index of 52 in energy engineering. It is ranked among top10 journals in engineering and manufacturing. As a co-author, I assisted with writing the manuscript provided guidance with regard to the positioning/ideas included in the paper.

- 4- Mayyas, A. T.*, Qattawi, A., **Mayyas, A. R.**, & Omar, M. A. (2012). Life cycle assessment-based selection for a sustainable lightweight body-in-white design. *Energy*, 39(1), 412-425. Q1

The Journal of Energy has an H-Index of 111 in energy engineering and ranked top 10 in energy engineering. As a co-author, I assisted with writing the manuscript provided guidance with regard to the positioning/ideas included in the paper.

- 5- Alahmer, A.*, Omar, M., **Mayyas, A. R.**, & Qattawi, A. (2012). Analysis of Vehicular Cabins' Thermal Sensation and Comfort State under Relative Humidity and Temperature Control Using Berkeley and Fanger Models. *Building and environment*, 48, 146-163. Q1

The Journal of Building and environment has an H-Index of 86 in environmental engineering and ranked top 5 among environmental engineering. As a co-author, I assisted with writing the manuscript provided guidance with regard to the positioning/ideas included in the paper.

- 6- Alahmer, A., Omar, M. A., **Mayyas, A. R.**, & Dongri, S. (2011). Effect of Relative Humidity and Temperature Control on In-Cabin Thermal Comfort State: Thermodynamic and Psychometric Analyses. *Applied Thermal Engineering*, 31(14), 2636-2644. Q1

The Applied Thermal Engineering has an H-Index of 94 and an impact factor of 3.2 and is ranked among top 20 journals in thermal engineering applications. As a co-author, I assisted with writing the manuscript provided guidance with regard to the positioning/ideas included in the paper.

- 7- **Mayyas, A. R.***, Omar, M., Pisu, P., Al-Ahmer, A., Mayyas, A., Montes, C., Dongri, S. (2011). Comprehensive thermal modeling of a power-split hybrid powertrain using battery cell model. *Journal of Power Sources*, 196(15), 6588-6594. Q1

The Journal of Power Sources has an H-Index of 211 in energy engineering and power technology. It is ranked among top 20 in energy engineering and power technology. My position as a corresponding author on this publication indicates that I had a significant role in directing the research component and the generation of the presented.

- 8- **Mayyas, A. R.***, Qin, S., Mayyas, A. Omar, M. A.. (2011). QFD and AHP based optimization methods for selecting a BiW material design", *Journal of Material and Design*, 32 (2011) 2771–2782. Q1

The Journal of Materials and Design has an H-Index of 25 in mechanical engineering design. It is ranked among top 20 in engineering design. My position as a corresponding author on this publication indicates that I had a significant role in directing the research component and the generation of the presented findings in and assisted with the writing and editing of the manuscript itself.

- 9- Alahmer, A.*, Mayyas, A., **Mayyas, A. R.**, Omar, M. A., & Shan, D. (2011). Vehicular thermal comfort models; a comprehensive review. *Applied Thermal Engineering*, 31(6), 995-1002. Q1.

Applied Thermal Engineering has an H-Index of 94 and an impact factor of 3.2 6 in thermal engineering and ranked among top 20 in thermal engineering applications. As a co-author, I assisted with writing the manuscript provided guidance with regard to the positioning/ideas included in the paper.

- 10- Reddy, K., Omar, M. A.*, Zhou, Y., **Mayyas, A.** (2011). Spatially constrained scanning scheme applied for automotive interior gap measurements. *Journal of Sensors Review* 31 (2011), pp. 239-245. Q2

Sensor Review is the world's leading journal on new sensor applications. It has an H-Index of 25. As a co-author, I assisted with writing the manuscript provided guidance with regard to the positioning/ideas included in the paper.

- 11- Zhou, Y., **Mayyas, A. R.**, Qattawi, A., & Omar, M. (2010). Feature-level and pixel-level fusion routines when coupled to infrared night-vision tracking scheme. *Infrared Physics & Technology*, 53(1), 43-49. Q2.

The Infrared Physics & Technology covers the entire field of infrared physics and is the world's leading journal on infrared physics. It has an H-Index of 44 and ranked among top 50 journals in infrared physics. As a co-author, I assisted with writing the manuscript provided guidance with regard to the positioning/ideas included in the paper.

Peer reviewed book chapters (published from ASU)

1. Ahmad Mayyas*, **Mayyas A. R.**, M. Omar. (2016). "Lightweight Composite Structures in Transport: Design, Manufacturing, Analysis and Performance". Elsevier Inc., p. 267-302 36 p.

Peer reviewed conference papers (published from ASU)

- 1- Kumar Sushil, Matthew West, Joshua Conter, Megan Cawley, Rashad Maady, and **Mayyas A. R.***. (2015) "Vehicle Plant Model and Supervisory Control Development for a Parallel Pre-Trans Plug-In Hybrid Electric Vehicle." The International Federation of Automatic Control. "IFAC- 48, no. 15:139-146. Q1

The lead author on this paper is a master student who is funded through the EcoCAR grant where I am listed as a (PI). The *IFAC* Proceedings has an H-Index of 19 in control and systems engineering. As a co-author, I assisted with writing the manuscript provided guidance with regard to the positioning/ideas included in the paper.

- 2- Omar, M*, Zhou, Y, **Mayyas, A. R.**, Qattawi, A. (2010). Pulse thermography for inspecting automotive components and materials. SAE 2010 World Congress and Exhibition, Detroit, MI, United States, 13-13 April. DOI: 10.4271/2010-01-0959.

The SAE World Congress assembles the best talent in the automotive industry and represents a world of untapped discoveries in the automotive industry. The SAE World Congress technical sessions, developed by professionals to maximize relevance, are designed to allow SAE members of all levels to gather relevant and stimulating information to enhance skills and creativity.

