

شما اینجا هستید:

درباره دانشکده

افراد

آزمایشگاه الکترونیک نوری

**حسین مددی**

مرتبه علمی: دانشیار

تخصص: Professor in Power Electronics &amp; Motor Drives

زمینه های تحقیقاتی: در حال حاضر یک پروژه بزرگ بین المللی با مدیریت اینجانب در زمینه انرژیهای نو و شبکه هوشمند در حال اجرا است دانشجویان علاقمند با بنده تماس بگیرند  
able Speed Motor Drives-1 2- Induction Motor Drives, PMSM drives, IPMSM Drives, Stepper Motor Drives, Application of Adaptive Control( EKF, MRAS, ...), Fuzzy Logic & Neural Network in Motor Drives, Estate Estimation 2-Power Electronics: DC-DC Choppers, Inverters, AC to DC Converters, Application of Power Electronics in Energy Conversion Systems ( Wind Energy, Solar Energy, Small Hydropower Units, Grid connected Inverters). 3- Electrical Machines: Modeling and Simulation of AC & DC motors, Synchronous & Induction Generators

مراکز تحقیقاتی: Renewable Energy Research Center, SUT, from 2008:

پست الکترونیکی: madadi@sut.ac.ir, hmadadi64@yahoo.ca

شماره تلفن: 04113459361

شماره فکس:

**رزومه:**

n:

Physics &amp; Mathematics ; Ferdowsi High-School, Tabriz-IRAN

G.P.A.: 19.34 (out of 20), Rank: 1/3000

Electrical Engineering; University of Tabriz, Tabriz-IRAN

G.P.A.: 16.21 (out of 20), Rank: 1/35

Electrical Engineering; University of Tabriz, Tabriz-IRAN

G.P.A.: 17.07 (out of 20), Rank: 2/10

Electrical Eng., Motor Drives &amp; Power Electronics, CANADA

University of New Brunswick (UNB), CANADA, G.P.A, A+

c]: UNB, &amp; Universit de Moncton, CANADA (Sept. 2003 - Sept. 2005)

**Professional Membership:**

Member in Power Electronics

**Interests:**

Speed Motor Drives:

Induction Motor Drives, PMSM drives, IPMSM Drives, Stepper Motor Drives, Application of Adaptive Control( EKF, MRAS, ...), Fuzzy Logic &amp; Neural Network in Motor Drives, Estate Estimation

Electronics:

DC-DC Choppers, Inverters, AC to DC Converters, Application of Power Electronics

Energy Conversion Systems ( Wind Energy, Solar Energy, Small Hydropower Units, Grid connected Inverters).

Electrical Machines:

Modeling and Simulation of AC &amp; DC motors, Synchronous &amp; Induction Generators.

**Skills:**

with:

- Microprocessors, Microcontrollers, Intel 80C196KC/ KD

- DSP, eZdspTMS320LF2407

- C language

- Lab Window/CVI , Version 6.1 [NI-DAQ, PCI-MIO-16E-4 ]

-MATLAB, SIMULINK Version 6.1

- QBasic

- ORCAD

- Microsoft Word  
- Word Perfect  
0- PSIM  
1- Grid connected Inverters for wind turbine application

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Experience:

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Courses and Workshops Attended:

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Accomplishments:

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and Distinctions:

1st rank award in Tabriz, Iran high schools  
1st rank award in Tabriz University, B.SC.  
1st Doctoral fellowship, UNB, Canada  
Ranking of 2 Inventors in Iran  
*Design and construction of Grid connected Single phase Inverter by DSP-TMS 320-2407A*  
*Control of IM speed by 4-switch three phase inverter*

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ons:

