Industrial & Systems Engineering: Ph.D. Dissertation Topics

2016 Dissertation Titles

- Evaluating City Logistics Using Two-Level Location Routing Modeling and SCPM Simulation
- Freeform 3D Shell Structure Fabrication Using 3D Printed Constraint-based Self-foldable Structures
- Pricing OTC Energy Derivatives—Credit, Debit, Funding Value Adjustment, and Wrong Way Risk
- Train Scheduling and Routing Under Dynamic Headway Control
- Third Party Provider Human Factors of Invasive Medical Technology in Non-clinical Environments
- Clinical Forecasting Models to Predict Depression in Patients with Diabetes & Applications in Depression Screening Policymaking
- Evaluation and Analysis of Human-systems Integration of the New PTC Technology in a Complex Railroad Organization
- Computational Stochastic Programming with Stochastic Decomposition
- Numerical Analysis of Structures Fabricated by Contour Crafting
- The Advancement of Selective Inhibition of Sintering for High Temperature Alloys
- Design and Evaluation of Communication and Information Technology Tools to Support Low-income Latino Patients with Diabetes
- Polymer-based Composite Fabrication Using Projection-based Stereolithography
- Enhancement of the Surface Quality and Dimensional Accuracy of the SIS-Metal Process with Application to High Temperature Alloys
- Routing for Ridesharing
- Deformation Control for Mask Image Projection Based Stereolithography Process
- Contour Crafting Construction with Sulfur Concrete
- Research Study on Selective Separation Sintering

2015 Dissertation Titles

- Simulation Modeling to Evaluate Cost-benefit of Multi-level Screening Strategies to Improve Compliance: the Example of Diabetic Retinopathy
- Evaluation & Analysis of Human-systems Integration of Ptc Technology in a Complex Railroad Organization:HRO-centric Methodology
- An Innovative System Design of a State-of-the-art Healthcare Delivery System in South Los Angeles Area
- Pricing Defaultable Energy Derivatives
- Deformation Control for Mask Image Projection Based Stereolithography Process
- Study of Principles of Selective Separation Sintering (Sss)

2014 Dissertation Titles

- Evaluating City Logistics Using Two-level Location Routing Modeling and SCPM Simulation
Industrial & Systems Engineering: Ph.D. Dissertation Topics

- Variants of Stochastic Knapsack Problems
- Energy Derivatives Pricing Subject to Default Risk
- Surface Design for Controlled Flexibility Based on 3D Printing
- Supply Chain Consolidation and Cooperation in the Agriculture Industry
- Energy Control and Material Deposition Methods for Additive Manufacturing Using Photo-polymerization
- A Risk Analysis Methodology to Assess Human and Organizational Factors Contributions in the Reliability and System Safety of Oil and Gas Drilling
- Simulation Modeling to Evaluate Cost-benefit of Multi-level Screening Strategies to Improve Compliance: the Example of Diabetic Retinopathy
- Modeling and Analysis of Nanostructure Growth Process Kinetics and Variations for Scalable Nanomanufacturing
- Routing for Ridesharing
- Traffic Assignment Models For A Ridesharing Transportation Market
- Nanostructure Interaction Modeling and Estimation for Scalable Nanomanufacturing