Peer reviewed journal (submitted from ASU)

1. †Jamil Alomari, **Mayyas A. R.***, †Mohammad Alozorgan, †Essam Almahasnah. (2017). Inattentive Driving Behavior Detection. Submitted to *Sensors*. Q1

Sensor Review is a leading journal on new sensor applications. It has an H-Index of 25. As a co-author, I provided guidance with regard to the positioning/ideas included in the paper and assisted with the writing and editing of the manuscript itself.

2. Puneet Jethani, **Mayyasa A. R.***, †Mohammad Alzorgan, Josh Carroll. (2017). Comprehensive Review of Control Strategies for Fuel Cell Hybrid Electric Vehicles. Submitted to *Fuel Cells*. Q1

The Journal of Fuel Cells has an H-Index of 53 in energy engineering. It is ranked among top 50 in energy engineering and power technology. My position as a corresponding author on this publication indicates that I had a significant role in directing the research component and the generation of the presented findings and assisted with the writing and editing of the manuscript itself.

3. **Mayyas A. R.***, Sushil Kumar, †Mohammad Alzorgana, Pierluigi Pisub, Jacqueline Rio, **Puneet Jethania**. (2017). “Model Based Design Validation of Advanced Energy Management Strategies for Electrified Hybrid Power Trains Using Innovative Vehicle Hardware in the Loop (VHIL) Approach”. Submitted to *Applied Energy*. Q1

The Journal is among top 5 and has an H-Index of 99 in energy engineering. As a co-author, I initiated the idea and I assisted with writing the manuscript and provided guidance with regard to the positioning/ideas included in the paper.

4. †**Jamil Alomari**, **Mayyas A. R.***, †**Mohammad ALOZORGAN**, †**Essam Almahasnah**. (2017). Evaluation of a Novel Hybrid-Based Driver Inattention Detection System. Submitted to *the SAE international journal of transportation safety*.

International Journal of Transportation safety is a world’s leading journal in safety research. It is ranked among top 25 and has an H-Index of 25. As a co-author, I assisted with writing the manuscript provided guidance with regard to the positioning/ideas included in the paper.

Peer reviewed journal (in preparation from ASU)

1. †**Jamil Alomari**, **AbdelRaouf Mayyas***, †**Mohammad ALOZORGAN**. (2017) Human-Centric Detection and Mitigation Approach for Various Levels of Driver Cell Phone-Based Distractions. *Journal of Safety Research*. Q1

Journal of Safety Research is an interdisciplinary publication and is the world’s leading journal on safety applications It has an H-Index of 58 and ranked#26 in safety research in US. As a co-author, I initiated the ideas in the paper and assisted with writing the manuscript provided guidance with regard to the positioning/ideas included in the paper.

2. †**Mohammad Alzorgan**, **Michael Cottle**, **Yu-Ju Hsu**, **Abdel Ra’ouf. Mayyas***, (2017). Forward-Looking Traffic-Aware Cooperative Adaptive Speed and Battery Control System (CASBC). *IEEE Transactions on Intelligent Transportation Systems*. Q1

IEEE Transactions on Intelligent Transportation Systems is the world’s leading journal on connected vehicles and intelligent transportation. It has an H-Index of 82 and ranked #11 in US in engineering and traffic safety. As a co-author, I initiated the idea and assisted with writing the manuscript and provided guidance with regard to the positioning/ideas included in the paper.

INVITED TALKS & PRESENTATIONS (from ASU)

Invited presentations – external

- 1- **Abdel Mayyas***, Josh Rosenberg. (2017). RadTherm for Modeling & Simulation Using Multifaceted Approach. Presented at Annual RadTherm User Group Meeting of North America, ThermoAnalytics Inc., Novi Michigan, USA.

- 2- **Abdel Mayyas***, Josh Carroll, Yu. Ju. Mohammad Alzorgan, James Contes. (2017). Advanced Vehicle Technology: High Performance Plug-in Hybrid Electric vehicle. Presented at SAE Annual Meeting, Phoenix, AZ.
- 3- Guaravraj Wadhwa, **Abdel Mayyas***, Ulises Sanchez. (2016). RadTherm for Modeling and Simulation Using Multifaceted Approach. Presented at Annual RadTherm User Group Meeting of North America ThermoAnalytics Inc., Novi Michigan, USA.
- 4- **Abdel Mayyas**, Briana Del Bianco, Josh Carroll, Brian Hennessey. (2016) "ASU EcoCAR Clean Cities Collaboration. Presented at Clean Cities Collation Stakeholder Meeting at Phoenix-Scottsdale. AZ.
- 5- **Abdel Mayyas**, Ashley Yost, Mohammad Alzorgan, Josh Carroll, Lauri Ralston. (2015). ASU EcoCAR Clean Cities Collaboration. Presented at Clean Cities Collation Stakeholder Meeting at Phoenix-Scottsdale. AZ, March 3-4, Phoenix, AZ.
- 6- ***Brian Hennesy**, Ashley Yost, **Abdel Mayyas**, Kiril Hristovski* (2015). EcoCAR 3: Creating Innovative Automotive Solutions for Environmental Sustainability at Arizona State University. 11th Annual Gatekeeper Regulatory Roundup, February 3-4, 2015 Phoenix, AZ.
- 7- **Abdel Mayyas**, Megan Coley, Josh Carroll, Rashad Maady, Ashley Yost. (2014). ASU EcoCAR Clean Cities Collaboration. Presented at Clean Cities Collation Stakeholder Meeting at Phoenix-Scottsdale. AZ February 3-4, 2014 Phoenix, AZ.
- 8- **Abdel Mayyas**, Ashley Yost, Brian Hennessey Lauri Ralston, (2014). Valley of the Sun Clean Cities Coalition Stakeholder Meeting, Arizona. February 3-4, 2014 Phoenix, AZ.

Invited presentations (ASU internal)

- 1- **Abdel Mayyas**. (2016). Importance of Ethical Engineering in the Field and Its Impact on Society. (2016). Presented at "The Order of the Engineering" Ceremony, March-2016 ASU-National Program.

