## 2014 Sigma Xi Monie A. Ferst Award Symposium Wave Motion in Its Variety of Utilization



>Laser ontio

>Informatio chnology

>Materials >Solid mechanics

>Applied

PROGNOSTICS

Material properties

damage growth laws)

Probabilistic prognosis ( damage evolution & remaining life ) J

> Failure probability et interval

(repair / replace)

high REMEDIATION

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## In honor of Jan D. Achenbach

Walter P. Murphy and Distinguished McCormick School Professor Emeritus of Civil and Environmental Engineering, Engineering Sciences and Applied Mathematics, and Mechanical Engineering, Northwestern University



## **SPEAKERS**

G. R. Liu University of Cincinnati "Wave Propagation and Computational Methods'

Yozo Mikata **Bechtel** Corporation Peridynamic Studies on Wave Propagation and Dispersion Curves"

Andy Norris Rutgers University "Acoustic Neutral inclusions, Transparency and Causality"

**Ron Roberts** Iowa State University "Elastodynamic Measurement Models for Industrial Inspection Design"

C. T. Sun Perdue University "Recent Advances in Acoustic Metamaterials" John Popovics University of Illinois at Urbana-Champaign "My Perspective on the Legacy and influence of Jan Achenbach'

QNDE-Quantitative Non-Destructive Evaluation SHM-Structural Health Monitoring

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Multires Failure

Probability of

detection

state of structure

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Jianmin Ou Northwestern University "Nonlinear Ultrasonic NDE"

V. K. Varadan University of Arkansas "Wireless Nanosensors and Smart Systems for Neurological and Cardiac Disorders and Diabetes: from Monitoring to Treatment including Surgery"

C. H. Zhang University of Siegen "Wave Propagation in Multi-field Coupled Materials"

FRIDAY, OCTOBER 17, 2014 AT 8AM GEORGIA INSTITUTE OF TECHNOLOGY, GEORGIA TECH HOTEL AND CONFERENCE CENTER, SALONS V AND VI 800 SPRING ST. NW, ATLANTA, GEORGIA 30308 INFORMATION AND P: SIGMA XI, <u>SIGMAXI@ME.GATECH.EDU</u>, WEBSITE: HTTP://SIGMAXI.GATECH.EDU

## John Aldrin

**Computational Tools** "Lessons Learned in Quantitative Nondestructive Evaluation Engineering"

Lou Brock University of Kentucky "Insight into Crack and Contact Zone Contours for 3D Problems"

Fu-Kuo Chang Stanford University "SHM for Aerospace Applications"

John Dempsey Clarkson University "Fracture of Arctic and Antarctic Sea Ice"

Sohichi Hirose Tokyo Institute of Technology "Recent Applications of Numerical Analysis to Nondestructive Evaluation"