Dr. Henry Louie

This project develops advanced techniques for forecasting the amount of electricity used when re-charging electric vehicles. Electric vehicles are an environmentally friendly alternative to conventional gasoline- and diesel-powered vehicles. Electric vehicles have zero or near-zero tailpipe emissions and are highly efficient. As the number of electric vehicles increases, there will be challenges to how engineers operate the electrical systems -- because when the large batteries used to power electric vehicles are recharged, they draw appreciable amounts of electricity. This consumption must be anticipated by engineers so that the generators supplying electricity can be properly prepared. It therefore becomes important to predict or forecast the electricity consumed by electric vehicles. This project develops algorithms for forecasting this consumption using advanced techniques based on statistical analysis and modeling.