

## Intelligent vehicle systems on off-road transportation- Demands and needs

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The main philosophies behind the research functions are the extension of knowledge, solution of problems, exploration, clarification, establishment of correlation, etc. In particular on vehicle dynamics, the automotive industry is having to reinvent itself in order to meet the challenges of a dramatically changing global automotive landscape with a wide variety of research tasks. Consequently, long-standing studies on vehicle dynamics, fuel efficiency, consumer and governmental demands are playing important roles for the research innovation, to a greater degree than ever before. In addition, in the emerging area of intelligent vehicle and highway systems (IVHS), research philosophy has been implanted notably from the exciting new developments on the horizon. The real necessity to develop the intelligent transportation system (ITS) in automotive industry especially in off-road transportation system has been explored deeply in the academic and industrial research investigation. However, growing environmental awareness, and increasing demand for cross country mobility, the research trend becomes increasingly important in the global automotive industry. Transportation is an important problem on off-road vehicles and is considered as one of the biggest issue in the world. Intelligent vehicle has become one of the most viable alternatives to conventional vehicles such as fully tracked vehicles and fully wheeled vehicles on the swamp peat terrain. Therefore, this study presents an intelligent air-cushion tracked vehicle over a swamp peat terrain for doing transportation on agriculture. Furthermore, a fuzzy logic control policy is incorporated in order to maintain the cushion pressure at any instant of the vehicle position over the terrain.

### Biography

Altah Hossain, Ph.D., is a Senior Lecturer in University of Malaya, Malaysia. He has obtained B.Sc. Engg. (Mechanical) from Bangladesh University of Engineering & Technology, M.Sc. in Aerospace Engineering from Universiti Putra Malaysia, and Ph.D. from International Islamic University Malaysia. He is a Chartered Engineer (CEng) with the Engineering Council, UK and member of The Institution of Mechanical Engineers (IMechE), UK. He has 11 years work experiences in various Institutions. His research interests are vehicle dynamics, vehicle aerodynamics, materials processing, renewable energy, and intelligent modeling. He has published 25 papers in the international journals and 18 in international conferences worldwide.

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