

## Soft-Computing Techniques for Vehicular Technology

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### **Abstract:**

In vehicular technology, electric energy systems are taking over conventional mechanical systems. The use of various energy sources yields better flexibility in achieving higher performance. Therefore, their integration is becoming a critical aspect as performance improves on next generation of vehicles. This tutorial covers a variety of soft-computing techniques as an enabling technology for modeling and prediction of intelligent transportation systems.

### **About the Distinguished Lecturer:**

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Hicham Chaoui received the B.Sc. degree in electrical engineering from the Institut supérieur du Génie Appliqué (IGA), Casablanca, Morocco, in 1999, the M.A.Sc. degree in electrical engineering, the M.Sc. degree in computer science (with honors), the graduate degree in project management, and the Ph.D. degree in electrical engineering (with honors) all from the University of Quebec, Canada, in 2002, 2004, 2007, and 2011, respectively.

His career has spanned both academia and industry in the field of intelligent systems. Prior to his academic career, he held various engineering and management positions. From 2014 to 2016, he was an Assistant Professor with Tennessee Technological University, Cookeville, TN, USA. He is currently a Faculty Member with Carleton University, Ottawa, ON, Canada, and an Associate Faculty Member with the Université du Québec à Trois-Rivières, QC, Canada. His research interests include adaptive and nonlinear control theory, intelligent control, robotics, electric motor drives, and energy storage devices. His scholarly work has produced more than 90 journal and conference publications. Dr. Chaoui received the Best Thesis Award (health, natural science, and engineering) and the Governor General of Canada Gold Medal Award for his doctoral dissertation in 2012. He is a senior member of IEEE and a Registered Professional Engineer in the Province of Quebec, Canada.