

# **Adaptive Boosting with SVM Classifier for Moving Vehicle Classification**

## **Abstract**

This study examines co-solvent modified supercritical carbon dioxide (SC-CO<sub>2</sub>) to extract the saturated fatty acids from palm oil. The applied pressure was ranging from 60 to 180 bar and the extraction temperatures were 313.15 and 353.15 K. The knowledge of the phase equilibrium is one of the most important factors to study the design of extraction processes controlled by the equilibrium. The objective of this work is the assessment of the feasibility studies of phase equilibrium mutual solubility process utilizing supercritical carbon dioxide. A thermodynamic model based on the universal functional activity coefficient (UNIFAC) used to predict the activity coefficients' expression for the system carbon dioxide / fatty acid. The parameters such as adsorption, diffusion, solubility, and desorption were determined using mass transfer modeling.