

Experience the Power of NDE / NDT

**ASNT Spring Conference and
11th Annual Research
Symposium - 2002**

**March 18-22, 2002
Hilton Portland
Portland, Oregon**



**Keynote Address: Tuesday, March 19 • 8:30 – 9:30 a.m.
South Galleria**

Conference Registration Hours

Sunday, March 17 - 3-5 p.m.
Monday, March 18 - 8 a.m.-8 p.m.
Tuesday, March 19 - 8 a.m.-6 p.m.
Wednesday, March 20 - 8 a.m.-5 p.m.
Thursday, March 21 - 8 a.m.-Noon
Friday, March 22 - 7:30 a.m.- 8:00 a.m.
(Post-Conference Seminar Only)

Tabletop Exhibit Hours

Monday, March 18 - 5-8 p.m. (Welcome Party)
Tuesday, March 19 - 9:30 a.m.-1 p.m. and 3-6 p.m.
Wednesday, March 20 - 9:30 a.m. - 1p.m.

*ASNT reserves the right to alter this schedule without notice.



***Service Robots Rising* • Presented by:
Gernot Schmierer, Ph.D.; J. Schmalz GmbH,
Germany**

Automation is integral to the success of the service sector, where the majority of the jobs in the United States, Europe and Asia exist. Smart automation products such as the service robots will soon be found in every household and will become a central part of everyday life.

Service robots will refuel vehicles, renovate nuclear power stations, care for the elderly, keep watch over museums, explore Mars and clean airplanes. While there is no all-inclusive definition for these robotic systems, one thing is clear: the areas of application for service robots are not easily defined as were those of the industrial robot. In numerous service sectors, efforts are being taken either to develop service robots or to implement them on a greater scale. In contrast with the field of industrial robots, the majority of service robots will be at first adjusted individually according to their type, environment and task sequence, even if important subsystems such as drives, control systems and sensors are constructed in a modular form and can be applied to other operational uses.

The information society of the future will demand high-level automation systems that interact with humans in a rapidly changing environment. The keynote addresses examples of today's service robots as well as some first steps toward the service society of the future.

A Special "ThankYou!" Goes Out To...

**National Conference
General Chair and
Research Council Chair**



Robert Shannon
Siemens Westinghouse

**Research Council
Program Committee
Chair**



Gary Workman
University of Alabama -
Huntsville

**Research
Symposium
Co-Chairs**



Doron Kishoni
Business Solutions USA,
LLC



Reza Zoughi
University of
Missouri-Rolla

Tuesday, March 19

8:30—9:30 a.m. **Keynote Address**
Service Robots Rising
Presented by:
Gernot Schmierer, Ph.D.
J. Schmalz GmbH, Germany

Room: South Galleria
*Recognition of the Program Organizers precedes
Keynote.*

9:30-10:00 a.m. Refreshment Break

Tuesday Morning Sessions March 19 • 10:00 a.m.-12:20 p.m.

Acoustic Emission Applications

Chair: James Walker, NASA Marshall Space Flight Center
Co-Chair: Gary Workman, Univ. of Alabama-Huntsville
Room: South Galleria

10:00 a.m. **Acoustic Emission For Periodic
Inspection of Composite Pressure
Vessels**

B. Mosinyi, A. Beattie, R. Finlayson,
V. Godínez-Azcuaga, R. Miller, Physical
Acoustics, E. Hill, Embry-Riddle Aeronautical
University

10:20 **Low Proof Load Prediction of
Ultimate Strengths of Fiberglass/
Epoxy I-beams Using Acoustic
Emission**

E. Fatzinger, E. Hill, Embry-Riddle Aeronautical
University

10:40 **Acoustic Emission Testing of Fossil
Seam-Welded Piping**

J. Rodgers, Acoustic Emission Consulting

11:00 **NDE of FRP Reinforced Civil
Structures Using Acousto-
Ultrasonics**

V. Godínez-Azcuaga, R. Finlayson, R. Miller,
Physical Acoustics; J. Berman, U.S. Army
Construction Engineering Research Laboratory

11:20 **NDE OF Fiber-Glass Insulation
Material Using Acoustic Emission**
F. Shu, V. Godínez-Azcuaga, R. Finlayson,
Physical Acoustics

Electromagnetic Techniques

Chair: Alan Raine, TSC Inspection Systems
Room: South Galleria

11:40 a.m. **The Use of Alternating Current Field
Measurement (ACFM) Array
Technology in the Power Generation
Industry**
A. Raine, TSC Inspection Systems (U.K.)

12:00 p.m. **Experiences in the Use of ACFM for
the Oil Industry in Brazil**

R. de Oliveira Carneval, M. Vinicius Maciel
Martins, Petróleo Brasileiro S.A.-Petrobras (Brazil)

Topics in NDE in the Power Industry

Chair: Robert Shannon, Siemens Westinghouse
Co-Chair: Lloyd Schaefer, Siemens
Room: North Galleria

10:00 a.m. **Changes in NDE Development for
Power Generation—Critical Support
for Engineering the Gas Turbine
Life-Cycle**

R. Shannon, P. Zombo, Siemens Westinghouse

10:20 **NDE Issues for Hydrogen Energy
Systems**

K. Miller, The National Hydrogen Association

10:40 **HRSG Fabrication in Asia: Concerns
in Applied NDE**

L. Prudhomme, QED Consultancy Services
(Malaysia)

11:00 **NDE Workforce Availability for the
Nuclear Power Industry**

M. Turnbow, Tennessee Valley Authority

11:20 **Reliability for NDE Processes in
Propulsion Gas Turbines**

L. Schaefer, Siemens

11:40 **Current Status in the Area of
Reliability of NDT: Experience in
Europe and USA**

C. Müller, M. Scharmach, BAM
Berlin (Germany) and L. Schaefer, Siemens

Tuesday Afternoon Sessions March 19 • 1:20 p.m.-3:00 p.m.

Advanced Radiography Applications

Chair: Habeeb Saleh, Federal Highway Administration
Co-Chair: Glenn Washer, Federal Highway Administration
Room: South Galleria

1:20 p.m. **Direct Digital Radiographic
Inspection System at Redstone
Technical Test Center**

G. K. Hodges, T. McCullough, W. Finney, U.S.
Army Redstone Technical Test Center

1:40 **High Energy Radiography of Bridge
Cable Using a Portable X-Ray Linear
Accelerator**

H. Saleh, Federal Highway Administration,
W. Johnson, High Energy Service Corporation,
A. Waters, V. Medical Systems, and G. Washer,
Federal Highway Administration

2:00 **All-Weather Portable Linear
Accelerator Development History**

J. Valdez, D. Fry, Los Alamos National Laboratory;
P. Leek, S. Kong, L&W Research; B. Wallingford,
Genuine Composites

2:20 **Damage Assessment of Impacted Ceramics Via 3-D X-Ray Computed Tomography**

J.M. Wells, W.H. Green, N.L. Rupert, US Army Research Laboratory

2:40 **A Brief Recap of the Use and Future Development of High Energy X-rays for Field Service**

M. Pinna, HESCO a division of PTSE, Inc, M. Cutler, High Energy Services Corp

Ultrasonics I

Chair: Doron Kishoni, Business Solutions USA, LLC
Co-Chair: Mark Pompe, West Penn Non-Destructive Testing, Inc.