PATENTS (prior to ASU)

- 1- Abdel Mayyas. (2002). Patent No. 2149. Amman, Jordan. Patent and Trademark Office. Tire Re-Inflation System.

FUNDED RESEARCH PROJECT (within ASU)

a) External funding during tenure clock (awarded)

1. **Torque Trends** (2013). Design and Build of a High Performance First Class, State-of-the-Aftermarket Art Test Drive Electric Vehicle EV- using Mazda MX-5 Miata Platform. \$5,000. ((Mayyas' Share as a PI: 100%). **AWARDED**
- 1- **DoE-AVTCs** (2014). Advance Vehicle Technology Competition AVTC's DoE, EcoCAR 3 Program. \$442,629 in cash and \$87,324,803 of an in-kind, ((Mayyas' Share as a PI: 65%). **AWARDED**

- 2- **SRP-CREC** (2014). Reliability and Performance Evaluation of Batteries in hot/dry climate: Phase 3, CTI –SRP Research Grant Program, Conservation and Renewable Energy Collaboratory (CREC), \$44,213. (Mayyas’ Share as a CO-PI: 25%). **AWARDED**
- 3- **SRP-CREC** (2015). EV Battery Performance in the Desert Area: Phase II, CTI –SRP Research Grant Program, Conservation and Renewable Energy Collaboratory (CREC), \$44,880. (Mayyas share as a CO-PI: 25%). **AWARDED**
- 4- **SRP-CREC**. (2016). EV Battery performance in the desert area Phase III” CTI –SRP Research Grant Program, Conservation and Renewable Energy Collaboratory (CREC), \$49,500. (Mayyas share as CO-PI: 25%). **AWARDED**
- 5- **NSF- Broadening Diversity Participation**. (2016). Broadening the Diverse Participation of ASU-Undergraduate Students from Underrepresented Minorities in the Field of Automotive Engineering. \$15,000. (Mayyas share as a PI: 50%). **AWARDED**

b) Internal funding during tenure (Awarded-from ASU)

- 1- **CTI-SSE** (2013). Scholarship Support & Enhancement Grant Program. Validation of an Advanced Hybrid Electric Propulsion System Configurations Using Hardware In-the-loop (HiL)). \$11,780. (Mayyas’ Share as a PI: 100%). **AWARDED**

RESEARCH PROPOSALS SUBMITTED

a) Proposals during tenure (not funded-within ASU)

- 1- **NSF-CAREER** (2016). Towards Energy-Efficient Autonomous Electric Drive: Adaptive and Optimal Battery Charge/Discharge Algorithms Based on Future Traffic Information and Road Terrain Preview. \$534,000. (Mayyas’ Share as a PI: 100%)
- 2- **ASU-FSE-TIL** (2016). Integrated Vehicle Hardware in the Loop (VHiL) for Next Generation of Advanced Power Trains. \$20,000. (Mayyas’ Share as a PI: 100%)
- 3- **DoE-ARPA** (2016). Cooperative Adaptive Speed and Battery Controller (CASBC)”, **\$1,000,000**. (Mayyas’ Share as a PI: 50%)
- 4- **NSF-CPS**: (2015). Hard real-time embedded software for next generation powertrains using Model-Based Development methods”. \$1,000,000. (Mayyas’ Share as a PI: 33%)
- 5- **DoE-ANL** (2015). Applied Automotive Engineering (AAE) Curriculum Proposal”. \$10,000. (Mayyas’ Share as a PI: 100%)
- 6- **MathWorks** (2015). MathWorks Innovative Curriculum in the Field of Automotive Model-Based Design for Embedded Systems for EcoCAR 3 Program. \$20,000. (Mayyas’ Share as a PI: 70%)
- 7- **NSF-MRI** (2015). Acquisition of Vehicle Testbed for Connected Virtual Proving Grounds for an Integrated Technology for Full Vehicle Analysis and Simulation. \$1,272,000. (Mayyas’ as a PI: 50%)
- 8- **NSF-CAREER** (2014). Integrated Vehicle Hardware in the Loop (VHiL) and Model-Based Design Approach for Energy Conversion and Power Flow Efficiency for Next Generation of Advanced Power Trains. \$530,000. (Mayyas’ as a PI: 100%)

- 9- **SBIR-DARPA** (2013). Hybrid Military Motorcycle: Design and Develop of a Lightweight, Efficient and Durable Off-Road Hybrid Electric Military Motor-Cycle. \$100,000. (Mayyas' as a PI: 50%)
- 10- **NSF MRI** (2012). Development of an Integrated Research-Based Power Train Test Platform for Hardware in the Loop (HiL) for the Development of Hybrid Electric Vehicles. \$463,200. (Mayyas' as a PI: 50%)

b) Proposals pending funding decision

- 1- **DoE-ANL** (2017): Applied Automotive Engineering (AAE) Curriculum. Pending. \$10,000. (Mayyas' as a PI: 100%)
- 2- **NSF-REU (PI)** (2017). Emphasize research training among ASU-undergraduate in the field of Advanced Vehicle Technology Competitions (**AVTCs**). Pending. \$12,000. (Mayyas' as a PI: 100%)

STUDENTS MENTORSHIP (within ASU)

To provide some additional context for this section, I note that the first PhD degree in my academic program just started this academic year (Fall/2016), and there has only been an engineering master's degree program as of the 2013 – 2014 academic year.

Mentoring Graduate Students

Below is the list of graduate students that were solely mentored/supervised by me for graduate thesis or applied projects for MS and PhD dissertations.

