Ali Mohamed Lotfy Ali Kandil

Personal Info

ORCID: https://orcid.org/0000-0002-7176-2489

Birth Date: March 21st, 1987

Nationality: Egyptian

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Current Position: Assistant Professor of Engineering Mathematics, Department of Physics and Engineering Mathematics, Faculty of Electronic Engineering, Menoufia University, Menouf, Egypt

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Education

- **Ph.D.** in Engineering Mathematics, Department of Physics and Engineering Mathematics, Faculty of Electronic Engineering, Menoufia University **(2018)**. Thesis: Analysis and Control of Vibrational Engineering Systems
- **M.Sc.** in Engineering Mathematics, Department of Physics and Engineering Mathematics, Faculty of Electronic Engineering, Menoufia University **(2014)**. Thesis: Vibration Analysis and Reduction of Nonlinear Dynamical Systems
- **B.Sc.** in Electronic Engineering, Department of Industrial Electronics and Control Engineering, Faculty of Electronic Engineering, Menoufia University **(2009)**. Graduation Project: Water level control via PLC and SCADA

Academic Employment

- **Assistant Professor** of Engineering Mathematics, Department of Physics and Engineering Mathematics, Faculty of Electronic Engineering **(2018-Present)**
- **Assistant Lecturer** of Engineering Mathematics, Department of Physics and Engineering Mathematics, Faculty of Electronic Engineering **(2014-2018)**
- **Teaching Assistant** of Engineering Mathematics, Department of Physics and Engineering Mathematics, Faculty of Electronic Engineering **(2010-2014)**

Research Interests

- Mechanical Vibrations
- Nonlinear Differential Equations
- Numerical Analysis
- Vibration Control
- Nonlinear Dynamical Systems
- Stability Theory

Publications

- Hamed, Y.S., **Kandil, A**: Influence of Time Delay on Controlling the Non-Linear Oscillations of a Rotating Blade. Symmetry (Basel). 13, (2021). https://doi.org/10.3390/sym13010085
- Hamed, Y.S., **Kandil, A.**, Machado, J.T.: Utilizing Macro Fiber Composite to Control Rotating Blade Vibrations. Symmetry (Basel). 12, (2020). https://doi.org/10.3390/sym12121984
- **Kandil, A.**: Investigation of the whirling motion and rub/impact occurrence in a 16-pole rotor active magnetic bearings system with constant stiffness. Nonlinear Dyn. 102, 2247–2265 (2020). https://doi.org/10.1007/s11071-020-06071-x
- Saeed, N.A., **Kandil, A.**: Two different control strategies for 16-pole rotor active magnetic bearings system with constant stiffness coefficients. Appl. Math. Model. 92, 1–22 (2021). https://doi.org/https://doi.org/10.1016/j.apm.2020.11.005
- **Kandil, A.**: Study of Hopf curves in the time delayed active control of a 2DOF nonlinear dynamical system. SN Appl. Sci. 2, (2020). https://doi.org/10.1007/s42452-020-03614-0
- **Kandil, A.**: Internal resonances among the first three modes of a hinged–hinged beam with cubic and quintic nonlinearities. Int. J. Non. Linear. Mech. 127, 103592 (2020). https://doi.org/10.1016/j.ijnonlinmec.2020.103592
- **Kandil, A.,** Sayed, M., Saeed, N.A.: On the nonlinear dynamics of constant stiffness coefficients 16-pole rotor active magnetic bearings system. Eur. J. Mech. A/Solids. 84, 104051 (2020). https://doi.org/10.1016/j.euromechsol.2020.104051
- Saeed, N.A., **Kandil, A.**: Lateral vibration control and stabilization of the quasiperiodic oscillations for rotor-active magnetic bearings system. Nonlinear Dyn. 98, 1191–1218 (2019). https://doi.org/10.1007/s11071-019-05256-3
- **Kandil, A.**, Kamel, M.: Vibration control of a compressor blade using position and velocity feedback. Int. J. Acoust. Vib. 24, 97–112 (2019). https://doi.org/10.20855/ijav.2019.24.11270
- **Kandil, A.**, El-Gohary, H.A.: Suppressing the nonlinear vibrations of a compressor blade via a nonlinear saturation controller. JVC/Journal Vib. Control. 24, 1488–1504 (2018).

https://doi.org/10.1177/1077546316661680

- **Kandil, A.**, El-Gohary, H.: Investigating the performance of a time delayed proportional–derivative controller for rotating blade vibrations. Nonlinear Dyn. 91, 2631–2649 (2018). https://doi.org/10.1007/s11071-017-4036-6
- **Kandil, A.**, El-Ganaini, W.A.: Investigation of the time delay effect on the control of rotating blade vibrations. Eur. J. Mech. A/Solids. 72, 16–40 (2018). https://doi.org/10.1016/j.euromechsol.2018.03.007
- **Kandil, A.**, Eissa, M., Kamel, M., El-Ganaini, W., El-Gohary, H.: Actively controlling a rotating blade vibrations excited by a superharmonic force. Menoufia J. Electron. Eng. Res. 27, 321–332 (2018). https://doi.org/10.21608/mjeer.2018.65894
- **Kandil, A.**, Eissa, M.: Improvement of positive position feedback controller for suppressing compressor blade oscillations. Nonlinear Dyn. 90, 1727–1753 (2017). https://doi.org/10.1007/s11071-017-3761-1
- El-Ganaini, W.A., **Kandil, A.**, Eissa, M., Kamel, M.: Effects of delayed time active controller on the vibration of a nonlinear magnetic levitation system to multi excitations. JVC/Journal Vib. Control. 22, 1257–1275 (2016). https://doi.org/10.1177/1077546314536753
- Eissa, M., **Kandil, A.**, Kamel, M., El-Ganaini, W.A.: On controlling the response of primary and parametric resonances of a nonlinear magnetic levitation system. Meccanica. 50, 233–251 (2015). https://doi.org/10.1007/s11012-014-0069-9
- Eissa, M., **Kandil, A.**, El-Ganaini, W.A., Kamel, M.: Vibration suppression of a nonlinear magnetic levitation system via time delayed nonlinear saturation controller. Int. J. Non. Linear. Mech. 72, 23–41 (2015). https://doi.org/10.1016/j.ijnonlinmec.2015.02.012
- Eissa, M., **Kandil, A.**, El-Ganaini, W.A., Kamel, M.: Analysis of a nonlinear magnetic levitation system vibrations controlled by a time-delayed proportional-derivative controller. Nonlinear Dyn. 79, 1217–1233 (2014). https://doi.org/10.1007/s11071-014-1738-x
- Kamel, M., **Kandil, A.**, El-Ganaini, W.A., Eissa, M.: Active vibration control of a nonlinear magnetic levitation system via Nonlinear Saturation Controller (NSC). Nonlinear Dyn. 77, 605–619 (2014). https://doi.org/10.1007/s11071-014-1323-3

Teaching Experience

Undergraduate courses:

- Calculus
- Analytical Geometry
- Mechanics

- Linear Algebra
- Linear Differential Equations
- Laplace Transform
- Special Functions
- Multiple Integrals
- Linear Programming
- Fourier Analysis
- Linear Difference Equations
- Numerical Analysis
- Z Transform
- Probability theory
- Statistical Analysis

Postgraduate courses:

- Equations of Mathematical Physics
- Nonlinear Differential Equations
- Advanced Numerical Analysis
- Differential Geometry
- Integral Equations
- Advanced Linear Algebra