Room: North Galleria

1:20 p.m. **Mapping Out the Ply Layup of Composite Laminates by UT Scans**

D. Hsu, D. Fei, Z. Liu, Iowa State University

1:40 **Fatigue Crack Measurement in Composite Materials by Ultrasonic Methods**

J. Walker, S. Russell, M. Suits, Marshall Space Flight Center; G. Workman, J. Watson, University of Alabama - Huntsville

2:00 **Guided Wave Mode Tuning for Piping Applications**

M. Quarry, Lawrence Livermore National Laboratory; J. Rose, Pennsylvania State University

2:20 **Development and Establishment of a Technique for Detection of ID Cracking in Power Cycle Piping Girth Welds Using Ultrasonic Creeping Waves**

R. Pardikar, S. Baby, NDTL/Bharat Heavy Electricals (India)

2:40 **Magnetic and Ultrasonic Evaluation of Microstructure and Strength of Variesly Heat Treated Pearlitic Railway Steel**

J. Byeon, J. Kim, S. Kwun, Korea University (Korea)

3:00-3:20 p.m. Refreshment Break

Tuesday Afternoon Sessions March 19 • 3:20 p.m. - 5:20 p.m.

Infrared/Thermal NDE in the Power Industry

Chair: Robert Shannon, Siemens Westinghouse
Co-Chair: Oscar Lewis, Siemens Westinghouse

Room: South Galleria

3:20 p.m. **Detecting Multiple Defect Modes in Turbine Components via Automatic Inspection**

B. Dalio, Computerized Thermal Imaging; M. Bales, D. Vladimirov, Bales Scientific

3:40 **An Automatic IR Inspection System for Turbine Components**

B. Dalio, Computerized Thermal Imaging; M. Bales, D. Vladimirov, Bales Scientific

4:00 **Sonic Infrared NDT for Crack Detection**

L. Favro, X. Han, R. Thomas, Wayne State University

4:20 **Ultrasonic Activated Thermography-Theoretical Investigation of the Thermal Response of Various Types of Defects**

M. Rothenfusser, R. Schiel, Siemens AG (Germany)

4:40 **Acoustic Thermography, The Next Wave in Nondestructive Testing Technology**

O. Lewis, R. Shannon, M. Felix, L. Loya, Siemens Westinghouse

5:00 **Automated Inspection Using Thermographic Signal Reconstruction**

S.M. Shepard, D. Wang, J.R. Lhota, T. Ahmed, B.A. Rubadeux, Thermal Wave Imaging

Ultrasonics II

Chair: Doron Kishoni, Business Solutions USA, LLC
Co-Chair: Mark Pompe, West Penn Non-Destructive Testing, Inc.

Room: North Galleria

3:20 p.m. **Sputtering Target Ultrasonic Cleanliness Characterization by Sorting Flaws Using Waveform Phase Change Detection**

A. Leybovich, TOSOH SMD

3:40 **Manufacturing Process Control of Miniature Fasteners**

H. Reis and A. Sethi, University of Illinois at Urbana-Champaign

4:00 **Field Deployable Immersion Scanning (Without a Tank)**

T. MacInnis, D. Christie, W. Nichols, D. Judd, J. Mandeville, M. Concordia, R. Grills, E. Lindgren, B. Drennen, SAIC-Ultra Image International

4:20 **Evaluation of Ultrasonic Probes Using Improved Ultrasonic Blocks and Mechanical Scanner**

A. Abdel-Fattah, M. El-Gazery, National Institute of Standards and Technology; M. Kenawy, Ain Shams University (Egypt)

Wednesday March 20

4:40 **Ultrasonic Evaluation of Thermal Degradation in Co-Base Superalloy Used for Stationary Gas Turbine Blade**

C. Kim, U. Park, Seoul National University of Technology (Korea); J. Byeon, J. Song, Y. Kim, S. Kwun, Korea University (Korea); C. Jeon, K. Park, S. Kim, Korea Plant Service & Engineering (Korea)

Wednesday Morning Sessions March 20 • 8:20 a.m. -10:00 a.m.

Applications of Analog Microwave Measurements in High-Speed Mixed-Signal IC's and Related Materials: Applications and Future Trends

Chair: James Baker-Jarvis, National Institute of Standards and Technology (NIST)

Co-Chair: Massood Tabib-Azar, Case Western Reserve University

Room: South Galleria

8:20 a.m. **Future Trends in Microelectronic Materials and New Needs for Nondestructive Testing Methods**

J. Baker-Jarvis, P. Kabos, National Institute of Standards and Technology (NIST)

8:40 **Detection of Sub-surface Corrosion Using Evanescent Microwave Imaging**

J. Maguire, W. Fitzgerald, S. LeClair, Air Force Research Laboratory

9:00 **Near-Field Microwave Imaging of Compliant Substrate and Other Hetero-Structure Materials**

P. Zhang, M. Tabib-Azar, Case Western Reserve University; S. LeClair, Air Force Research Laboratory

9:20 **Real-Time Monitoring of the Microwave Properties of a Micro-Fluidic Channel Using Evanescent Microwave Probe Microscopy**

W. Tesfayesu, Wright Patterson Air Force Base; M. Tabib-Azar, Case Western Reserve University

9:40 **3D Imaging of Materials and Devices with Sub-Micron Spatial Resolution Using a Scanning Near-Field Microwave Microscope**

D. Mast, University of Cincinnati

Aerospace NDE

Chair: Lisa Brasche, Iowa State University

Co-Chair: Kevin Smith, Pratt & Whitney

Room: North Galleria

8:20 a.m. **Automation of NDE on Space Shuttle Solid Rocket Motor Metal Components**

J. Hartman, ATK Thiokol Propulsion;

M. Kirby, Westinghouse AMDATA

8:40 **Automated Signal Classification Development Environment for Nondestructive Evaluation**

J. Aldrin, Computational Tools; C. Kropas-Hughes, Air Force Research Laboratory; J. Mandeville, SAIC Ultra Image International

9:00 **Micro-Cracking Detection in Laminated Composites**

T. Chu, A. Leyte, A. DiGregorio, Southern Illinois University; S. Russell, J. Walker, NASA Marshall Space Flight Center

9:20 **Optimization of X-ray Inspections for Parts with Complex Geometry-Castings**

J. Gray, Center for NDE, Iowa State University

9:40 **Orientation Corrected UT Measurements**

J. Umbach, Pratt & Whitney

10:00-10:20 a.m. Refreshment Break

Wednesday Morning Sessions March 20 • 10:20 a.m.-Noon

Applications of Analog Microwave Measurements in High-Speed Mixed-Signal IC's and Related Materials: Microwave Atomic Force Microscopy

Chair: James Baker-Jarvis, National Institute of Standards and Technology (NIST)

Co-Chair: Massood Tabib-Azar, Case Western Reserve University

Room: South Galleria

10:20 a.m. **Microfabricated Silicon Microwave Near-Field Probes for Circuit-Probing**

B. Rosner, University of Wisconsin and University of Delaware; D. van der Weide, University of Wisconsin; P. Kabos, D. Williams, National Institute of Standards and Technology (NIST)

10:40 **Microwave Atomic Force Microscopy**

A. Scott, Y. Wang, M. Tabib-Azar, Case Western Reserve University

11:00 **Evanescent Microwave Probe Make Invisible World of Electromagnetic Properties Visible**

X. Xiang, Ariel Technologies



11:20 **AFM-Compatible Microwave Probes for Nondestructive Surface Measurement**

Y. Wang, M. Tabib-Azar, Case Western Reserve University

11:40 **Recent Progress in Microwave Microscopy and Its Applications**

Massood Tabib-Azar, Case Western Reserve University

Wednesday Afternoon Sessions March 20 • 1:20 p.m. - 3:00 p.m.

