

2004 IEEE International Ultrasonics, Ferroelectrics, and Frequency Control 50th Anniversary Conference - Condensed Program						
SUNDAY, AUG. 22	<i>Registration (De Bleury Hall), 6:00 p.m. – 9:00 p.m.</i>					
MONDAY, AUG. 23	<i>Registration (De Bleury Hall), 7:00 a.m. – 7:00 p.m.</i>					
8:15 a.m. – 5:45 p.m.	<i>SHORT COURSES Please see listing on pages 7-9.</i>					
TUESDAY, AUG. 24	<i>Registration (De Bleury Hall), 7:00 a.m. – 6:00 p.m.</i>					
8:30 a.m. – 10:00 a.m.	<i>Opening Ceremony and UFFC Awards (Room: 210A-F)</i>					
10:00 a.m.–10:30 a.m.	<i>Refreshments (220A)</i>					
10:30 a.m.–12:00 p.m.	<i>Ultrasonics Plenary Session (210 A-F)</i>					
12:00 p.m. – 1:30 p.m.	<i>Lunch</i>					
	510AC	510BD	511AB	513AB	512C-H	512 A-F
1:30 p.m. – 3:00 p.m.	U1A Cont. Agents-Perfus.	U2A Tissue Elasticity I	U3A NDE Non-Cont. Meas. Tech.	U4A Optical Inter.	U5A SAW Device Modeling	
	513CD			511CF	511DE	
1:30 p.m. – 3:00 p.m.	FE1A Thin Film I			FC1A Histor. Over.	FC2A Th. Fil. Reson.	
3:00 p.m. – 3:30 p.m.	<i>Refreshments (220A)</i>					
	510AC	510BD	511AB	513AB	512C-H	512 A-F
3:30 p.m. – 5:00 p.m.	U1B Direc. Ultra. Imag.	U2B Therapy: Adv. Appl.	U3B Novel Transducer Appl.	U4B Bulk Wave Mat. & Effects	U5B From SAW: Thin Films	
	513CD			511CF	511DE	
3:30 p.m. – 5:00 p.m.	FE1B Tunable & RF Mat.			FC1B Single Crystal Piezo. Mat.	FC2B Cold Atom Clocks	

	Posters: (Location: 220B)					
5:00 p.m. – 6:30 p.m.	PS1Stu. Paper Final. P1FCA Osc. & Re. P1UB Cont. Agents I P1UC Beamforming I	P1UD Med. Sig. Pr. P1UE Cavit. in Ther. P1UF Tis. Elastog.	P1UG SAW Wire. P1UH Hi. Coup. SAW P1FCI Time Tr. &Cha.	P1FCJ Chem. Sens. P1UK Sensors P1UL Phy. Acou. IV	P1UMUnder. Trans. P1UN Trans.Arr.Mod. P1UO Comp.Trans.	P1UP BulkAcou.Wa. P1FEQ Thin Flims P1FCR Th.Fil.BulkAc.
6:30 p.m. – 8:00 p.m.	Reception (Location: 220A)					
WEDNESDAY, AUG. 25	Registration (De Bleury Hall), 7:00 a.m. – 5:30 p.m.					
8:30 a.m. – 10:00 a.m.	Frequency Control Plenary Session (210A-F)					
10:00 a.m. – 10:30 a.m.	Refreshments (220A)					
	510AC	510BD	511AB	513AB	512C-H	512 A-F
10:30 a.m.–12:00 p.m.	U1C Contrast Agents- Fund.	U2C Beamforming I	U3C CMUT Modeling	U4C BAW Reson. Anal., Mag. Inter.	U5C BAW Sensors	U6C BAW Sensors
	513CD			511CF	511DE	
10:30 a.m.–12:00 p.m.	FE1C Thin Film II			FC1C Min. At. Clocks	FC2C Manu. Tech.	
12:00 p.m. – 1:30 p.m.	Lunch					
	510AC	510BD	511AB	513AB	512C-H	
1:30 p.m. – 3:00 p.m.	U1D Cont. Agents- Charac.	U2D Vascular Elasticity I	U3D CMUT Applications	U4D Thin Film BAW Reson. & Filters	U5D SAW Dev. & Propagation	
	512A-F	513CD		511CF	511DE	
1:30 p.m. – 3:00 p.m.	FE3D Piezoelectric Devices	FE1D Single Crystals		FC1D Enhancing Micro. Stan. Perf.	FC2D Applic., Jit., & Min. Oscil.	

