

# Dr. Ali Khudhair Al-Jiboory

P.O. box 9, College of Engineering, Baqubah 32001, Diyala, (+964) 773-907-5768

E-Mail : ali\_khudhair@uodiyala.edu.iq

## EDUCATION

---

<b>Ph.D., Mechanical Engineering, GPA 3.8</b> Michigan State University, East Lansing, MI	Jan. 2012 - Aug. 2016
<b>M.Sc., Mechanical Engineering</b> Baghdad University, Baghdad, Iraq	Oct. 2001 - Sept. 2004
<b>B.Sc., Mechatronics Engineering</b> Baghdad University, Baghdad, Iraq	Oct. 1995 - Jun. 2000

## AWARDS

---

- Outstanding Graduate Student Award, Michigan State University, USA. 2016
- National Science Foundation (NSF) Award (0952558), USA. 2014
- HCED Scholarship. 2011

## POSITIONS

---

<b>Directors of Scientific Affairs Department</b> University of Diyala, Baqubah, Iraq	Oct. 2017 - present
<b>Deputy Head of Computers and Software Department</b> College of Engineering, Baqubah, Iraq	2006 - 2007
<b>Deputy Head of Electronics Department</b> College of Engineering, Baqubah, Iraq	2007 - 2010

## RESEARCH INTEREST

---

- Linear Parameter-Varying (LPV) systems, Gain-Scheduling control, Time-varying systems.
- Linear Matrix Inequality (LMI), Robust control, Uncertain systems.
- Aerospace applications.

## SKILLS

---

- Optimization softwares for controller design, YALMIP, ROLMIP.
- Robust Control Toolbox, MATLAB Programming, Simulink.

## HIGHLIGHTED COURSES

---

- Linear Systems and Control (ECE 851)
- Nonlinear Control (ME 859)
- Engineering Analysis (ME 800)
- Robust Control (ME 854)
- Optimal Control (ECE 853)
- Adaptive Control (ECE 856)

## TEACHING EXPERIENCE

---

- Feedback Control Systems, Digital Control.

- Digital Signal Processing, Image Processing.
- Engineering Analysis.

## MEMBERSHIP

---

- American Society of Mechanical Engineer (ASME).
- Society for Industrial and Applied Mathematics (SIAM).
- Iraqi Engineers Union.

## ACADEMIC WEBSITES

---

- Scopus.
- Google Scholar.
- Research Gate
- Publons
- ORCID

## PUBLICATIONS

---

- [J1] **Ali Khudhair Al-Jiboory**, Guoming Zhu, and Jongeun Choi, "Guaranteed Performance State-Feedback Gain-Scheduling Control With Uncertain Scheduling Parameters", *Journal of Dynamic Systems Measurement and Control (ASME)*, Vol. 138, No. 9, January 2016.
- [J2] **Ali Khudhair Al-Jiboory**, Andrew White, Shupeng Zhang, Guoming Zhu, and Jongeun Choi, "LMI Solutions to the Input Covariance Constraint Problem with an Application to Electronic Throttle Control", *Journal of Dynamic Systems Measurement and Control (ASME)*, Vol. 137, No. 9, September 2015.
- [J3] **Ali Khudhair Al-Jiboory** and Guoming Zhu, "Robust Input Covariance Constraint Control for Uncertain Polytopic Systems", *Asian Journal of Control*, Vol. 18, No. 4, pp. 1–12, July 2016.
- [J4] **Ali Khudhair Al-Jiboory** and Guoming Zhu, "Improved Synthesis Conditions for Mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  Gain-Scheduling Control Subject to Uncertain Scheduling Parameters", *International Journal of Control*, June, 2016, DOI: <http://dx.doi.org/10.1080/00207179.2016.1186843>.
- [J5] **Ali Khudhair Al-Jiboory** and Guoming Zhu, "Static output-feedback robust gain-scheduling control with guaranteed  $H_2$  performance," *Journal of the Franklin Institute*, vol. 355, no. 5, pp. 2221–2242, Mar. 2018.
- [J6] **Ali Khudhair Al-Jiboory** and Guoming Zhu, "Experimental Study on an Electric Variable Valve Timing Actuator: LPV Modeling and Control", *Journal of Dynamic Systems Measurement and Control (ASME)*, vol. 139, pp. 101011–1, 2017.
- [J7] **Ali Khudhair Al-Jiboory**, G. Zhu, S. S.-M. Swei, W. Su, and N. T. Nguyen, "LPV modeling of a flexible wing aircraft using modal alignment and adaptive gridding methods," *Aerospace Science and Technology*, vol. 66, pp. 92–102, Jul. 2017.
- [C1] **Ali Khudhair Al-Jiboory**, Guoming Zhu, and Cornel Sultan, "LMI Control Design with Input Covariance Constraint for a Tensegrity Simplex Structure", In *Proceedings of the ASME 2014 Dynamic Systems and Control Conference (DSCC2014)*, San Antonio, TX, USA, October 22-24, 2014.
- [C2] **Ali Khudhair Al-Jiboory** and Guoming Zhu, "Robust Gain-Scheduling Output Feedback Control With Noisy Scheduling Parameters", In *Proceedings of the ASME 2015 Dynamic Systems and Control Conference (DSCC2015)*, Columbus, OH, USA, October 28-30, 2015.

- [C3] **Ali Khudhair Al-Jiboory** and Guoming Zhu, "Robust Gain-Scheduling Control with Guaranteed Performance", 10th IFAC Symposium on Nonlinear Control Systems, August 23-25, 2016, Monterey, CA, USA.
- [C4] **Ali Khudhair Al-Jiboory**, G. G. Zhu, S. S.-M. Swei, W. Su, and N. T. Nguyen, "LPV Model Development for a Flexible Wing Aircraft," 2017 AIAA Guidance, Navigation, and Control Conference, Grapevine, TX, USA.
- [C5] Ali. M. Alhajjar, **Ali Khudhair Al-Jiboory**, S. S.-M. Swei, and G. G. Zhu, "LPV Modeling and Control for Active Flutter Suppression of a Smart Airfoil," 2018 AIAA Guidance, Navigation, and Control Conference, Kissimmee, FL, USA.
- [C6] T. He, **Ali Khudhair Al-Jiboory**, G. G. Zhu, S. S.-M. Swei, and W. Su, "Guaranteed  $H_\infty$  Performance LPV ICC Control with Application to Blended-Wing-Body Model," 2018 AIAA Guidance, Navigation, and Control Conference, Kissimmee, FL, USA.