Applications of Analog Microwave Measurements in High-Speed Mixed-Signal IC's and Related Materials: Novel Techniques

Chair: James Baker-Jarvis, National Institute of Standards and Technology (NIST)

Co-Chair: Massood Tabib-Azar, Case Western Reserve University

Room: South Galleria

1:20 p.m. **Nanoscale Quantitative Measurements of Electromagnetic Fields with Magnetic Resonance Scanning Probes**

J. Moreland, National Institute of Standards and Technology (NIST)

1:40 **The Sensitivity Comparison between Charge Sensor and Evanescent Microwave Probe Sensor**

T. Zhang, M. Tabib-Azar, Case Western Reserve University

2:00 **Phase Detection in Evanescent Microwave Microscopy**

T. Zhang, M. Tabib-Azar, Case Western Reserve University

2:20 **Scanning Near-Field Millimeter-Wave Microscope Using a Resonant Waveguide Probe**

K. Lee, W. Park, M. Kim, J. Kim, Sogang University (Korea)

2:40 **Characterization of Plant Leaf Using Evanescent Microwave Probe**

M. Kosem, M. Tabib-Azar, Case Western Reserve University

1:20 p.m. **Panel Discussion: Building a Better Relationship: ASNT and Its Support of University NDE Programs**

Panel Discussion Members: G. Ramirez, University of Kansas; R. Zoughi, University of Missouri-Rolla; J. Gray, Iowa State University; R. Green, Johns Hopkins Univ.

Room: North Galleria

3:00-3:20 p.m. Refreshment Break

Wednesday Afternoon Sessions March 20 • 3:20 p.m.-5:00 p.m.

Ultrasonics III

Chair: Henrique Reis, University of Illinois at Urbana-Champaign

Co-Chair: David Hsu, Iowa State University

Room: South Galleria

3:20 p.m. **Precision Weld Inspections Using Ultrasonic Phased Arrays**

M. Moles, F. Jacques, R/D Tech (Canada)

3:40 **Monitoring the Growth of Corrosion in Piping Using the Magnetostrictive Sensor Technology**

G. Light, H. Kwun, S. Kim, R. Spinks, Southwest Research Institute

4:00 **Broken Rail Detection Using Distributed Array of Acoustic Sensors**

H. Reis and C. Barkin, University of Illinois at Urbana-Champaign

4:20 **An Ultrasonic Study of the Effect of Stress on the Detectability of Defects**

S. Baby, T. Balasubramanian, Regional Engineering College (India); R. Pardikar, Bharat Heavy Electricals (India)

Laser and Optical Methods

Chair: B. Boro Djordjevic, Johns Hopkins University

Room: North Galleria

3:20 p.m. **Point and Line Source Laser Generation of Ultrasound for Inspection of Internal and Surface Flaws in Rail and Structural Materials**

S. Kenderian, B. Djordjevic, R. Green, Johns Hopkins University

3:40 **Evaluation of High Temperature Acoustic Properties of Alumina, Silicon Nitride and Partially Stabilized Zirconia Ceramics by Using Laser Ultrasonics Technique**

K. Singh, Y. Matsuda, K. Hattori, H. Nakano, S. Nagai, National Metrology Institute of Japan (NMIJ), National Institute of Advanced Industrial Science and Technology (AIST) (Japan)

4:00 **Visual Characterization of Wear in Large Caliber Weapons**

D. Salafia, US Army Yuma Proving Ground

4:20 **Ultrasonic Detection by Laser Based on Photo-Induced EMF Sensor and by Wideband Air-Coupled Transducer**

D. Cerniglia, B. Djordjevic, F. Davidson, Y. Dikmelik, Johns Hopkins University

Thursday March 21

Thursday Morning Sessions March 21 • 8:20 a.m.-10:00 a.m.

Applications of Microwave and Millimeter Wave NDE I

Chair: Reza Zoughi, University of Missouri—Rolla
Co-Chair: Mark Goth, RLE Technologies
Room: South Galleria

- 8:20 a.m. **Design and Development of a Portable Microwave System for Detection of Surface Cracks in Metals**
M. Goth, D. Raymond, RLE Technologies
- 8:40 **Surface Crack Detection on Bridge #E-16-HI in Golden, Colorado Using an Open-Ended Rectangular Waveguide Device**
M. Goth, D. Raymond, RLE Technologies
- 9:00 **Microwave Higher-Order Mode Technique for Determining Crack Tip Location**
R. Zoughi, University of Missouri-Rolla; H. Welty, Colorado State University
- 9:20 **Fellowship Award Paper: Moment Method Modeling of Microwave Detection of Surface Cracks Using Open-Ended Coaxial Probes**
N. Wang, Colorado State University; R. Zoughi, University of Missouri-Rolla
- 9:40 **Microwave Evaluation of Accelerated Chloride Ingress in Mortar Subjected to Cyclical Loading**
R. Zoughi, S. Peer, T. Case, University of Missouri-Rolla; K. Kurtis, Georgia Institute of Technology

General NDE

Chair: Bill Chedister, Circle Systems
Room: North Galleria

- 8:20 a.m. **Automation of Wear Analysis for Large Caliber Weapons**
D. Salafia, N. DeLeon, J. Outlaw, US Army Yuma Proving Ground
- 8:40 **Non-Destructive Evaluation as a Condition Monitoring Tool or Vice Versa**
G. Green, T. Nowell, QinetiQ (U.K.)
B. Wallingford, Genuine Composites
- 9:00 **Relationship Between Microstructure and Magnetic Coercivity, Electrical Resistivity and Ultrasonic Attenuation in Thermally Aged 2.25CrMo Steel**
J. Byeon, S. Kwun, Korea University (Korea)

- 9:20 **F(P)SO's Hull Inspection (Possible Solutions)**
R. Carneval, F. Marques, Petróleo Brasileiro S.A.Petrobras (Brazil)

10:00-10:20 a.m. Refreshment Break

Thursday Morning Sessions March 21 • 10:20 a.m.-Noon

Applications of Microwave and Millimeter Wave NDE II

Chair: Reza Zoughi, University of Missouri—Rolla
Co-Chair: Mark Goth, RLE Technologies
Room: South Galleria

