

# Reduced order model based iterative learning control for reduced lift fluctuation in wind turbine blades based on CFD models

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**Zoom link:** <https://wpi.zoom.us/j/93007938481> **Passcode:** 670267

### Abstract

The subject of this seminar is aerodynamic load control for wind turbines, which has the potential to increase power extraction efficiency, including economic competitiveness when compared to other sources of alternative energy. The general feasibility of this approach is developments in sensor and actuator technology, which enables their embedding into the rotor blades. Minimizing lift fluctuations due to disturbances is feasible when combined with active control to modify the blade section aerodynamics.



Eric Rogers (Life Member, IEEE) received the M.S. and Ph.D. degrees in control systems from the University of Sheffield, Sheffield, U.K., in 1984, and the D.Sc. degree in research in control systems from The Queen's University of Belfast, Belfast, U.K., in 2004. He is a Professor of Control Systems Theory and Design with the School of Electronics and Computer Science, University of Southampton, Southampton, U.K. He has an extensive record of advisory work for funding agencies and industries in the U.K. and elsewhere. His major research interests include iterative learning control theory and applications in both engineering and health care, multidimensional system theory and applications, long-range autonomy for autonomous underwater vehicles, and flow control. Dr. Rogers is the Editor-in-Chief for International Journal of Control.