RESEARCH ROADMAP
LABORATORY OF MODELLING AND SIMULATION
DEPARTMENT OF MATHEMATICS – FSAD - ITS

PAST RESEARCH

	RESEARCH SUBJECT	RESEARCH OBJECT
Renewable Energy	Analysis and Development of Control Methods	Solar Cells
	Efficient Method Development	
	Mathematical Model Development	Bioenergy
	Control Design	
	Mathematical Model Analysis and Optimization	Microalgae
Computational Fluid Dynamics	Mathematical Model Construction and Computer Simulation	Pollutant Dispersion
		Magnetohydrodynamic Boundary Layer
Bio-Mathematics	Mathematical Models and Dynamic Analysis	Solar Cells
	Multi-path Multilocation Mathematical Modelling	Multi strain
	Persistence Analysis	
	Optimal Control Analysis in Mathematical Model Construction	H1N1- pandemic, H5N1
Navigation, Guidance and Control	Development of Mathematical Models and Control Systems	Aircraft/ Warships
	Control and Estimation development	Plane/ Ship without crew

FUTURE RESEARCH

RESEARCH SUBJECT	RESEARCH OBJECT
Development of Mathematical Models and Efficiency Methods	Solar Cells
	Bioenergy
Mathematical Model Analysis and Optimization	Microalgae
	Biofuel
Mathematical Model Construction and Computer Simulation	Pollutant Dispersion
	Magnetohydrodynamic Boundary Layer
Mathematical Modeling and Dynamic Analysis of Climate Change	Solar Cells
Mathematical Modeling of Multilocation predictions for Climate Change	Bioenergy
Persistence Analysis, Traveling wave, Bifurcation, Attractive	Microalgae
Optimal Control Analysis on Multilocation, Multitrack, and Multi-Strain Mathematical models	Biofuel
Domains and Codomains Analysis of persistence, attractive, and travelling wave	
Development of Mathematical Models and Control Systems	Aircraft/ Warships
Control and Estimation development	Plane/ Ship without crew