- 10:20 a.m. **Microwave and Millimeter Wave Inspection of Impact Damage in GFRP Composite and Pitted Corrosion in Steel**
R. Zoughi, D. Hughes, C. Behrens, University of Missouri-Rolla; G. Green, QinetiQ (U.K.); P. Campbell, Ministry of Defense (U.K.)
- 10:40 **Fellowship Award Paper: A Transmission Line Matrix Model for Microwave NDT**
R. Ciocan, N. Ida, The University of Akron
- 11:00 **Applications of Microwave Microscopy in High Technology Materials, Devices and Systems: An Overview of What Has Been Accomplished and New Trends**
M. Tabib-Azar, Case Western Reserve University

Emerging Technologies

Chair: Glenn Light, Southwest Research Institute
Co-Chair: Lloyd Schaefer, Siemens
Room: North Galleria

- 10:20 a.m. **On-Line Monitoring of PVC Melt Viscosity During Foam Extrusion Using Dielectric Measurement**
N. Abu-Zahra, University of Wisconsin-Milwaukee
- 10:40 **Acoustography: Radiography-Like Ultrasonic Testing**
J. Sandhu, H. Wang, Santec Systems;
P. Sincebaugh, US Army Research Laboratory
- 11:00 **Quantitative Remaining Life Assessments for System Components Subject to Fatigue or Embrittlement Using *In-Situ* Positron Annihilation Spectrometry (ISPAS)**
D. Akers, Positron Systems, A. Denison, Idaho National Engineering and Environmental Laboratory



IMPORTANT NUMBERS

ASNT Conference Message
Center - 503.721.2867
Hilton Portland – 503.226.1611
Guest Fax- 503.220.2565

Tips for First Timers

So this is your first time at an ASNT Spring Conference and Annual Research Symposium? To get the most out of your time we offer the following hints:

- **Making New Acquaintances**

Sessions contain refreshment breaks. Use this time to introduce yourself. You may be able to make contact with which you can have lunch to continue discussion. "Dutch treat" is normal procedure.

- **Networking Opportunities**

The Welcome Party and Tabletop Exhibits on Monday, March 18 is open to all attendees. Take advantage of this opportunity to network and meet this year's exhibitors.

What does my badge permit me to attend?

Full conference badges permit attendance to the Research Symposium Program, Welcome Party and Tabletop Exhibits. One-day badges permit attendance to the Research Symposium Program and Tabletop Exhibits only on the day specified.

Separate registration fees and tickets are required for the Post-Conference Seminar, Short Courses and Tours. Short Course tickets are good only for the Short Course designated on the ticket. You may attend open committee meetings of your choice. Show only passes are complimentary and a badge is required to enter the exhibit hall.

Committee Meetings

ASNT committee meetings are open to all conference attendees unless otherwise indicated. Improve your industry and NDE technology knowledge. Get involved with ASNT's Councils: Technical and Education, Research, Certification Management or Section Operations.

Spouse/Companion Registration and Hospitality Suite

Spouses/Companions can register for the tours offered at this year's conference and can visit the Spouse/Companion's Hospitality Suite, Monday-Thursday mornings, 8:30-10 a.m. The Suite is open only to registered spouses/companions and badge is required for admittance. Daily gift drawings will be held for those attending.

Tour Reservations and Departures

ASNT strongly suggests advance purchase of tour tickets. On-site purchase of tour tickets may not be available. Plan to arrive approximately ten minutes prior to the published tour time to board the tour busses.

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ASNT

Two Events You Should Attend:

Structural Materials Technology (SMT): NDE/NDT for Highways and Bridges Topical Conference

September 10-13, 2002 • The Westin Cincinnati
Cincinnati, OH, US



July 29-31, 2002
Foxwoods Resort
Mashantucket, Connecticut

For more information on both events,
contact ASNT at: 800.222.2768 (USA/Canada only)
614.274.6003 • www.asnt.org

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All meetings are listed by Council. Meetings preceded by an asterisk (*) are by invitation only. Please contact the chair if you wish to attend. All other meetings and events are open. Some events require fees; refer to registration form. ASNT reserves the right to alter this schedule without notice. Recording of speakers is not permitted. Please reference the schedule and if you have any questions, contact ASNT.

Time	Event	Location	Time	Event	Location
Saturday, March 16			1:00-3:30 p.m.	Strategic Planning	Broadway III, IV
9 a.m.-5 p.m.	Constitutions and Bylaws	Forum Suite	1:00-5:00 p.m.	Short Course: Basic Stress	
Sunday, March 17			1:30-2:45 p.m.	Wave NDT for Concrete	Pavilion East
<i>Other Committee Meetings and Events</i>			3:00-5:00 p.m.	*NDTMA Membership Committee	Galleria I
8:00 a.m.-Noon	*Executive Committee	Broadway III, IV	5:00-8:00 p.m.	*NDTMA Board Meeting	Galleria I
9:30 a.m.-5:00 p.m.	Standards Development	Studio Suite	Portland Welcome Party and Tabletop Exhibits		
1:00-5:00 p.m.	Board of Directors	Broadway III, IV	(open to all registered attendees)		
3:00-5:00 p.m.	Registration Open	Plaza Foyer West	Grand Ballroom		
Monday, March 18			Tuesday, March 19		
<i>Technical and Education Council Committee Meetings</i>			<i>Technical and Education Council Committee Meetings</i>		
8:00-10:00 a.m.	Administrative Meeting (Committee and Division Chairs)	Parlor C	10:00-11:00 a.m.	Educational Publications Committee	Parlor C
11:00 a.m.-1:00 p.m.	*SNT-TC-1A Review Committee	Parlor C	10:00 a.m.-Noon	Leak Testing	Parlor B
11:00 a.m.-1:00 p.m.	*SNT-TC-1A Review Committee	Parlor C	11:00 a.m.-Noon	Technician Advisory Committee	Forum Suite
Noon-2:00 p.m.	Education Division Career Advancement High School Programs Technical Programs	Council Suite	11:00 a.m.-1:30 p.m.	Chemical & Petroleum	Parlor C
4:00-6:00 p.m.	MT/PT	Council Suite	Noon-1:00 p.m.	Penetrating Radiation	Parlor B
<i>Section Operations Council Committee Meetings</i>			Noon-1:30 p.m.	Materials Evaluation Committee	Parlor A
8:00-9:00 a.m.	Awards Division	Forum Suite	Noon-1:30 p.m.	Ultrasonics	Broadway I
9:00-10:00 a.m.	Membership Division	Forum Suite	1:00-2:00 p.m.	Emerging Technologies	Parlor B
10:15 a.m.-Noon	Regional Directors Division	Forum Suite	1:30-3:00 p.m.	Acoustic Emission	Parlor C
11:00 a.m.-1:00 p.m.	*SNT-TC-1A Review Committee	Parlor C	2:00-3:00 p.m.	Visual	Parlor B
1:00-2:30 p.m.	Section Management Division and Student Interests Committee	Forum Suite	1:30-2:30 p.m.	Handbook Development	Parlor A
<i>Certification Management Council Committee Meetings</i>			3:00-4:00 p.m.	Electromagnetic Committee Meeting	Parlor C
8:00 a.m.-5:00 p.m.	CMC Level III Method Committee	Broadway I	3:00-4:30 p.m.	Metals	Parlor B
9:00 a.m.-Noon	*Proctor Training	Broadway II	3:30-4:30 p.m.	*Joint Council	Parlor A
11:00 a.m.-1:00 p.m.	*SNT-TC-1A Review Committee	Parlor C	4:30-5:30 p.m.	Aerospace	Parlor A
1:30-4:00 p.m.	*CMC Programs	Broadway II	4:30-6:00 p.m.	Utilities	Parlor C
<i>Research Council Committee Meetings</i>			<i>Section Operations Council Committee Meetings</i>		
11:00 a.m.-1:00 p.m.	*SNT-TC-1A Review Committee	Parlor C	9:45-10:45 a.m.	*Technician of the Year Selection	Studio Suite
1:00-3:00 p.m.	*Executive Committee	Parlor A	11:00 a.m.-Noon	*Mentoring Award Selection	Studio Suite
<i>Other Committee Meetings and Events</i>			1:30-3:00 p.m.	2002 Section Leaders Conference Planning	Studio Suite
8:00 a.m.-5:00 p.m.	Standards Development	Galleria III	3:30-4:30 p.m.	*Joint Council	Parlor A
8:00 a.m.-5:00 p.m.	SAE Committee K	Parlor B	<i>Research Council Committee Meetings</i>		
8:00 a.m.-8:00 p.m.	Registration Open	Plaza Foyer West	3:00-4:00 p.m.	Technology Transfer and Liaison	Broadway I
8:30 a.m.-10:00 a.m.	Spouse/Companion Hospitality Suite	Plaza Foyer East	3:30-4:30 p.m.	*Joint Council	Parlor A
8:30 a.m.-12:30 p.m.	Short Course: Fundamentals of Wave Propagation	Pavilion East	4:00-5:00 p.m.	Infrastructure	Broadway I
8:30 a.m.-12:45 p.m.	Industry Tour: Cascade General Shipyard	Departs from Salmon Street	5:00-5:30 p.m.	*Executive Committee and Awards	Broadway I
9:00 a.m.-3:00 p.m.	*Selection Committee	Galleria II	6:30-8:30 p.m.	Research Council Dinner Meeting (open meeting, sign-up form located in Registration area)	Pavilion West
			<i>Certification Management Council Committee Meetings</i>		
			9:30 a.m.-5:00 p.m.	*CMC Level II Division Methods	Council Suite
			1:00-3:30 p.m.	*CMC Industry Sectors	Forum Suite
			2:00-3:30 p.m.	IRRSP Subcommittee	Broadway II
			3:30-4:30 p.m.	*Joint Council	Parlor A

