

# DENTAL FRACTOGRAPHY COURSE 2019

July 10 – July 12

## P R O G R A M

Hands-on Instructors: Scherrer SS, Lohbauer U, Cesar P, Belli R

### Day 1: In vitro Fractography

08:30-09:00	Welcome, safety instruction	(SS, UL)
09:00-09:15	History, relevant standards and NIST Guide	(SS; UL)
09:15-09:45	Stress-strain behavior and strength of ceramics	(PC)
09:45-10:15	Fractographic equipment and viewing techniques, Part 1 (live demo)	(UL)
10:15- 10:30	COFFEE BREAK	
10:30-10:50	Hands on 1: Hand loupes, stereomicroscopes, glass rods	(all)
10:50-11:35	Fractographic equipment and viewing techniques, Part 2 (live demo)	(UL)
11:35-12:05	Fracture surface features, Part 1 (in vitro)	(SS)
12:10-13:20	LUNCH BREAK	
13:20-14:00	Fractography, Fracture origins & Flaw types	(PC)
14:10-15:10	Hands on 2: Ceramic bending bars (Feldspath, LS2, ZrO2)	(all)
15:10-15:30	COFFEE BREAK	
15:30-16:15	Mechanical properties and microstructure of dental ceramics	(UL)
16:15-16:45	Introduction to Fracture Mechanics	(RB)
16:45-17:45	Mechanical testing of dental materials: strength and toughness	(RB)

## Day 2: In vivo Fractography

08:30-08:45	Fracture surface features, Part 2 (in vivo)	(SS)
08:45-09:00	Data collection: A systematic approach	(SS)
09:00-09:50	Clinical case presentations 1	(SS&PC)
09:50-10:30	Hands-on 3: Clinical cases	(all)
10:30-10:45	COFFEE BREAK	
10:45-11:30	Clinical case presentations 2	(SS&PC)
11:30-11:55	The replica technique	(UL)
11:55-12:30	Hands-on 5: Systematic approach on crown replicas	(all)
12:20-13:30	LUNCH BREAK	
13:30-14:00	Clinical case presentation 3 (2 Replica Chippings)	(RB)
14:00-14:30	How to organize a fracto case in a paper	(RB)
14:30-15:30	Interactive clinical cases	(all)
15:30-15:45	COFFEE BREAK	
15:45-16:15	Hands-on 6: Clinical cases	(all)
16:15-16:45	Dental Porcelain Fractography	(PC)
16:45-17:15	Composite clinical fractures	(SS)

### **Day 3: Research and Fractography**

08:30-09:15	Microstructure and mechanical properties of resin composites	(UL)
09:45-10:15	Hands-on 10: Fractography of composite failures	(SS)
09:45-10:15	Key role of fractography in failure analysis of brittle dental restorations	(PC)
10:15-10:30	COFFEE BREAK	
10:30-11:15	Interactive clinical cases	(all)
11:15-11:45	Interactive clinical cases	(all)
11:45-12:00	Closing remarks, end of the Fractocourse 2018	