

16th US National Congress of Theoretical and Applied Mechanics, 27 June – 2 July 2010
Mechanics of Materials and Structures Track
Symposium on Structural Health Monitoring

4-7-4 JLR-1 SHM Session Celebrating Joe Rose's accomplishments in ultrasonics (6/28/10, Monday 9:15-11:20)
 Chair: Cliff Lissenden

No.	Authors	Affiliations	Title
961	Joseph L Rose	Penn State	<i>Ultrasonic guided wave success stories and challenges in NDT and SHM</i>
396	Weibin Li, Younho Cho , Jaesun Lee, Ik-Keun Park	Pusan National Univ., Seoul National Univ. of Technology	<i>The effect of heat treatment on acoustic nonlinear parameters of Inconel</i>
384	Huidong Gao , Borja Lopez, Syed Ali, John Flora, Jeffrey Monks	Innerspec Technologies Inc, Monks	<i>Inline testing of ERW tubes using ultrasonic guided wave EMATS</i>
329	Jason K Van Velsor , Joseph L Rose, Li Zhang	FBS Inc, Penn State	<i>Circumferential guided wave methods for the in-line inspection of pipe</i>

4-7-5 JLR-2 SHM Session Celebrating Joe Rose's accomplishments in ultrasonics (6/28/10, Monday 12:35-2:40)
 Chair: Jason Van Velsor

No.	Authors	Affiliations	Title
765	Ajit Mal	UCLA	<i>Guided wave based health monitoring of composite structures</i>
964	John Popovics	University of Illinois at Urbana-Champaign	<i>Developments in sensing and imaging for civil structures</i>
553	Fei Yan	FBS Inc	<i>Nondestructive evaluation of a boiler tube with wall thinning using ultrasonic guided waves</i>
1278	Xiaoliang (George) Zhao	Intelligent Automation Inc	<i>Wireless guided wave transducer network for bridge structural health monitoring</i>
320	Cliff Lissenden , Hwanjeong Cho	Penn State	<i>Health monitoring of aluminum joint with fasteners using guided waves</i>

4-7-6 JLR-3 SHM Session Celebrating Joe Rose's accomplishments in ultrasonics (6/28/10, Monday 2:55-5:00)
 Chair: John Popovics

No.	Authors	Affiliations	Title
466	Jin-Yeon Lim, Laurence Jacobs, Jianmin Qu	Georgia Tech, Northwestern University	<i>Higher order harmonics and their applications in nondestructive damage assessment in metallic materials</i>
630	Bernhard R Tittmann , Manton J Guers, Cliff Searfass, David Parks	Penn State	<i>Ultrasonic sensors for harsh environments</i>
840	Jing Mu , Li Zhang	FBS Inc	<i>Guided wave active and synthetic focusing techniques in pipe inspection</i>
1375	Ajit Mal , Fabrizio Ricci, Ernesto Monaco, Leonardo Lecce, Simone Tancredi, Sauvik Banerjee	UCLA, University of Naples Federico II, IIT Bombay	<i>Simulation and testing of ultrasonic guided waves for PZT based sensing of structural components and damage detection</i>
1377	Padmakumar Puthillath , Cliff J Lissenden, Joseph L Rose	Penn State	<i>Theoretically driven parameter selection for ultrasonic guided wave inspection of adhesive bonding</i>

4-7-7 JLR-4 SHM Session Celebrating Joe Rose's accomplishments in ultrasonics (6/29/10, Tuesday 9:15-11:20)