Other Committee Meetings and Events

7:30-8:00 a.m.	*Speakers Briefing	Broadway II
8:00 a.m.-6:00 p.m.	Registration Open	Plaza Foyer West
8:30-9:30 a.m.	Keynote Address: Service Robots Rising	South Galleria
8:30-10:00 a.m.	Spouse/Companion Hospitality Suite	Plaza Foyer East
9:30 a.m.-1:00 p.m.	Tabletop Exhibits Open	Grand Ballroom
9:30 a.m.-2:30 p.m.	Tour: Portland City Tour	Departs from Salmon Street
10:00 a.m.-Noon	*Gold Medal Award	Broadway I
Noon-1:00 p.m.	*Past Presidents Luncheon	Broadway II
Noon-4:00 p.m.	*NDE of Reliability	Broadway III, IV
1:00-2:00 p.m.	*Past Presidents Meeting	Broadway II
1:00-5:00 p.m.	Short Course: Basic Eddy Current Theory	Pavilion East
2:00-3:00 p.m.	*Fellow Awards Subcommittee	Broadway I
3:00-6:00 p.m.	Tabletop Exhibits Open	Grand Ballroom

Wednesday, March 20

Technical and Education Council Committee Meetings

8:00-10:30 a.m.	*SNT-TC-1A 2004 Workshop	Broadway I
10:00 a.m.-Noon	Laser Methods	Parlor B
10:30 a.m.-12:30 p.m.	*SNT-TC-1A Interpretation Panel	Broadway I
Noon-1:30 p.m.	Professional Program	Parlor B
1:30-3:30 p.m.	Methods Division	Parlor A
2:30-5:00 p.m.	Full Council	Broadway I

Section Operations Council Committee Meetings

8:00-9:30 a.m.	*Executive Committee	Forum Suite
1:30-3:00 p.m.	Full Council	Pavilion West

Certification Management Council Committee Meetings

8:30-10:30 a.m.	*CMC Examination Division (Level II Methods)	Council Suite
10:30 a.m.-1:00 p.m.	*CMC Examination Division (Level III Methods)	Council Suite
11:00 a.m.-1:00 p.m.	*CMC Programs	Forum Suite
1:00-2:00 p.m.	*Open CMC Meeting	Council Suite
2:00-5:00 p.m.	*Closed CMC Administrative Body	Council Suite

Research Council Committee Meetings

11:00 a.m.-Noon	Programs	Parlor C
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Other Committee Meetings and Events

7:00-8:00 a.m.	Interdenominational Prayer Breakfast (open to all attendees)	Parlor B
7:30-8:00 a.m.	*Speakers Briefing	Broadway II
8:00 a.m.-5:00 p.m.	Registration Open	Plaza Foyer West
8:30-9:30 a.m.	Exhibitors Committee	Parlor C
8:30-10:00 a.m.	Spouse/Companion Hospitality Suite	Plaza Foyer East
9:00-11:30 a.m.	Business & Finance	Broadway III, IV
9:30 a.m.-1:00 p.m.	Tabletop Exhibits Open	Grand Ballroom
9:30 a.m.-2:30 p.m.	Tour: Columbia Gorge	Departs from Salmon Street
10:30 a.m. - Noon	The Future of NDT	Broadway II

1:00-5:00 p.m.	Short Course: Alternating Current Field Measurement	Pavilion East
1:00-5:00 p.m.	Constitution and Bylaws	Broadway III, IV

Thursday, March 21

Other Committee Meetings and Events

7:30-8:00 a.m.	*Speakers Briefing	Broadway II
8:00 a.m.-Noon	Registration Open	Plaza Foyer West
8:00 a.m.-9:00 a.m.	ISO Review	Parlor C
8:30-10:00 a.m.	Spouse/Companion Hospitality Suite	Plaza Foyer East
8:30 a.m.-12:30 p.m.	Short Course: NDE of Composites	Parlor A/B
9:00 a.m.-5:00 p.m.	*Executive Committee	Broadway III, IV

Friday, March 22

Other Committee Meetings and Events

7:30-8:00 a.m.	Post-Conference Seminar Registration	Galleria North
7:30-8:00 a.m.	*Post-Conference Seminar Speakers Briefing	Galleria South
8:00 a.m.-5:00 p.m.	Board of Directors	Broadway III, IV
8:15 a.m.-4:30 p.m.	Post-Conference Seminar: Implementing the 2001 Edition of SNT-TC-1A	Galleria North
Noon-1:00 p.m.	*Post-Conference Seminar Luncheon	Galleria South

ASNT reserves the right to alter this schedule without notice.