- Number of Students Mentored by me to completion of their graduate degree since fall/2012: **13 students (1-PhD, 12 MS)**
- Number of students **currently** mentored by me for graduate degree: **7 (4 PhD, 4 MS)**
- Number of **undergraduate** students mentored by me on research projects (internally/externally funded): **10** students

a) PhD students mentorship (graduated)

1- Jamil AL Omari (As Committee Chair)

Program: Simulation Modeling and Applies Cognitive Sciences (Human Systems Engineering)

Graduated in May 2017; Internally Funded

- Dissertation Title: Human-Centric Detection and Mitigation Approach for Various Levels of Cell Phone-Based Driver Distractions for Inter-Active Vehicle Safety Systems
- Co-authored one technical paper with A. Mayyas
- Co-authored two peer reviewed journal article with A. Mayyas
- Contributed to development of two proposals:
 - NSF graduate fellowship, Fall/2015
 - Driver behavior Context Aware Interactive Vehicle Safety System submitted to Arizona Department of Transportation. Spring 2017

b) PhD students mentorship (In Progress)

1. Mohammad Alzorgan, Ph.D. (Committee Chair)

- Program: Mechanical and Aerospace Engineering
- Expected Date of Graduation: May 2018; Externally Funded

- Dissertation Title: Forward-Looking Traffic-Aware Cooperative Adaptive Speed and Battery Control System (CASBC)
 - Co-authored two technical paper with A. Mayyas
 - Co-authored three peer reviewed journal article with A. Mayyas
 - Awarded MathWorks® award for Best Modeling and Simulation. Advanced Vehicle Technology Competition. San Diego CA. Spring 2016
2. Essam Almahasneh, Ph.D. (**Committee Chair**)
- Program: Simulation Modeling and Applies Cognitive Sciences (Human Systems Engineering)
 - Expected Date of Graduation: May 2018; Externally Funded
 - Dissertation Title: Driver Behavior and Transitioning Control in Highly Automated Vehicles
 - Co-authored one technical paper with A. Mayyas
 - Co-authored one peer reviewed journal article with A. Mayyas
3. Mahdi Alquran, Ph.D. (**Committee Chair**)
- Program: Mechanical and Aerospace Engineering
 - Expected Date of Graduation: May 2019; Externally Funded
 - Tentative Dissertation Title “Tire Slip Angle-Based Rollover Prevention for Sport Utility Vehicles with Human-in-the-loop Evaluations”
4. Charan Prakash, Ph.D. (**Committee Member**)
- Program: Electrical and Computer Engineering; ECEE
 - Expected Graduation: Dec. 2017; Externally Funded
 - Dissertation Title: Sparse Depth Calculation using Real-time Key-point Detection and Structure from Motion for Advanced Driver Assist Systems
 - Co-authored three peer reviewed journal article

c) M.S. Students Mentorship (graduated)

Total of (17) MS students. Out of which (14) students were solely mentored by Abdel Mayyas as a committee chair. (13) Graduated and (4) are still in progress

Committee Chair, Thesis, Josh Carroll, MSE-Poly, **graduated**, Spring/2017. **Externally Co-Funded**.

Thesis Title “Comprehensive Model-Based Design and Analysis Approach for Optimal Thermal Management Systems in Hybridized Vehicles”.
co-authored 3 peer reviewed journal article with A. Mayyas

Committee Chair, Thesis, Puneet Jethani, MSE-Poly, **graduated**, Spring/2017.

Thesis Title “Power Management Strategy of a Fuel Cell Hybrid Electric Vehicle with Integrated Ultra-Capacitor with driving pattern recognition.”
co-authored 3 peer reviewed journal article with A. Mayyas

Committee Chair, Thesis, Mohammad Alzorgan, MAE-SEMTE, **graduated**, Fall/2016. **Externally Co-Funded**.

Thesis Title “Look-Ahead Information Based Optimization Strategy for Hybrid Electric Vehicles”

Co-authored two technical paper with A. Mayyas
Co-authored two peer reviewed journal article with A. Mayyas
Awarded MathWorks® award for Best Modeling and Simulation. Advanced Vehicle Technology Competition. San Diego CA. Spring 2016

Committee Chair, Thesis, Sushil Kumar, MSE-Poly, **graduated**, Fall/2015. **Externally Co-Funded**.

Thesis Title “Fuzzy logic based driving pattern recognition for Hybrid Electric Vehicle energy management”.

Co-authored 1 peer reviewed journal article with A. Mayyas.

Committee Chair, Thesis, Dilip Ramani, MSE-Poly, **graduated**, Fall/2015.

Thesis Title “Fuel Cell Thermal Management with Thermoelectric Generators: 3D Thermal Modeling of PEM Fuel Cell Stack using Multi-Faceted Approach”.

Co-authored 1 peer reviewed journal article with A. Mayyas.

Committee Chair, Thesis, Govind Goyal, MSE-Poly, **graduated**, Fall/2014; **Internally Funded**.

Thesis Title “Model Based Automotive System Integration: Fuel Cell Vehicle Hardware In-the-loop”.

Committee Chair, Applied Project, Shubham Sahrma, MAE-SEMTE, **graduated**, Fall/2015.

Project Title “Internet Distributed Vehicle Hardware in the Loop: Platform for an Automotive Development over Chassis Dynamometer”.

Committee Chair, Applied Project, Hari Sankar, MAE-SEMTE, **graduated**, Fall/2015.

Project Title “Analysis of Vehicular Cabin Human Thermal Comfort using optimized Fuzzy controller”.

Committee Co-Chair, Thesis, Rashad Ma’ady, MSE-Poly, **graduated**, Spring/2017.

Thesis Title “Supervisory Control Optimization with SQP for Parallel Hybrid Vehicle with Synchronous Power Sources”.

co-authored 2 technical paper with A. Mayyas.

Committee member, Applied Project, Pouya Bidram, **graduated** Spring/2013.

Thesis Title” Investigation On The Functionality of PC-Based Centralized Industrial Control”

Committee Member, Priyesh Ray, Thesis, MSE-Poly, **graduated** Spring/2014.

Thesis Title” Performance and Scaling Analysis of a Hypocycloid Wiseman Engine”

Committee member, Thesis, Rod Nesheiwat, **graduated** Spring/2016.

Thesis Title” Hydrogen Fuel Cell on a Rotary Wing Aircraft A System Engineering Approach”

Committee member, Thesis, Rahul Srinivasa, **graduated** Spring/2016.