1. Faiz, M. Sharifian, and **H. Madadi Kojabadi**, "Simulation of Induction Motor Including Mechanical losses and Saturation." *Advanced Technology of Electrical Engineering and Energy (Journal)*, China, No.1, pp. 55-60, 1994.  
**I. Madadi Kojabadi**, and G. Ahrabian, "Simulation and analysis of the interior permanent magnet synchronous motor as a brushless AC-Drive", *Simulation Practice and Theory*, 7(2000), pp. 691-707, *ELSEVIER*.  
**I. Madadi Kojabadi**, L. Chang, and T. Boutot, "Development of a Novel Wind Turbine Simulator for Wind Energy Conversion Systems Using an Inverter Controlled Induction Motor," *IEEE Transaction on Energy Conversion*, vol. 19, no. 3, Sept. 2004, pp. 547-552.  
**I. Madadi Kojabadi**, L. Chang, "Comparative Study of Pole Placement methods in adaptive flux observers," *Control Engineering Practice*, *ELSEVIER*. Volume 13, Issue 6, June 2005, Pages 749-757.  
**I. Madadi Kojabadi**, L. Chang "A Novel Wind Steady-State Turbine Simulator Using an Inverter Controlled Induction Motor," *Wind Engineering*". 2004, pp. 433-434(11).  
**I. Madadi Kojabadi**, L. Chang, and R. Doraiswami "A MRAS-Based Pseudoreduced Order Flux Observer for Sensorless Induction Motor Drives, *IEEE Transactions on Power Electronics*, Volume 20, Issue 4, July 2005 Page(s):930 – 938.  
**I. Madadi Kojabadi**, "Simulation and experimental studies of model reference adaptive system for sensorless induction motor drive *Simulation Modelling Practice and Theory*, Volume 13, Issue 6, September 2005, Pages 451-464.  
Y. Mohammad Monfareda, **H. Madadi Kojabadi**, H. Rastegar "Static and dynamic wind turbine simulator using a converter controlled DC motor," *Renewable Energy, International Journal Elsevier*, Vol. 5, May, 2008, pp. 906-913.  
**I. Madadi Kojabadi**, L. Chang, I. Ghadoura, M. Ghribi, "A Novel DSP-based Current-Controlled PWM Strategy for Single Phase Grid Connected Inverters," *IEEE Transaction On Power Electronics.*, Vol. 21, no. 4, 2006. pp. 985-993.  
Y. Mohammad Monfareda, H. Rastegar, **H. Madadi Kojabadi**, "A new strategy for wind speed forecasting using artificial intelligent methods" *Renewable Energy, International Journal Elsevier*, Vol. 34, (2009), pp. 845-848.  
**I. Madadi Kojabadi**, "Active power and MRAS based rotor resistance identification of an IM drive, *Simulation modelling practice and theory*, *SIMPAT ELSEVEIR*, 17 (2009)-376-389.  
1. Kazemi, A. sadeghi, **H. Madadi Kojabadi**, "A Simple Approach to Direct Power Control of DFIG Based on DSVM with Constant Switching Frequency," has been accepted at *Renewable Energy, International Journal Elsevier*.

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1. H. Madadi Kojabadi, Damroudi, "Optimization of DC motor speed control using adaptive controller and comparing it with constant PID controller, 7, Iranian Conf. on Electrical Eng, Tehran, Iran.

1. Ahrabian, and **H. Madadi Kojabadi**, "Improving of the Performance of Brushless Dc Motor by Injecting of Demagnetizing Current." *IGIP*, Klagenfurt/Austria, Conference Proceedings, PP.623-629, 1992.