Welcome Party and Tabletop Exhibits

Location: Grand Ballroom, Hilton Portland

Please plan on attending the Welcome Party and Show Opening from 5-8 p.m. on Monday, March 18. The reception, complimentary to all registered attendees, provides an excellent opportunity to network with peers and visit tabletop exhibits to learn about the latest products and technologies from some of the industry's top manufacturers, suppliers and service companies.

Bring Your Questions to the Experts!

ADMISSION IS FREE!

Location: Grand Ballroom

Learn about the latest products and technologies from some of the NDT industry's top manufacturers, suppliers and service companies. No children under 16 permitted. Badge required to enter Welcome party and Exhibits.

Agfa NDT Inc.

Krautkramer
Ultrasonic Systems

Pantak Seifert
X-Ray Systems

RadVIEW
Digital Systems

STRUCTRIX
Film Systems
50 Industrial Park Road
Lewistown, PA 17044
(P)717.242.0327
(F)717.242.2606
www.agfandt.com

American NDT Products

3080 South 300 West
Salt Lake City, UT 84115
(P) 801.673.3722
(F) 801.466.8779
www.americanndt.com

Bales Scientific

2 Centerpointe Dr. Ste. 450
Lake Oswego, OR 97035
(P)503.594.1222
(F)503.594.1215
www.cti-net.com

CREO

8 Oak Park Drive
Bedford, MA 01730
(P) 781.275.5150
(F) 781.275.3430
www.creo.com

Dakota Ultrasonics

1650 B. Mansfield St.
Santa Cruz, CA 95062
831.465.8585
831.465.8558
www.dakotaultrasonics.com

Ely Chemical Company Limited / Q.C. Technologies

Lisle Lane, Ely
Ely Cambridgeshire, England CB7
4AS
(P)1353665881
(F)353664623
www.elychemical.co.uk

Envision Product Design, LLC

520 W. 58th Avenue
Anchorage, AK 99518
(P) 907.563.1141
(F) 907.563.1142
www.cmosxray.com

FlawTech, Inc.

5040-B Hwy 49
Harrisburg, NC 28075
(P)704.455.1322
(F)704.455.1323
www.flawtech.com

Fuji NDT Systems

1055 Stevenson Ct.
Roselle, IL 60172
(P)800.323.2546
(F)630.582.2292
www.fujindt.com

Industrial Nuclear Co.

14320 Wicks Blvd.
San Leandro, CA 94577
(P)510.352.6767
(F)510.352.6772
www.ir100.com

Inspection Port Systems

39421 Hwy. 929/PO Box 372
Prairieville, LA 70769
(P)225.622.6183
(F)225.622.6787
www.inspectionportsystems.com

Karta Technologies, Inc.

5555 Northwest Parkway
San Antonio, TX 78249
(P) 210.582.3351
(F) 210.582.3002
www.karta.com

Matec Instrument Companies, Inc.

56 Hudson Street
Northborough, MA 01532
(P)508.393.0155
(F)508.393.5476
www.matec.com

NDE Professionals

7505 NE Ambassador Pl., Suite N
Portland, OR 97220
(P) 503.287.5255
(F) 503.287.5992

NDT Engineering Corp.

19620 Russell Rd.
Kent, WA 98032
(P) 253.872.3565
(F) 253.872.0857

NDT Systems, Inc.

17811 Georgetown Lane
Huntington Beach, CA 92647
(P) 714.893.2438
(F) 714.897.3840
www.ndtsystems.com

Niton Corporation

900 Middlesex Turnpike
Billerica, MA 01821
(P) 978.670.7460
(F) 978.670.7430
www.niton.com

North Star Imaging

953 Westgate Dr., #109
St. Paul, MN 55114
(P) 800.635.8392
(F) 651.645.7568
www.4ndtnsi.com

Olympus Industrial America, Inc.

414 Airport Executive Park
Nanuet, NY 10954
(P)845.425.3100
(F)845.425.2192
www.olympusindustrial.com

Panametrics, Inc.

221 Crescent Street
Waltham, MA 02453
(P)781.899.2719
(F)781.899.1552
www.panametrics.com

Physical Acoustics Corporation

195 Clarksville Road
Princeton Junction, NJ 08550
(P)609.716.4000
(F)609.716.0706
www.pacndt.com

Quality Network, Inc.

350 Sparta Ave., #B3
Sparta, NJ 07871
(P)973.726.8399
(F)973.726.8499
www.qnetworld.com

R/D Tech

1005 St. Jean-Baptiste
Quebec, Canada G2E 5L7
(P)418.872.1155
(F)418.877.0141
www.rd-tech.com

Sentinel/AEA Technology QSA, Inc.

40 North Avenue
Burlington, MA 01803
(P)781.505.8271
(F)781.564.2771
www.880delta.com

Sherwin Incorporated

5530 Borwick Ave.
South Gate, CA 90280
(P)562.861.6324
(F)562.923.8370
www.sherwininc.com

Sigma Transducers, Inc.

8919 W. Grandridge
Kennewick, WA 99336
(P)509.783.9497
(F)509.783.9497
www.sigmatx.com

Source Production & Equipment Co., Inc.
113 teal Street
St. Rose, LA 70087
(P)504.464.9471
(F)504.467.7685
www.spec150.com

Staveley NDT Technologies
421 N. Quay
Kennewick, WA 99336
(P)509.735.2751
(F)509.735.4672
www.staveleyndt.com

STRESSTEL
2790 W. College Avenue
State College, PA 16801
(P)814.861.6300
(F)814.861.6330
www.stresstel.com

T.E.S.T. NDT
193 Viking Avenue
Brea, CA 92821
(P)714.255.1500
(F)714.255.1580
www.testndt.com

Thermal Wave Imaging, Inc.
845 Livernois St.
Ferndale, MI 48220
(P)248.414.3730
(F)248.414.3764
www.thermalwave.com

Uniwest
330 W. Clark Street
Pasco, WA 99301
(P)509.544.0720
(F)509.544.0868
www.uniwest.com

Utex Scientific Instruments, Inc.
2319 Dunwin Drive, Unit 8
Mississauga, ON L5L 1A3
(P)905.828.1313
(F)905.828.0360
www.utex.com

Valpey Fisher Corporation
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Hopkinton, MA 01748
(P)508.435.6831
(F)508.544.7031
www.valpeyfisher.com