Thesis Title” Instrumentation and Coverage Analysis of Cyber Physical Systems”

d) MS Students Mentorship (In Progress)

Committee Chair, Thesis, Yu-Ju Hsu, MAE-SEMTE, **expected graduation:** Spring/2018; **externally Co-Funded.**

Thesis Title “Distributed Coordination of Connected and Automated Vehicles at Multiple Interconnected Intersections”.

Co-authored 1 peer reviewed journal article with A. Mayyas.

Committee Chair, Thesis, Arjun Subba, MAE-SEMTE, **expected graduation:** Fall/2017;

Thesis Title “Towards Energy Efficient Autonomous Drive: Hierarchical control strategies for energy management of connected hybrid electric vehicles in urban roads”.

Co-authored 1 peer reviewed journal article with A. Mayyas.

Committee Chair, Thesis, Samruddhi Gaikwad, MAE-SEMTE, **expected graduation:** Fall/2018;

Thesis Title “Integrated Vehicle Thermal Management Design– Combining Fluid Loops in Plug-in Electric Drive Vehicle Power Trains”.

Committee Chair, Thesis, Vineet Sharma, MAE-SEMTE, **expected graduation:** Fall/2018;

Thesis Title “Traffic Information Integrated Energy Management Strategy for Maximum Regenerative Braking Energy Efficiency for High Performance Plug-In Hybrid Electric Vehicle”.

e) Undergraduate students mentorship (Graduated)

Undergraduate Students Mentored for their undergraduate project; (Select from more than 40)

Samantha Twit, Fulton Undergraduate Research Initiative Grant, Spring 2015

Joshua Conter, Fulton Undergraduate Research Initiative Grant, Fall/2014

Victor Wise, Fulton Undergraduate Research Initiative Grant, Spring 2015

Ulises Sanchez, NASA Space Grant, Fall 2015 & Spring 2016

Michael Cottles, Fulton Undergraduate Research Initiative Grant, Fall 2016

Josh Rosenberg, Fulton Undergraduate Research Initiative Grant, Spring 2017

Ashley Yost, EcoCAR Advanced Vehicle Technology Program Communication Management. Fall/2015. **Externally Funded.**

Briana De Bianco, EcoCAR Advanced Vehicle Technology Program Communication Management. Spring/2014. **Externally Funded.**

Brian Hennessey, EcoCAR Advanced Vehicle Technology Program Project Management. Fall/2016. **Externally Funded.**

Mattie Whitt, EcoCAR Advanced Vehicle Technology Program Communication Management. Spring/2016 (In Progress). **Externally Funded.**

Kumail Selani, EcoCAR Advanced Vehicle Technology Program Project Management. Spring/2017. **Externally Funded.**

f) iProjects, NASA & FURI students’ grants

1. FSE-NASA. Dual Hybrid Propulsion Vehicles Design and Simulation “ASU/NASA SPACE GRANT. \$3,800. AWARDED
2. FSE-FURI. Look-Ahead Power Management in Plug-In Hybrid Electric Vehicles”, Fulton Undergraduate Research Initiative (FURI) for fall 2014-Spring 2015, \$3,800. AWARDED.
3. FSE-FURI. Optimizing Human Thermal Comfort in High Performance Plug-In Hybrid Electric Vehicle (PHEVs)”, Fulton Undergraduate Research Initiative (FURI) for fall 2014-Spring 2015, \$3,800. AWARDED
4. FSE-FURI. Optimized Human Thermal Comfort for design and analysis for Hybrid Electric Powered Vehicle using real time closed feed-back and fuzzy control”. Fulton Undergraduate Research Initiative (FURI) for spring 2015, \$3,800. AWARDED.
5. FSE-FURI. Driving Pattern Recognition Algorithm Based Control Strategy for Fuel Cell Hybrid Electric Vehicles “FCHEV””, Fulton Undergraduate Research Initiative (FURI) for fall 2014-Spring 2015, \$3,800. AWARDED
6. FSE-FURI. Advanced Energy Management Strategies Design and Development for Plug-in Hybrid Electric Vehicle (PHEV)”. Fulton Undergraduate Research Initiative (FURI) for spring 2014, \$3,800. AWARDED

LIST OF STUDENTS’ POSITIONS

The list below demonstrates the volume and diversity of students who have been funded and/or mentored. Many of these students are also represented in publications elsewhere on the CV, illustrating the effectiveness of the mentorship of these students, even for the cases in which there is not a formal advising relationship.

Name Student Name	Major (Student Level)	Employer	Current Position
Jamil Alomari	Computer Engineering/PhD	Intel	Lead Engineer
Sushil Kumar	Graduate/ MS-ME	Karma Automotive	Hybrid Control
Shubham Sharma	Graduate/MS-ME	Caterpillar	Design Engineer
Ashley Yost	Graduate /MS-GIT	CP Graphics	Projects director
Josh Carroll	Graduate/ MS-EE	Bosch	Lead Engineer
Rashad Maady	Graduate/ MS-ME	General Motors	Control Engineer
Zackary Yaski	Undergraduate/ Automotive	Ford Motor Company	Control Engineer
Puneet Jethani	Graduate/ MS-ME	AVL	Hybrid Testing and Control
Arjun Subba	Graduate/ MS-ME	Tesla	Design Engineer
Justin Lonchar	Graduate/ MS-EE	General Motors	Electrical Engineer
Josh Conter	Undergraduate/	General Motors	Design Engineer

	Automotive		
Matt West	Undergraduate/ Automotive	Ford Motor Company	Design Engineer
Hayden Hostetler	Undergraduate / ME	Bosch	Internship
Josh Boulangsy	Undergraduate / ME	Honeywell	Design Engineer
Corey Page	Undergraduate / ME	General Motors	Control Engineer
Ashley Yost	Graduate/MS-GIT	Director of Operations.	Director at printCPG
Josh Rosenberg	Undergraduate/ Automotive	General Motors	Design Engineer
Sara Hernandez	Undergraduate/ EE	General Motors	Control Engineer
Edgar Cunningham	Undergraduate/ Automotive	General Motors	Calibration Engineer
Spencer Klimke	Undergraduate/ Automotive	General Motors	Application Engineer
Oliver Ramos	Undergraduate/ Automotive	General Motors	Application Engineer
Nathian Chaison	Undergraduate/ Automotive	General Motors	Control Engineer

LIST OF FACULTY COLLABORATORS

The list below demonstrates the volume and diversity of faculty with whom I have formal collaborations (e.g., formal publication, conference presentation, or acquired grant funding with).

