

Agenda

Durability and Fatigue

8 a.m.	<i>Welcome and coffee</i>	1 p.m.	Fatigue Life Approaches
8:30 a.m.	Fundamental Concepts: Why Predict Product Life?		<ul style="list-style-type: none"> • Simulation methods overview • Applications related to spot welding and seam welding • Load extrapolation: Quantile and statistical various methods • Operator and event variation • Load superposition • Setting targets from customer data
	<ul style="list-style-type: none"> • Stress, strain, damage, and fatigue life • Cyclic fatigue versus static strength 		
9 a.m.	Understanding Loads-Test and Simulation		
	<ul style="list-style-type: none"> • Load data acquisition • Strain gauges, LVDT, string pots, load cells, canbus and GPS. • Data cleanup: Spike removal, drift correlation and anomaly detection • Simulation: Flexible bodies, unit loads, modal superposition, transient analysis 	2:30 p.m.	<i>Break</i>
10 a.m.	<i>Break</i>	2:45 p.m.	Accelerated Testing and Simulation
10:15 a.m.	Load Data Processing: Understanding Damage Content an Establishing a Target		<ul style="list-style-type: none"> • Block cycle testing • Damage based time compression • Mission synthesis • Nodal elimination
	<ul style="list-style-type: none"> • Cycle counting, SN curves, miner's rule • Mean stress and other SN curve adjustments • Rainflow counting and interpretation • Endurance limit and Haigh-Goodman diagram 	4 p.m.	Frequency Based Fatigue
Noon	<i>Lunch</i>		<ul style="list-style-type: none"> • FFT's and power spectral density (PSD) • Shock response spectrum (SRS) • Fatigue damage spectrum (FDS)
		4:30 p.m.	<i>Close</i>

Agenda changes will be made at the discretion of Siemens PLM Software