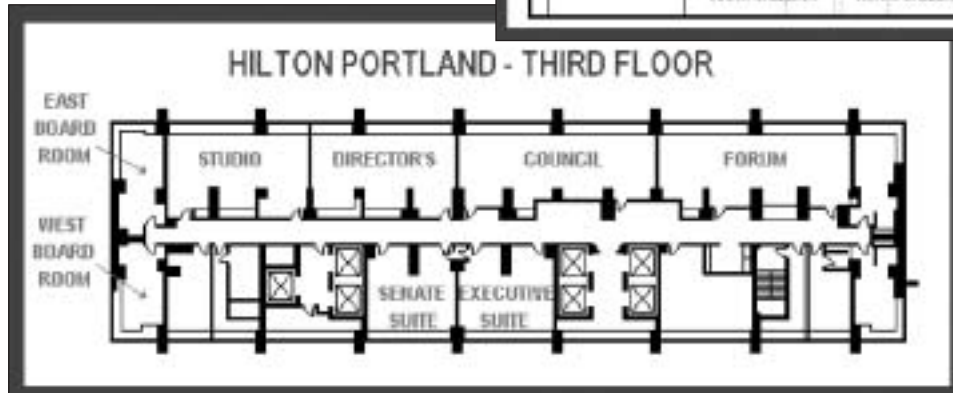
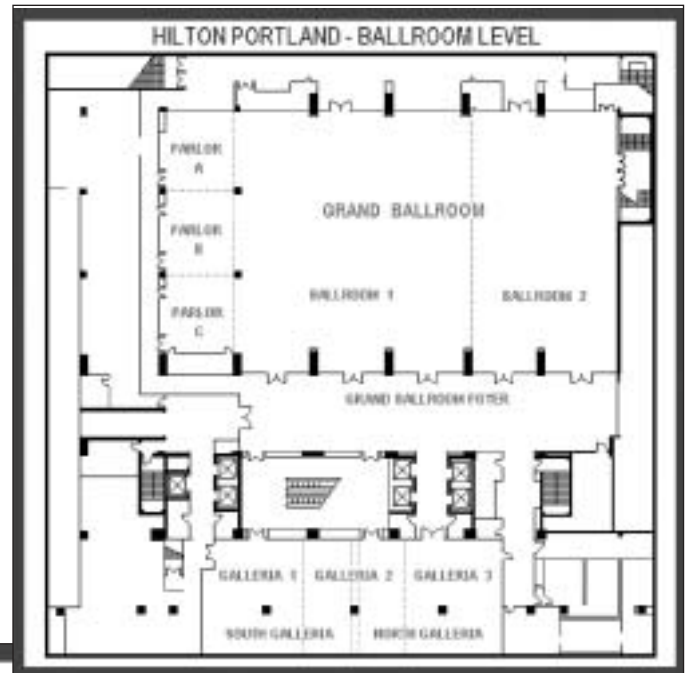
Varian Medical Systems
3100 Hansen Way
Palo Alto, CA 94304
(P)650.424.6034
(F)650.493.5637
www.varian.com

Virtual Media Integration
115 East Garden
Pensacola, FL 32501
(P)850.432.0355
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www.vminde.com

Xactex Corp.
3704 N. Stearman Avenue
Pasco, WA 99301
(P)509.545.6364
(F)509.545.6597
www.xactex.com

Yxlon International Inc.
3400 Gilchrist Road
Mogadore, OH 44260
(P)330.798.4834
(F)330.784.9854
www.yxlon.com

Zetec, Inc.
1370 NW Mall Street
Issaquah, WA 98027
(P)425.392.5316
(F)425.392.2086
www.zetec.com



Short Course Coordinator: Tim McCay, Westar Corporation, Huntsville, Alabama

Course A
Fundamentals of Wave Propagation

Monday, March 18
8:30 a.m.-12:30 p.m.
Instructor: Edmund G. Henneke, II, Virginia Polytechnic Institute
Room: Pavilion East

Objectives: This course highlights the mathematical and physical foundations of wave propagation in solid materials. The approach is to begin with a discussion of wave motion in an infinite, unbounded isotropic medium to describe the mathematical prediction of longitudinal and transverse waves. This is followed by consideration of the effect

of the appearance of one boundary, a semi-infinite plane surface that reflection of plane waves and the propagation of surface waves. Then, additional boundaries are allowed to appear, leading to Love waves, and guided waves in plates and bars. Finally, a discussion is presented for the effects of anisotropy on the wave propagation phenomena.

Who Should Attend? Anyone interested in learning the mathematical foundations of the mechanics of wave propagation in isotropic and anisotropic materials. This knowledge is fundamental to engineers, scientists, and technicians who find it necessary to understand and apply ultrasonic nondestructive evaluation techniques.

Course B
Basic Stress Wave NDT for Concrete

Monday, March 18
1:00-5:00 p.m.
Instructor: Clint Woodward, New Mexico State University
Room: Pavilion East

Objectives: This course presents the fundamentals of concrete NDT using stress waves (sonic and ultrasonic). A brief introduction to concrete and concrete deterioration will be given. This will be followed by a discussion of stress wave propagation and stress wave generation in concrete. With this

background, the following NDT methods will be discussed: pulse velocity, impact-echo and briefly the SASW (Rayleigh wave). The discussion will include equipment, methods, sensitivity to different types of deterioration, results and factors affecting results.

Who Should Attend? This course is intended for those unfamiliar with the stress wave nondestructive testing of concrete. The course will be of value to bridge inspectors, concrete inspectors and anyone interested in learning the basics of concrete testing using stress wave methods.

Course C
Basic Eddy Current Theory

Tuesday, March 19
1:00-5:00 p.m.
Instructor: Dane Harvey
Room: Pavilion East

Objectives: To instruct any ET Level II's and III's on the basics of electromagnetic testing. An enhanced understanding of the physical basis of electromagnetic testing, an increase in the ability to read, comprehend and

interpret literature, such as operating procedures and manuals, dealing with electromagnetic testing. Course material will include a book.

Who Should Attend? Level II and III technicians, NDT engineers, and NDT managers who need or desire to know the fundamental principles underlying electromagnetic testing.

Course D
Alternating Current Field Measurement (ACFM)

Wednesday, March 20
1:00-5:00 p.m.
Instructor: Alan Raine, TSC Inspection Systems
Room: Pavilion East

Objectives: To provide an introduction to the Alternating Current Field Measurement technique, describe how it works and describe the difference between it and the eddy current technique. The course will describe the various probes and instruments, which can be used and the wide range of applications will also be described. Both manual and automated applications will be described and their use in the offshore industry, petrochemical industry and outer space. Information

will be given on basic data interpretation, describing the different types of defects that have been detected, the effect of geometry and the sizing procedures. The results of evaluation trials will be presented together with information about the approval of the technique by the certifying authorities. Information will be given on cost savings achieved by inspection company clients and the methodology used to achieve these savings. Information will be given on the international certification schemes,

which produce certification for ACFM operatives and hopefully up to date information will be available on the proposed ASNT scheme.

Who should attend? Inspection and technical managers, supervisors, NDE/NDT specialists, NDT engineers and scientists, quality control engineers, safety case authors and engineers, inspection buyers and anyone interested in learning more about the technique, its cost benefit and its applications.