<u>Name</u>	<u>Current Position</u>	<u>University Department</u>
A M. Kannan	Professor	ASU/Engineering and Manufacturing
Sangram Redkar	Associate Professor	ASU/Robotics Engineering
Yan Chen	Assistant Professor	ASU/Automotive Engineering
Jeff Wishart	Clinical Professor	ASU/Mechanical Engineering
Kiril Histroviski	Associate Professor	ASU/Environmental Eng.
Ashraf Ghaffar	Assistant Professor	ASU/Software Engineering
John Robertson	Professor	ASU/Electrical Engineering
Micah Lindae	Assistant Professor	ASU/Engineering Education
Jane Humble	Emeritus Professor	ASU/Technology Management
Laura Raltson	Clinical Professor	ASU/Graphical Information Technology
Aviral Shrivastava	Associate Professor	ASU/Computer Engineering
Georgios Fainekos	Associate Professor	ASU/Computer Engineering
Yingyang Li	Assistant Professor	ASU/Intelligent Transportation Systems

Max Ri	Assistant Professor	ASU/Mechanical Engineering
Spring Berman	Assistant Professor	ASU/Mechanical Engineering/Robotics
Lina Karam	Clinical Professor	ASU/Electrical and Computer Engineering
Kristina Csavina	Clinical Professor	ASU/Engineering Education
Pisu Pierluigie	Associate Professor	Clemson University/Automotive
Wing Wu	Assistant Professor	ASU/Mechanical Engineering/Robotics
Patrick Currier	Associate Professor	Embry Riddle/Robotics
Thomas Bradley	Associate Professor	Colorado State/ ME
Nancy Cooke	Professor	ASU/Human Systems
Rob Gray	Associate Professor	ASU/Human Systems
Giulia Pedrielli	Assistant Professor	ASU/Human Systems
Feng Ju,	Assistant Professor	ASU/Control
Pitu Mirchandani	Professor	ASU/Control
Jorge Sefair	Assistant Professor	ASU/Control

TEACHING AT ARIZONA STATE UNIVERSITY

In addition to mentoring (10) capstone projects, I have taught (28) total courses (an average of (2.3) courses/semester and (9) different course preps, of which (5) were complete new course developments and (4) of which were significant course evolutions). The information presented below is based on the received student evaluations.

Average course evaluation

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG ± StDev of 9 questions): 4.43 ± 0.37 Overall quality of the courses and instruction (AVG ± StDev): 4.2 ± 1.02

a) Graduate level courses

EGR 598: EcoCAR Model Based Design (3 units) **Fall 2014**

Students in class: **8**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG ± StDev of 10 questions): **4.53± 0.00** Overall quality of the course and instructor (AVG): **4.75**

Note: New Course Development in Classroom Setting. First time taught.

EGR 598: EcoCAR Model Based Design (3 units) **Fall 2015**

Students in class: **10**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG ± StDev of 10 questions): **3.96 ± 0.00** Overall quality of the course and instructor (AVG): **4.17**

EGR 598: EcoCAR Model Based Design (3 units) **Spring 2015**

Students in class: **2**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG ± StDev of 10 questions): **4.4 ± 0.00** Overall quality of the course and instructor (AVG): **4.44**

EGR 598: EcoCAR Model Based Design (3 units) **Fall 2016**
Students in class: **1 (independent study)**
Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **5 \pm 0.00** Overall quality of the course and instructor (AVG): **5**

b) Undergraduate Level Courses

MET 424: Vehicle Electrical Systems (3 units) **Fall 2012**
Students in class: **12**
Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **3.20 \pm 0.00** Overall quality of the course and instructor (AVG): **3.70**.
Note: New Course Development in Classroom Setting. First time taught.

MET 427: Vehicle Systems Integration (3 units) **Spring 2013**
Students in class: **12**
Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **3.70 \pm 0.00** Overall quality of the course and instructor (AVG): **3.90**
Note: New Course Development in Classroom Setting. First time taught.

MET 424: Vehicle Electrical Systems (3 units). **Fall 2013**
Students in class: **18**
Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **4.63 \pm 0.00** Overall quality of the course and instructor (AVG): **4.20**

EGR 219: Computational Modeling (3 units). **Spring 2014**
Students in class: **37**
Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **4.67 \pm 0.00** Overall quality of the course and instructor (AVG): **4.50**
Note: First time taught.

EGR 219: Computational Modeling (3 units). **Summer 2014**
Students in class: **19**
Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **4.74 \pm 0.00** Overall quality of the course and instructor (AVG): **4.50**

MET 424: Vehicle Electrical Systems (3 units). **Fall 2014**
Students in class: **27**
Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **4.53 \pm 0.00** Overall quality of the course and instructor (AVG): **4.75**

EGR 463: Vehicle Electrical Systems & Hybrid System (3 units). **Fall 2014**
Students in class: **7**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **4.60 \pm 0.00** Overall quality of the course and instructor (AVG): **4.00**

EGR 494: EcoCAR Model Based Design (3 units).

Fall 2014

Students in class: **8**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **3.60 \pm 0.00** Overall quality of the course and instructor (AVG): **3.78**

Note: New Course Development in Classroom Setting. First time taught.

EGR 493: EcoCAR Model Based Design (3 units).

Fall 2014

Students in class: **20**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **2.70 \pm 0.00** Overall quality of the course and instructor (AVG): **3.48**

Note: New Course Development in Classroom Setting. First time taught.

EGR 194: EcoCAR Model Based Design (3 units).