Chair: Jianmin Qu

No.	Authors	Affiliations	Title
498	Victor Giurgiutiu	University of South Carolina	<i>Piezoelectric wafer active sensors for structural health monitoring – state of the art and future directions</i>
1076	Debaditya Dutta, Hoon Sohn, Jin Y Yang	Carnegie Mellon University, Korea Advanced Institute of Science and Technology	<i>A non-contact structural health monitoring system through laser based excitation and sensing of ultrasonic guided waves</i>
1323	Roger Royer, Fei Yan, Joseph L Rose	FBS Inc, Penn State	<i>Ultrasonic guided waves for large area structural health monitoring</i>
439	Manton J Guers, Bernhard R Tittmann	Penn State	<i>Guided waves for in-situ monitoring of specimens in reactor environments</i>
1384	Jaya Koduru, Joseph L Rose	Penn State	<i>Defect detection in composite structures using guided wave phased arrays</i>

4-7-1 SHM-1 Structural Health Monitoring (6/29/10, Tuesday 12:35-2:40)

Chair: Doug Adams

No.	Authors	Affiliations	Title
1350	Joseph Cusumano, Arjun Roy, Sergey G Abaimov	Penn State	<i>Simulated space-time failure statistics for a new coupled-field damage model</i>
550	Brandon Zwick, Douglas E Adams, Dave J Koester	Purdue University	<i>Structural health monitoring in composite materials using vibration reciprocity measurements</i>
1197	David Johnson, KW Wang, Jun- Sik Kim	University of Michigan, Kumoh National Institute of Technology	<i>Determining a proper interrogation signal for use in a nonlinear, breathing crack detection technique</i>
548	Jacob Loverich, Michael Grissom, Joe Szefi, Steve Wenner, Zach Fuhrer	KCF Technologies, Invercon, Lord Corporation	<i>Smart rodend with embedded wireless load sensing</i>
1325	Karl Reichard, Brenton Forshey, Eli Hughes, Mark Turner	Penn State	<i>Wireless monitoring of wind turbine blade health</i>

4-7-2 SHM-2 Structural Health Monitoring (6/29/10, Tuesday 2:55-5:00)

Chair: Huidong Gao

No.	Authors	Affiliations	Title
421	Jandro L Abot, Mark J Schulz, Vesselin N Shanov, Yi Song, Maruthi Srivatsavaya	University of Cincinnati	<i>Mode II delamination detection in composite materials using carbon nanotube sensor thread</i>
1060	Wonchang Choi, Hyun-Do Yun	North Carolina A&T State University, Chungnam National University	<i>Flexural damage evaluation of reinforced concrete beams strengthened with CFRP</i>
1348	Kimberly Cook-Chennault, David Cosaboon, Mickey Whitzer, Danielle Castley	Rutgers, Drexel University	<i>Enhanced output voltage and power from aluminum-PZT-Portland cement composites</i>
322	Mykanth R Mada, Sri Bandyopadhyay	University of New South Wales	<i>Development of activated charcoal-PMMA composites with superior electrical conductivity and surface hardness properties</i>
1438	Ik-Keun Park, Kyoung Young Jhang, Tae Hoon Lee, Chung Seok Kim	Seoul National University of Technology, Hanyang University	<i>Defects characterization for structural health monitoring using classical and nonclassical nonlinear acoustics</i>

4-7-3 SHM-3 Structural Health Monitoring (6/30/10, Wednesday 9:15-11:20)

Chair: Cliff Lissenden

No.	Authors	Affiliations	Title
1437	Ignacio Perez , John Kinzer, Mike Yu, Bill Frazier, Nam Phan	Office of Naval Research, Naval Air Systems Command	<i>Rotorcraft structural health and usage monitoring--navy perspective</i>
424	Mark Seaver , Engin Aktas, Stephen T Trickey	Naval Research Laboratory, Izmir Institute of Technology	<i>Evaluating sensor performance via ROC curves as low energy impacts damage a composite wing</i>
839	Nathanael C Yoder, Douglas E Adams	Purdue University	<i>Robust crack detection in geometrically complex metallic components using vibro-acoustic modulation</i>
1214	Aditi Chattopadhyay , Cristobal Hiche	Arizona State University	<i>Impact localization and damage estimation on a composite wing using fiber Bragg grating sensors</i>