



1. Name and Academic Rank: Bilal Youssef, Assistant Professor

2. Education: Degrees, Discipline, Institution and Date:

- Ph.D., Automatic Control, Grenoble Institute of Technology, 2005
- Research Master, Automatic Control, Grenoble Institute of Technology, 2002
- Electrical and Electronics Engineering Diploma, Lebanese University - Faculty of Engineering I, 2001

3. Work experience

- Beirut Arab University, Teaching & Research, 2015 – present
- IFP Energies nouvelles, France, Research & Development, 2006-2014

4. Honors and Awards:

- "Who's Who in the world", Marquis Who'sWho®, 2012.

5. Research Interests

- Control systems
- Fault Diagnostic
- Estimation

6. International Scientific Activities and Research Cooperation

- Ph.D. course, Montpellier University, France, 2017.

7. Principal publications and presentations:

7.1 International Patents

1. Method for diagnosing a particle filter by means of a soot capturing device.
Inventors: Bilal Youssef, Yann Creff **United States Patent, US9556780 B2 , 2017**
2. Method of testing engines based on graphic signatures.
Inventors: Bilal Youssef, Gilles Corde
European Patent, EP 2 212 537 B1, 2012
3. Method for controlling a turbocharger with the help of a physical model of the turbocharger's load.
Inventors: Bilal Youssef, Philippe Moulin
European Patent, EP 2 042 712 B, 2012
4. Procédé de contrôle d'un moteur à combustion thermique équipé de deux boucles de recirculation de gaz d'échappement.
Inventors: Olivier Hayat, Christophe Jabeur, Guenael Le Soliec, Bilal Youssef
French Patent, FR 2 956 160 B1, 2012
5. Fast prototyping tools for diagnosis algorithms for nonlinear systems
Inventors: Mazen Alamir, Bilal Youssef, Pascal Bellemain
French APP, IDDN.FR.001.300032, June, 2006



7.2 Journal Publications

1. O. Brunel, F. Duault, J. Lavy, Y. Creff and B. Youssef. Smart Soot Sensor for Particulate Filter OBD. SAE Int. J. Passeng. Cars – Electron. Electr. Syst. 6(1):307-327, 2013, doi:10.4271/2013-01-1334.
2. B. Youssef, Y. Creff and N. Petit. Model Based Control of Alumina Support Synthesis Process. Computers and Chemical Engineering 36(2012) 255-264.
3. A. Albrecht, O. Grondin, J.C. Schmitt, L.M Malbec, B. Youssef, G.Font, P. Gautier and P. Moulin. Simulation Support for Control Issues in the Context of Modern Diesel Air Path Systems. Oil & Gas Science and Technology Journal, Vol. 64 (2009), No.3, pp.381-405.
4. J. Chauvin, P. Moulin, B. Youssef and O. Grondin. Global Air Path Control of a Turbocharged Diesel HCCI Engine. Oil & Gas Science and Technology Journal, Vol. 63 (2008), No.4, pp.553-561

7.3 Papers Book Section

1. O. Brunel, F. Duault, B. Youssef, J. Lavy and Y. Creff. Smart Soot Sensor for Particulate Filter OBD. In Advanced Microsystems for Automotive Applications 2013 (pp. 351-361). Springer International Publishing.
2. B. Youssef. A graphical signature generation tool for diagnosis and parametric estimation of industrial systems: Application to induction motors. Book Chapter - Fault Diagnosis in Robotic and Industrial Systems, ISBN, 978-0980733099, 2012.

7.4 Conference Proceedings

1. Bilal Youssef. A novel Approach for Diesel Particulate Filter Diagnostic Using Resistive Sensor. ICAST, 2018, Tunisia.
2. Jacques Lavy, Claire-Noëlle Millet, Yann Creff, Bilal Youssef, Frédéric Duault, et al.. PM sensor development and simulation for diesel particulate filter on board diagnostic. *IMCS (15th International Meeting on Chemical Sensors)*, Mar 2014, Buenos Aires, Argentina.
3. O. Brunel, F. Duault, B. Youssef, J. Lavy and Y. Creff. Smart Soot Sensor for Particulate Filter OBD. AMAA conference, June 17-18, 2013, Berlin, Germany.
4. O. Brunel, F. Duault, J. Lavy, Y. Creff and B. Youssef. Smart Soot Sensor for Particulate Filter OBD. SAE 2013 World Congress, April 16-18, 2013 Michigan, USA.
5. B. Youssef, J. Malaize and W. Dib. Flux estimation of permanent magnet synchronous motors based on a graphical signature generation tool. IEEE International Conference on Industrial Technology, March 19 -21, 2012, Athens, Greece.
6. B. Youssef , F. Guillemain, G. Le Sollicec and G. Corde. In cylinder trapped mass estimation in diesel engines using cylinder pressure measurements. IEEE Multi-Conference on Systems and Control, September 28 -31, 2011, Denver, USA.
7. B. Youssef. Diagnosis and Parametric Estimation of Induction motors based on Graphical Signature Tool. IEEE International Symposium on Industrial Electronics (ISIE), July 4 -7, 2010, Bari, Italy.
8. B. Youssef, G. Le Sollicec, G. Corde, O. Hayat, C. Jabeur and P.O. Calendini. Low Pressure EGR Control for a Turbocharged Diesel HCCI Engine. IEEE Multi-Conference on Systems and Control (MSC-CCA) , July 8 -11, 2009, Saint Petersburg, Russia.



9. B. Youssef, and G. Corde. Individual Cylinder IMEP Estimation Based on Two Dimensional Graphical Signature Using Crankshaft Angular Velocity Measurements. IEEE Multi-Conference on Systems and Control (MSC-CCA) , July 8 -11, 2009, Saint Petersburg, Russia.
10. P. Moulin, J. Chauvin and B. Youssef. Modelling and Control of the Air System of a Turbocharged Gasoline Engine. IFAC World Congress, July 6-11, 2008, Seoul, Korea.
11. B. Youssef. On Line Parametric Faults Detection in Induction Motors Based on a Graphical Signature Tool. Conference of the IEEE Industrial Electronics Society IECON, November 5-8, 2007, Taipei, Taiwan.
12. B. Youssef, P. Moulin and O. Grondin. Model Based Control of Turbochargers: Application to a Diesel HCCI Engine. IEEE Multi-Conference on Systems and Control (MSC-CCA), October 1-3, 2007, Suntec City, Singapore.
13. B. Youssef. Diagnostic par signatures graphiques des systèmes non linéaires: Détection et localisation des défauts multiples. Conférence Internationale Francophone d'Automatique, CIFA 2006, Bordeaux, France.
14. B. Youssef, M. Alamir and Fadi Ibrahim. Diagnosis and on-line parametric estimation of simulated moving bed. IEEE Conference on Decision and control CDC and European Control Conference ECC, December 12-15, 2005 , Seville, Spain.
15. B. Youssef and M. Alamir. Diagnosis and on-line parametric estimation of automotive electronic throttle control system. IFAC World Congress, July 4-8, 2005, Praha, Czech Republic.
16. B. Youssef and M. Alamir. Generic signature generation tool for diagnosis and parametric estimation of multi-variable dynamical nonlinear systems. IEEE conference on Decision and Control, December 9-12 2003, Hawaii, USA.