Fall 2014

Students in class: **11**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **3.63 \pm 0.00** Overall quality of the course and instructor (AVG): **3.62**

Note: New Course Development in Classroom Setting. First time taught.

EGR 316: Automotive System Project (3 units).

Spring 2015

Students in class: **7**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **4.63 \pm 0.00** Overall quality of the course and instructor (AVG): **4.64**

Note: New Course Development in Classroom Setting. First time taught.

EGR 589: EcoCAR Model Based Design (3 units).

Spring 2015

Students in class: **4**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **4.75 \pm 0.00** Overall quality of the course and instructor (AVG): **4.75**

EGR 494: EcoCAR Model Based Design (3 units).

Spring 2015

Students in class: **6**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **4.00 \pm 0.00** Overall quality of the course and instructor (AVG): **4.00**

EGR 394: EcoCAR Model Based Design (3 units).

Spring 2015

Students in class: **8**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **3.17 \pm 0.00** Overall quality of the course and instructor (AVG): **3.74**

EGR 194: EcoCAR Model Based Design (3 units).

Spring 2015

Students in class: **6**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **4.19 \pm 0.00** Overall quality of the course and instructor (AVG): **4.25**

MET 424: Vehicle Electrical Systems (3 units).

Fall 2015

Students in class: **6**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **4.6 \pm 0.00** Overall quality of the course and instructor (AVG): **4.16**

EGR 463: Vehicle Electrical Systems (3 units).

Fall 2015

Students in class: **13**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **4.58 \pm 0.00** Overall quality of the course and instructor (AVG): **4.36**

EGR 494: EcoCAR Model Based Design (3 units).

Fall 2015

Students in class: **5**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **4.33 \pm 0.00** Overall quality of the course and instructor (AVG): **4.33**

EGR 394: EcoCAR Model Based Design (3 units).

Fall 2015

Students in class: **9**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **4.63 \pm 0.00** Overall quality of the course and instructor (AVG): **4.58**

EGR 316: Automotive System Project (3 units).

Spring 2016

Students in class: **12**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **4.26 \pm 0.00** Overall quality of the course and instructor (AVG): **4.41**

EGR 494: EcoCAR Model Based Design (3 units).

Spring 2015

Students in class: **4**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **5 \pm 0.00** Overall quality of the course and instructor (AVG): **5**

EGR 394: EcoCAR Model Based Design (3 units).

Spring 2015

Students in class: **10**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **4.53 \pm 0.00** Overall quality of the course and instructor (AVG): **4.75**

EGR 194: EcoCAR Model Based Design (3 units).

Spring 2015

Students in class: **4**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **4.50 \pm 0.00** Overall quality of the course and instructor (AVG): **4.50**

EGR 219: Computational Modeling (3 units). **Summer 2016**

Students in class: **30**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **4.2 \pm 0.00** Overall quality of the course and instructor (AVG): **4.47**

Note: First time taught (ONLINE COURSE)

EGR 494: EcoCAR Model Based Design (3 units). **Fall 2016**

Students in class: **6**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **5 \pm 0.00** Overall quality of the course and instructor (AVG): **5**

EGR 394: EcoCAR Model Based Design (3 units). **Fall 2016**

Students in class: **10**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **3.68 \pm 0.00** Overall quality of the course and instructor (AVG): **4.06**

EGR 194: EcoCAR Model Based Design (3 units). **Fall 2016**

Students in class: **8**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **4.03 \pm 0.00** Overall quality of the course and instructor (AVG): **4.08**

EGR 463: EcoCAR Model Based Design (3 units). **Fall 2016**

Students in class: **13**

Evaluation of the instructor describing quality of different aspects of instruction based on the 9 standardized questions (AVG \pm StDev of 10 questions): **4.61 \pm 0.00** Overall quality of the course and instructor (AVG): **4.64**

c) iProjects (MET 461, EGR 401/402)

iProject Title: Design and Development of SAE Baja Suspension for Endurance Race Testing.

Project Duration: 2 semesters (Fall 2012-Spring 2013)

Students on the project: 6

Overall Evaluation of the Instructor (AVG \pm StDev): NA

Lead Instructor: Abdel Mayyas

Co-Instructor: James Contes

iProject Title: Advance Infotainment System Development Using Android App for Open XC Platform.

Project Duration: 2 semesters (Fall 2013-Spring 2014)

Students on the project: 6

Overall Evaluation of the Instructor (AVG \pm StDev): NA

Lead Instructor: Abdel Mayyas

iProject Title: Analysis of Vehicular Cabin Human Thermal Comfort using optimized Fuzzy controller.

Project Duration: 2 semesters (Fall 2014-Spring 2015)

Students on the project: 4

Overall Evaluation of the Instructor (AVG \pm StDev): NA

Lead Instructor: Abdel Mayyas

iProject Title: EcoCAR 3: Vehicle Design and Implementation of a High Performance Parallel-Pre Transmission Plug-in Hybrid Electric Vehicle.

Project Duration: 2 semesters (Fall 2014-Spring 2015)

Students on the project: 4

Overall Evaluation of the Instructor (AVG \pm StDev): NA

Lead Instructor: Abdel Mayyas

iProject Title: EcoCAR 3: A Matlab-Based Modeling and Simulation for Parallel-Pre Transmission Plug-in Hybrid Electric Vehicle Design.

Project Duration: 2 semesters (Fall 2014-Spring 2015)

Students on the project: 4

Overall Evaluation of the Instructor (AVG \pm StDev): NA

Lead Instructor: Abdel Mayyas

iProject Title: EcoCAR 3: A Matlab-Based Modeling and Simulation for Parallel-Pre Transmission Plug-in Hybrid Electric Vehicle Design.

Project Duration: 2 semesters (Fall 2014-Spring 2015)

Students on the project: 6

Overall Evaluation of the Instructor (AVG \pm StDev): NA

Lead Instructor: Abdel Mayyas

iProject Title: EcoCAR 3: Modeling and Control of Parallel-Pre Transmission Plug-in Hybrid Electric Vehicle Design.