3:00 p.m. – 3:30 p.m.	Refreshments					
3:00 p.m. – 6:30 p.m.	Posters: (Location: 220B)					
	P2FCA Phys. Sen	P2FEE Pie.Mat.&De.	P2UH Cont. Agents II	P2UK Ultra. Therapy	P2FCN Fre. Stand.	2UQ SAW Filters
	P2FCB Re.Al.Mo.Im.	P2FCF Piezo. Mat.	P2UI Beamforming II	P2UL Bioeffects	P2UO Trans. Mat.	P2UR High Fre.App.
	P2FCC Crys. & Micro.	P2FCG Man. & Tech.	P2UJ Tis. Char. Ves.	P2UM De. & Tomog.	P2UP Thin Films Dev.	P2FCS Osc., Syn., & Noise
6:30 p.m. – 10:00 p.m.	Banquet (Location: 710)					
THURSDAY, AUG. 26	Registration (De Bleury Hall), 7:00 a.m. – 5:30 p.m.					
8:30 a.m. – 10:00 a.m.	Ferroelectrics Plenary Session (210 A-F)					
10:00 a.m. – 10:30 a.m.	Refreshments (220A)					
	510AC	510BD	511AB	513AB	512C-H	512 A-F
10:30 a.m.–12:00 p.m.	U1E Blood Flow I	U2E Heart Charact.	U3E Ultra. MEMS Tech.	U4E Physical Acoustics I	U5E NDE & in-Proc. Monit.	U6E Bone Char.
	513CD			511CF	511DE	
10:30 a.m.–12:00 p.m.	FE1E Relaxors			FC1E Opti. Stand. & Applications	FC2E Chemical Sensors	
12:00 p.m. – 1:30 p.m.	Lunch					
	510AC	510BD	511AB	513AB	512C-H	512 A-F
1:30 p.m. – 3:00 p.m.	U1F Blood Flow II	U2F Cells and Cardiac	U3F Transducer Modeling	U4F Physical Acoustics II	U5F Acoustic Imaging	U6F Ther. Therm. Ablation

	513CD			511CF	511DE	
1:30 p.m. – 3:00 p.m.	FE1F Materials Characterization			FC1F Micro. Oscil.	FC2F Phys. Sens.	
3:00 p.m. – 3:30 p.m.	Refreshments (220A)					
	510AC	510BD	511AB	513AB	512C-H	512 A-F
3:30 p.m. – 5:00 p.m.	U1G Tissue Elasticity II	U2G High Fre. & Mice	U3G Medial Transducers	U4G Physical Acoustics III	U5G SAW Sensors	U6G Tissue Charac.
	513CD			511CF	511DE	
3:30 p.m. – 5:00 p.m.	FE1G Modeling, Theory & Domains			FC1G Micro & MEMS Res.-Theo. & Fabri.	FC2G Panel Dis.-Manu. Tech.	
5:00 p.m. – 6:30 p.m.	Posters: (Location: 220B)					
	P3FCA Freq. Stand. P3FEF Mat. Process. P3FEJ Model.& The. P3UN Blood Flow P3UR Trans. Tech. P3UV Ac.& Op.Scat. P3FCB Sensor Tech. P3FEG Tunable/RF P3FEK Capac. & Die. P3UO Im.Tech.&Mo. P3US CMUT Tech. P3UW NDE Imag. P3UC Mod. SAW Mat. P3FEH Mat. Charact. P3UL Med. Sig. Proc. P3UP Clin. Tis. Char. P3UT Surgical Trans. P3UX Sig. Proc. P3UD SAW Trans. P3FEI Dom. Switch. PEUM Tis. Charac. P3UQ 3D P3UU Ultra.Mot.&Act. P3UY NDE Methods P3UE SAW Prop. The.					
FRIDAY, AUG. 27	Registration (De Bleury Hall) 7:00 a.m. – 1:00 p.m.					
	510AC	510BD	511AB	513AB	512C-H	512 A-F
8:30 a.m. – 10:00 a.m.	U1H Abbera. Corre.	U2H Therapy: Cavit.	U3H High Fre. Tran.	U4H Transducers I	U5H Wave Prop.	U6H Lad. Fil. & Dup.
	513CD			511CF	511DE	
8:30 a.m. – 10:00 a.m.	FE1H Piezo. Mat.			FC1H Phase Noise Meas. & Reduc. Tech.	FC2H Sensor Tech. & Instrumentation	
10:00 a.m. – 3:30 p.m.	Refreshments (220A)					
	510AC	510BD	511AB	513AB	512C-H	512A-F
10:30 a.m.–12:00 p.m.	U1I Cont. Agents Imag.	U2I Therapy: Brain	U3I Single Cryst.Trans. Mat.	U4I Acoustic & Optical Scatter.	U5I Imag. & Signal Proc.	U6I Sys. & Dev. App.
	513CD			511CF	511DE	
10:30 a.m.–12:00 p.m.	FE1I Piezo. Mat. II			FC1I Times. & Trans.	FC2I Freq. Shifts Crys. Reson.	
12:00 p.m. – 1:30 p.m.	Lunch					
	510AC	510BD	511AB	513AB	512C-H	512 A-F
1:30 p.m. – 3:00 p.m.	U1J Cont. Agents: Ther.	U2J Intravascular Imag.	U3J Trans. Materials	U4J Ultra. Motors & Actuators	U5J NDE	U6J SAW Mater. & Propagation
	513CD					
1:30 p.m. – 3:00 p.m.	FE1J Capac. & Diel.					
	510AC	510BD	511AB	513AB	512C-H	
3:00 p.m. – 3:30 p.m.	Refreshments (220B)					
3:30 p.m. – 5:00 p.m.	U1K Vascular Imaging	U2K Beamforming II	U3K Transducers II	U4K Ultra. Motors & Actuators II	U6K Advanced Tech.	
	513CD					
3:30 p.m. – 5:00 p.m.	FE1K Mat. Process.					