# Dr. Mohammad Abu-Naser

## EDUCATION

University of California - Merced, CA, U.S.A.
**Postdoctorate, Environmental Systems**                                                           2013

Illinois Institute of Technology - Chicago, IL, U.S.A.
**Ph.D., Electrical Engineering**                                                                  2009
**M.Sc., Electrical Engineering**                                                                  2003

University of Jordan - Amman, Jordan
**B.Sc., Electrical Engineering**                                                                  2001

## EXPERIENCE

Philadelphia University - Amman, Jordan
**Assistant Professor**                                                                 2014 - Present

- Research Interests: Optimization techniques for Renewable Energy systems.
- Teaching Duties: Developed, improved, enhanced, and delivered the following courses: Power Systems, Electrical Machines, Bioenergy Systems, Electric Circuits, Instrumentation and Measurement, Electromagnetics, Energy Economics and Management, Energy Conservation and Saving, Fundamentals of Engineering.
- Guiding Graduation Projects: Supported students in their skills development such as scientific research, technical writing, engineering design and implementation to solve real-world problems under economic, technical, and environmental constraints.
- Academic Advising: Worked with students on a one-to-one basis to solve pedagogical problems and ensure a rewarding learning experience at the university.
- Career Development: staying up-to-date in my field of interest through attending seminars, workshops, conferences, courses, as well as professional registration with IEEE and related societies within.

University of California - Merced, CA, U.S.A.
**Postdoctoral Scholar**                                                                   2011 - 2013

Conducted research in collaboration with several world-renowned research groups. Worked on projects sponsored by multiple research grants. Research focused on the study of carbonyl sulfide as tracer for estimates of gross primary productivity through atmospheric modeling and analysis of airborne measurements.

Involved in research with the following institutions:

- Lawrence Livermore National Laboratory, California
- NASA-Jet Propulsion Laboratory, California
- Carnegie Institution for Science, California
- Universite Paris $6$, France
- Lawrence Berkeley National Laboratory, California
- University of Nebraska, Nebraska
- Colorado State University, Colorado

- University of California-Los Angeles, California
- NASA-Goddard Space Flight Center, Maryland
- California Air Resources Board, California
- National Oceanic and Atmospheric Administration, Colorado

Illinois Institute of Technology - Chicago, IL, U.S.A.
**Research Assistant**                                                                                             2001 - 2009
Research was funded by grants from National Institutes of Health. Research was conducted in cooperation with Loyola University Medical Center to investigate and characterize the dynamical regulatory mechanisms that operate in the vasculature of the kidney.

Fund money shaped my PhD dissertation through the following milestones:
- Research focused on system identification, time-varying systems, adaptation, and studying of linear/nonlinear systems.

- This mathematical foundation appears in many engineering applications such as the electric grid, mechanical systems, and various renewable energy-harvesting systems.

- Also it plays an important role for a better understanding of these systems and analyzing their behaviour, and of course in solving real-world problems encountered while dealing with such mathematical formulation and designing improved engineering systems.

**PUBLICATIONS**
- M. Abu-Naser, "Solar panels cleaning frequency for maximum financial profit," *Open Journal of Energy Efficiency* , vol. 6, no. 3, pp. 80-86, 2017.

- D.P. Billesbach, J.A. Berry, U. Seibt, K. Maseyk, M.S. Torn, M.L. Fischer, M. Abu-Naser, J.E. Campbell, "Growing season eddy covariance measurements of carbonyl sulfide and $CO_2$ fluxes: COS and $CO_2$ relationships in Southern Great Plains winter wheat," *Agricultural and Forest Meteorology,* vol. 184, pp. 48-55, 2014.

- M. Abu-Naser, "Output error algorithms for unbiased identification of a class of time-varying linear systems," *PhD dissertation, Illinois Institute of Technology (USA)*, 2009.

- G.A. Williamson, M. Abu-Naser, and S. Dasgupta, "An exponentially convergent adaptive algorithm for time-varying IIR filters," *IEEE Proceedings, Asilomar Conference on Signals, Systems, and Computers,* pp. 1861-1865, 2009.

- M. Abu-Naser, G.A. Williamson, and J. Long, "Fundamental issues in the stability of adaptive IIR filters," *IEEE Proceedings, Digital Signal Processing Workshop,* pp. 84-89, 2008.

- K.A. Griffin, M. Abu-Naser, I. Abu-Amarah, M. Picken, G.A. Williamson, and A.K. Bidani, "Dynamic blood pressure load and nephropathy in the (fa-facp) ZSF model of type II diabetes," *American Journal of Physiology: Renal Physiology,* vol. 293, pp. F1605-F1613, 2007.

- M. Abu-Naser and G.A. Williamson, "Convergence of adaptive estimators of time-varying linear systems using basis functions: Continuous time results," *IEEE Proceedings, International Conference on Acoustic, Speech, and Signal Processing,* pp. 1361-1364, 2007.

- M. Abu-Naser and G.A. Williamson, "Convergence properties of adaptive estimators of time-varying linear systems using basis functions," *IEEE Proceedings, Digital Signal Processing Workshop,* pp. 336-341, 2006.

- M. Abu-Naser, G.A. Williamson, A.K. Bidani, and K.A. Griffin, "Vascular resistance estimation in renal hemodynamics using a time-varying windkessel model," *IEEE Proceedings, International Conference on Acoustic, Speech, and Signal Processing,* pp. 641-644, 2005.

## HONORS

- Outstanding Academic Achievement Award, Illinois Institute of Technology, 2006.

- Student Paper Contest Finalist, International Conference on Acoustics, Speech, and Signal Processing, 2005.

- Dean's Honor List, Faculty of Engineering, Jordan University of Science and Technology, 1995-1996.

## COMPUTER SKILLS

- **Software Packages:** MATLAB/Simulink/Simscape, AutoCAD, HOMER Microgrid, PSpice, Maple, PVSYST.
- **Document Preparation Tools:** LaTeX, Microsoft (Word, Excel, PowerPoint).
- **Programming Languages:** C/C++, JAVA, Assembly, FORTRAN.
- **Operating Systems:** Windows ⊞, UNIX 🐧, Apple .

## SOCIAL NETWORKS/ONLINE SITES

- 🏛 https://www.philadelphia.edu.jo/academics/mnaser/

- 💼 https://www.linkedin.com/in/mohammad-abu-naser-49047866/

- G https://scholar.google.com/citations?hl=en&user=NxJ6vJUAAAAJ

- R² https://www.researchgate.net/profile/Mohammad-Abu-Naser