Project Duration: 2 semesters (Fall 2015-Spring 2016)

Students on the project: 6

Overall Evaluation of the Instructor (AVG \pm StDev): NA

Lead Instructor: Abdel Mayyas

iProject Title: EcoCAR 3: Control optimization for a Parallel-Pre Transmission Plug-in Hybrid Electric Vehicle Design.

Project Duration: 2 semesters (Fall 2015-Spring 2016)

Students on the project: 6

Overall Evaluation of the Instructor (AVG \pm StDev): NA

Lead Instructor: Abdel Mayyas

iProject Title: EcoCAR 3: The Impact of Hybrid and Electric Powertrains on Vehicle Dynamics, Control Systems and Energy Consumption.

Project Duration: 2 semesters (Fall 2016-Spring 2017)

Students on the project: 6

Overall Evaluation of the Instructor (AVG \pm StDev): NA

Lead Instructor: Abdel Mayyas

iProjects Title: EcoCAR 3: Vehicle Control in Plug-in Hybrid Electric Vehicles

Project Duration: 2 semesters (Fall 2016-Spring 2017)
 Students on the project: 6
 Overall Evaluation of the Instructor (AVG ± StDev): NA
 Lead Instructor: Abdel Mayyas

PROFESSIONAL EXPERIENCE

- AUG 2012-PRESENT Assistant Professor
Arizona State University, Mesa, Arizona
 Program of Engineering & Computing Systems,
 Ira A. Fulton’s Schools of Engineering-Polytechnic School

- DEC 2010- AUG 2012 Post Doc. Scholar
Clemson University, SC, USA
 Automotive Engineering Department
 International Center for Automotive Research CU-ICAR

- AUG 2008- DEC 2010 Graduate Research Assistant
Clemson University, SC, USA
 Automotive Engineering Department
 International Center for Automotive Research CU-ICAR

- MAY 2003- AUG 2008 Traffic Safety Engineer, Jordan Traffic Institute,
 Jordan/Amman

- MAY 2002- AUG 2003 United Nations Mission of Support in East Timor, Senior
 Automotive Engineer, UNMISSET East Timor

- MAY 1996- AUG 2002 Traffic Safety Engineer, Jordan Traffic Institute,
 Jordan/Amman

HONORS AND AWARDS

- MAY. 2016 Mathworks Modeling Award, Advanced Vehicle Technology Competition,
 EcoCAR 3 Year Two Competition. CA, Sand Diego

- MAY. 2016 NSF Innovation Grant for Advanced Vehicle Technology Competition,
 EcoCAR 3

- May. 2014 Best Collaboration with Clean Cities Award, DoE-EcoCAR 3 Advanced
 Vehicle Technology. Seattle, WA, 2014

- May. 2014 Best Labs & Facilities Award, DoE-EcoCAR 3 Advanced Vehicle
 Technology. Seattle, WA, 2014

- DEC. 2010 Outstanding Dissertation Award in Recognition of Excellent Contribution to
 Advancement of Knowledge in Automotive Engineering. Clemson University-
 International Center for Automotive Research, CU-ICAR, 2010

- DEC. 2006 Best Invention Award, Philadelphia University, Jordan

- DEC. 2002 Distinguished Engineers Award, Jordanian Engineering Association. Amman,
 Jordan

PROFESSIONAL ACTIVITIES AND SERVICE**a) Member of editorial board of peer-reviewed journals**

- Editorial Advisory Board Member of International Journal of Latest Technology in Engineering, Management & Applied Science. 2016. ISSN: 2278-2540. Impact Factor 3.47
- Considered for Co-Editor for the SAE International's Journal of Cybersecurity. To be launched in Fall/2017

b) International/national conference sessions chaired

- Session Chair at SAE 2017 International Powertrains Conference. Session title: "Advanced Hybrid and Electric Vehicle Powertrains" (FFL710). 2017

c) Reviewer services for peer reviewed journals

- Grand Award judge at the 2016 Intel International Science and Engineering Fair Intel-ISEF in Phoenix 2016
- SAE 2016 World Congress and Exhibition 2015 & 2016, Advanced Vehicle Technology Competitions Technical Session
- International Journal of Energy Research
- Journal of Building and Environment
- Journal of Membrane and Science
- IEEE Symposium on Humanities, Science and Engineering 2013 (SHUSER 2013)
- International Journal of Sustainable Energy
- SAE International Thermal Management Systems Symposium
- International Journal of Hydrogen Energy
- International Electric Vehicle Symposium, EDAS

d) University level committees

- East Valley Advisory Board Member. 2014
- Volunteer for E2 camps ASU 101 Lesson Plan, 2016.
- Collaboration with Valley of the Sun Clean Cities Coalition.
- Collaboration with National AFV Day Odyssey. 2014/2015/2016
- Participating in National Alternative Fuel Vehicle Day
- ASU Homecoming Event. 2014, 2015

e) Engineering school level committees

- The Polytechnic School-Automotive Curriculum Development Committee. 2012-Present
- Member Committee. The Polytechnic School Research Committee. 2012-2013.
- Chair "The Polytechnic School Research Committee". 2013-2014
- Committee Member "Fulton Undergraduate Research Initiative (FURI)
- Revolutionizing Math Intensive Courses. The Polytechnic School. 2016/201
- ASU-Poly EcoCAR Faculty Advisory Board
- Automotive engineering curriculum committee

- The Polytechnic School Search Committee member for tenure track faculty in automotive engineering

h) Professional membership

- Member, American Society of Mechanical Engineers. **ASME/since 2012**
- Member, Society of Automotive Engineers **SAE/since 2008**
- Member, Jordan Engineer Association, **JEA/since 1996**
- Member in the **International Scientific Committee** for the first International Conference on Mechanical Engineering Sciences, Applied and Applications Jordan, **2016**
- Member “**The Order of the Engineering**” ASU-National Program”/**2016**
- Member/Founder United States Universities Graduates Club **USUG-Jordan/2015**

The End