- i. Ahrabian, and **H. Madadi Kojabadi**, "Estimation of Pole Position of an Inverter Fed Permanent Magnet Synchronous Machine by an Extended Kalman Filter" *Proceedings of the 1996 IEEE International Symposium on Circuits and Systems, ISCAS*. Part 4 (of 4), May 12-15 1996, Atlanta, GA, USA, p 588-591.
- i. Ahrabian, and **H. Madadi Kojabadi**, "Estimation of Speed of an Inverter Fed IPMSM by an Extended Kalman Filter," *ELMA'93*, Varna / Bulgaria, Conference proceedings, pp.498-503, 1993.
- I. Madadi Kojabadi**, and G. Ahrabian, "Interior Permanent Magnet Synchronous Motor Drive without Electro-mechanical Sensors." *ELMA, 96, Eight International conference on Electrical Machines and Drives*, Varna/Bulgaria, pp. 102-110, 1996.
- . Chang, and **H. Madadi Kojabadi**, "Review of interconnection standards for distributed power generation," *Proceedings of IEEE 2002 Large Eng. System Conf., on Power Eng. (LESCOPE02)*, Halifax, Canada, Jun, 2002, pp.36-40.
- I. Madadi Kojabadi**, and L. Chang, "Recent progress in sensorless vector-controlled Induction Motor drives," *Proceedings of IEEE 2002 Large Eng. System Conf., on Power Eng. (LESCOPE02)*, Halifax, Canada, Jun, 2002, pp.80-85.
- I. Madadi Kojabadi**, and L. Chang, "Model reference adaptive system pseudoreduced – order flux observer for very low speed and zero speed estimation in sensorless induction motor drives," *PESC Record - IEEE Annual Power Electronics Specialists Conference*, v 1, 2002, pp. 301-308, *PESC02*, Queensland, Australia.
- . Chang, R. Doraiswami, T. Botout, and **H. Madadi Kojabadi**, "Development of a Wind Turbine Simulator for Wind Energy Conversion Systems," *IEEE 2000 Canadian Conference on Electrical and Computer Engineering*, Halifax, Canada, May 2000, pp. 550-554.
- I. Madadi Kojabadi**, L. Chang, R.. Doriaswami, "Novel Adaptive Observer for Very Fast Estimation of Stator Resistance in Sensorless Induction Motor Drives" *IEEE Annual Power Electronics Specialists Conference*, 2003, pp. 1455-1459, *PESC03, Mexico*.
- I. Madadi Kojabadi**, L. Chang, R.. Doriaswami, "Effects of Adaptive PI Controller Gains on Speed Estimation Convergence and Noises at Sensorless Induction Motor drives, pp. 263-269, 2003, Montreal *CCECE2003*.
- I. Madadi Kojabadi**, L. Chang, R.. Doriaswami, "Stability Conditions of Adaptive Pseudoreduced-Order Flux Observer for Vector-Controlled of Sensorless IM Drives presented in: " *IEEE Canadian Conference on Electrical & Computer Eng., CCECE2004*, Niagra Falls, Canada.
- I. Madadi Kojabadi**, L. Chang, "Induction motor as wind turbine simulator, presented at *MITACS 2004*, Halifax, Canada.
- I. Madadi Kojabadi**, L. Chang, A. Chao, M. Ghribi, "Optimal PI controller gains using a multi-loop multi objective genetic algorithm in IM drives," *CCEC2005*, in CD with Zhang, **H. Madadi Kojabadi**, L. Chang, , "Modelling of a converter-connected six phase PMSM Generator" Malaysia, Nov. 2005, *PEDS 2005*.
- I. Madadi Kojabadi**, I. Gadoura, M. Ghribi, IMPLEMENTATION OF DIFFERENT CURRENT-CONTROLLED PWM STRATEGIES FOR VSI, Has been accepted in *IFAC*, 2005. Pragh, Czech Republic.
- I. Madadi Kojabadi**, I. Gadoura, M. Ghribi, "A simple digital current control for Grid-connected inverters," Germany, 2005, *EPE2005*, Germany.
- I. Madadi Kojabadi**, K. Zhang, M. Ghribi, "Wind turbine driven grid-connected inverter based on predictive current control technique," 20<sup>th</sup> international power system conference, *PSC2005*, Tehran-Iran, Nov. 2005.
- . Joshi, A. Gordon, I. Holloway, L. Chang, **H. Madadi**, "Development of stand alone micro-hydro system using pump as turbine tech. for low head sites in remote areas" 20<sup>th</sup> international power system conference, *PSC2005*, Tehran, Iran, Nov. 2005.
- I. Madadi Kojabadi**, L. Chang, "Sensorless PMSM drives with MRAS based adaptive speed estimator," 37<sup>th</sup> IEEE power electronics specialist conference, *PESC06*, Busan, South Korea, June 2006.
1. Monfared, H. Rastegar, **H. Madadi Kojabadi**, "Overview of Modulation Techniques for the Four-Switch Converter Topology, 2nd IEEE International Conference on Power and Energy (PECon 08), Has been accepted.
1. Kazemi, A. sadeghi, **H. Madadi Kojabadi**, "Active power direct control of wind turbines by using of discrete space vector modulation," *PSC2008, 23th International Power System Conference*, Iran, Tehran, 2008.
- ¶. Bagheri, **H. Madadi Kojabadi**, "Novel single stage grid connected PV system with fuzzy reactive power control," *PSC2008, 23th International Power System Conference*, Iran, Tehran, 2008.