Invited Speaker of Session 01

LITHIUM ION BATTERIES

Dr. Plett received his PhD in Electrical Engineering from Stanford University in 1998, and has been a member of the faculty of the Department of Electrical and Computer Engineering at the University of Colorado Colorado Springs (UCCS) since that time.

Dr. Plett entered the battery-controls research field in 2001, and his research is now largely done in collaboration with his colleague Dr. Trimboli at UCCS. They are focused on research in control systems as applied to the management and control of high-capacity battery systems, such as found in hybrid and electric vehicles. Current research efforts include: physics-based reduced-order modeling of lithium-ion dynamics; system identification of physics-based model parameters; estimation of cell internal physical state and degradation status; power and energy prediction using model predictive control and other advanced techniques to extend life; and battery pack fast charging.