Course E
NDE of Composites

Thursday, March 21
8:30 a.m.-12:30 p.m.
Instructor: B. Boro Djordjevic, Johns Hopkins University
Room: Parlor A/B

Objectives: To provide a global overview of NDE technology specific for composite materials and structures. This course will discuss standard and emerging NDE methods applicable to final and in process testing and evaluation of composites. The information will include practical and industrial NDE/NDT practices. The NDE methods covered include all aspects of ultrasonic testing, enhanced radiography methods,

acoustic emission testing, optical methods, thermal applications, *in-situ* sensor technologies and several advanced concepts. Furthermore, in process control NDE and emerging technology developments will be discussed. The format of the presentation is intended to be informative for a broad audience with examples, summary tables, performance limits, and comparative information between test methods.

The emphasis of the presentation will be on information and applications with minimum time on analytical and modeling issues.

Who should attend? NDE/NDT specialists, NDE engineers and scientists, material scientists, quality control engineers and more.

Implementing the 2001 Edition of SNT-TC-1A

Friday, March 22 • 8:30 a.m. - 4:30 p.m.
Location: Galleria North, Hilton Portland

One-day seminar following the Spring Conference - 2002. CEU's will be awarded to participants completing the seminar. Separate registration fee required for this one-day seminar. Lunch and refreshment breaks are included. Sponsored by ASNT's Technical and Educational Council

Chair: Roland Valdes, Cooperheat - MQS

Objective: To introduce participants to the changes incorporated in the 2001 Edition, as well as acting as a refresher for SNT-TC-1A requirements for NDT personnel qualification and certification.

Who Should Attend: NDT Level III's responsible for training, qualifying, and certifying NDT personnel. NDT Managers and other personnel responsible for implementation of NDT personnel qualification and certification programs.

Program Schedule:

7:30 - 8:00 a.m. - Registration

8:15 a.m. - Introduction - R. Valdes, SNT-TC-1A Committee Chair; J. Brignac, Professional Program Committee Chair, Alstom Power

8:30 - 9:30 a.m. - Overview of 2001 Edition, including changes from 1996 Edition: C. Davis, Unified Testing Services, Inc.

9:30 - 10:30 a.m. - Qualification Requirements: C. Davis, Unified Testing Services, Inc.

10:30 - 11:00 a.m. - Refreshment Break

11:00 a.m. - Noon - Certification Requirements: B. Kienlen, Entergy

Noon - 1:00 p.m. - Lunch (included in registration fee)

1:00 - 2:00 p.m. - Recertification Requirements: T. Schafer, Mantech Systems Engineering

2:00 - 2:30 p.m. - Documentation Requirements: T. Schafer, Mantech Systems Engineering

2:30 - 3:00 p.m. - Future Changes for 2004 Edition: R. Valdes, Copperheat MQS

3:00 - 3:30 p.m. - Refreshment Break

3:30 - 4:30 p.m. - Panel Discussion

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NASA / MSFC
Gary Workman
University of Alabama -
Huntsville
Reza Zoughi
University of Missouri -
Rolla

Portland Hotspots

Things To Do While in Portland – The City of Roses

Restaurants & Brewpubs

Rock Bottom Restaurant & Brewery
206 SW Morrison St., 503.796.2739

Jake's Famous Crawfish
401 SW 12th Ave., 503.226.1419

Ringside Downtown- Steak/Seafood
2165 W. Burnside St., 503.223.1513

Heathman Restaurant (Northwest/French)
1001 SW Broadway, 503.790.7102

Bush Garden (Japanese)
900 SW Morrison, 503.226.7181

South Park Seafood Grill
901 SW Salmon, 503.326.1300

Pazzo Ristorante
627 SW Washington, 503.228.1515

Nightlife

McMenamins Crystals Ballroom – "The Place to Dance"
Check this place out - it has a Floating Dance Floor!

Shopping

Pioneer Place & Sundance Cinemas
Pioneer Place is the premier shopping destination in downtown Portland, offering a unique selection including Saks Fifth Avenue and over 95 shops and eateries. The March 2000 expansion unveils a soaring glass-topped rotunda and the nation's first Sundance Cinemas. Contact 503.228.5800 for more information.

BOARD OF DIRECTORS

The Board of Directors is composed of: the chair of the ASNT Board of Directors; at least 10 elected Directors, four of whom are elected by the councils;* elected national officers (Board chair, president, vice president, secretary/treasurer);* and the ASNT executive director (ex officio).

Executive Committee

The Executive Committee is composed of: four national officers; the chairs of the Certification Management Council, Research Council, Section Operations Council and Technical and Education Council; and the executive director.

Standing Committees of the Board of Directors and Executive Committee†

- Awards Committee
- Business and Finance Committee
- Constitution and Bylaws Committee
- Exhibitors Committee‡
- Joint Council Committee‡
- Oversight Committee
- Past Presidents Committee‡
- Publications Review Committee‡
- Selection Committee
- Standards Development Committee
- Strategic Planning Committee

Ad Hoc Committees and Task Groups‡

- ASNT/NDTMA Coordinating Committee
- Committee on Aerospace Relations
- Committee on Amenities Policy
- Committee on Awards
- Committee on Training Initiatives
- Committee on Travel

COUNCILS

Members and nonmembers are invited to become active in a council and may do so by contacting the appropriate council chair. More information about the councils, their divisions and committees appears in this issue in the ASNT Constitution and Bylaws and the council yearbooks. Council, division and committee meetings are usually held during ASNT's Spring and Fall Conferences.

Certification Management Council

(elected chair and vice chair)

Certification Management Council Divisions

- Industry Sector
- Level II Examination
- Level III Examination
- Program Maintenance

Research Council

(elected chair, vice chair and secretary)

Research Council Committees

- Awards
- Membership
- Program
- Publications
- Research Liaison

- RNDE®
- Special Meetings
- Technology Transfer
- University Programs

Section Operations Council

(elected chair and vice chair/secretary)

Section Operations Council Divisions

- Awards
- Membership
- Regional Directors
- Section Management

Technical and Education Council

(elected chair and vice chair/secretary)

Technical and Education Council Divisions

- Committee on Acoustic Emission from Reinforced Plastics (CARP)
- Education
- Industry Interest

- Methods
- Publications

Technical and Education Council Standing Committees

- Future of NDT
- NDT/NDE Reliability
- Professional Program
- SNT-TC-1A Interpretation Panel
- Training and Accreditation

* ASNT directors and national officers are elected at the Annual Business Meeting held at the ASNT Fall Conference. More information about national elections can be found in the ASNT Constitution and Bylaws printed in this issue.

† Persons from outside the Board of Directors are tapped to serve on several of these committees. The chair of each committee is usually a Board member.

‡ Reports directly to the Executive Committee.

Who to Call at ASNT

ASNT headquarters is open from 8:30 a.m. to 5 p.m. ET, Monday through Friday to answer your inquiries. Voice mail messages can be left 24 hours a day by following the recorded prompts. In the US and Canada, call toll-free (800) 222-2768 or (614) 274-6003; fax (614) 274-6899. If you prefer, write ASNT, 1711 Arlingate Lane, PO Box 28518, Columbus, OH 43228-0518. The address of ASNT's Web site is <www.asnt.org>.

Area	Inquiry	Ask for (Extension)
Accounting	To determine payment process To check on dues payment To check account balance Purchasing	Angie Guzzo (228) Carolyn Reed (229) Kate Bowen (221) Phyllis Wiseman (200)
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