CNDE PERSONNEL – SPECIALTY AREA

NAME	POSITION	HIGHEST DEGREE	UNIVERSITY/DISCIPLINE	SPECIALTY AREA
Amin, Viren	Associate Scientist, CNDE & Adjunct Assistant Professor, E CpE	Ph.D.	Iowa State University – Biomedical Engineering	Biomedical and medical imaging, ultrasound, signal and image processing, visualization, agricultural and animal applications of NDE technology, system and software development
Barnard, Dan	Assistant Scientist, CNDE	M.S.	Iowa State University - Metallurgy	Applications of ultrasonics for materials characterization, NDE of composites, equipment design and prototyping, automation, software
Bowler, John	Group Leader-Electromagnetics, CNDE & Professor, E CpE	Ph.D.	University of Surrey – Physics	Electromagnetic methods of NDE and properties of composite materials. Eddy current field theory, for quantifying interaction with cracks and corrosion. Benchmark problems to validate predictions. Transient eddy current and pulse signal analysis. Inverse problems in electromagnetism. Magnet and probe design
Bowler, Nicola	Associate Scientist, CNDE & Adjunct Associate Professor, E CpE	Ph.D.	University of Surrey – Physics	Electromagnetic properties of composite materials (engineering new properties by theroretical analysis and design), electromagnetic non-destructive evaluation of dielectrics and metals (inventing new NDE techniques and improving accuracy in four-point potential drop, eddy current, microwave and capacitive NDE. http://www.public.iastate.edu/~nbowler/homepage.html
Brasche, Lisa	Associate Director, CNDE & Program Manager, CASR, ETC, and QIT	M.S.	Iowa State University – Materials Science	Fluorescent penetrant inspection, aviation applications of NDE, NDE technology implementation, and aerospace inspection standards
Chimenti, Dale	Group Leader-Guided Wave Ultrasonics, CNDE & Professor, Aero	Ph.D.	Cornell University – Physics	Elastic waves in complex media, interaction of bounded acoustic beams with plates, guided waves, materials characterization, air-coupled ultrasonics, transducer design
Chiou, Chien-Ping	Associate Scientist, CNDE	Ph.D.	Iowa State University – Engineering Mechanics	Advanced computer simulation and modeling, signal and imaging processing, pattern recognition and artificial intelligence in UT and terahertz ray applications

Dogandzic, Aleksandar	Group Leader-Signal Processing, CNDE & Assistant Professor, E CpE	Ph.D.	University of Illinois (Chicago) – Electrical Engineering and Computer Science	Statistical signal processing and sensor array processing with applications to sensor networks, NDE, and communications.
Eisenmann, David	Assistant Scientist, CNDE	M.S.	Iowa State University – Material Science	Material characterization, fracture and fatigue, Education Coordinator for CASR, fluorescent penetrant inspection
Garton, Mike	Associate Scientist, CNDE	M.S.	Iowa State University – Engineering Mechanics	Ultrasonic Simulations, Ultrasonic Ray Tracing, Ultrasonic inspections in complex geometry. Phased Array design and applications. UTSim project lead
Gray, Joe	Group Leader-Radiography, CNDE & Adjunct Associate Professor, ME	Ph.D.	University of Michigan – Physics	The emphasis of his work in this area is in the development of new X-ray inspection techniques, computer modeling of X-ray inspectability, XRSIM and CTSIM. The first of these areas involves the development of microCT systems, energy sensitive measurements, real time inspections methods, new X-ray detectors, and image processing techniques. Recent work has focused on developing high energy x-ray diffraction and refraction methods. The x-ray modeling work involves the development of a first principles computer simulation code for predicting the probability of detecting flaws in components. This software is coupled to a computer-aided-design environment allowing an assessment of the inspectability of the design. Recent activity also includes developing NDE course material especially at the undergraduate engineering levels.
Gray, Tim	Scientist II, CNDE & Adjunct Associate Professor, Aero	Ph.D.	Iowa State University – Engineering Mechanics	Ultrasonics, UT modeling and simulation, NDE of welds, UT phased arrays, probability of detection.
Holland, Stephen	Group Leader-Thermal Methods & Assistant Professor, Aero	Ph.D.	Cornell University – Theoretical and Applied Mechanics	Thermal NDE, vibrothermography/sonic infrared inspection, guided wave ultrasonics, air coupled ultrasonics, nonlinear acoustics
Hsu, David	Group Leader-Composites, CNDE & Adjunct Professor, Aero	Ph.D.	Wayne State University – Physics	Ultrasonic NDE, composites, development of instrument that can be used in the field, solution of industrial problems

Jensen, Terry	Scientist I, CNDE	Ph.D.	University of Rochester – Physics	X-ray inspection techniques- film and digital radiography, CT, energy-sensitive material characterization, stereography, refraction, image processing, x-ray modeling
Larson, Brian	Associate Scientist, CNDE & Program Manager, Iowa Company Assistance	B.S.	Iowa State University – Metallurgical Engineering	General Application of NDE Methods and Technique Development (EC, UT, RT, MT, PT and VT); Educational Material Development
Lo, Chester	Associate Scientist, CNDE	Ph.D.	Oxford University – Materials Science	Magnetic NDE techniques including magnetic hysteresis, Barkhausen effect and magnetoacoustic emssion; Relationship between structure, magnetic and mechanical properties of materials; Magnetic field and magnetoelastic sensors for NDE applications; Material characterization using electron microscopy and scanning probe microscopy.
Lopez, Rick	Assistant Scientist II, CNDE	B.S.	Iowa State University – Metallurgical Engineering	Application of NDE methods to solve manufacturing needs. Liquid penetrant, magnetic particle, visual, radiographic, and ultrasonic inspection methods; along with mechanical testing, electro-discharge machining, optical microscopy, and ultraviolet photography.
Margetan, Frank	Associate Scientist, CNDE	Ph.D.	Iowa State University – Physics	Ultrasonic experiments. Ultrasonic attenuation and backscattered grain noise in metals. Characterizing the focal properties of ultrasonic transducers.
Meeker, Bill	Group Leader-Statistics/POD, CNDE & Professor, Statistics	Ph.D.	Union College – Administrative and Engineering Systems	Engineering statistics, product reliability, analysis of censored data, analysis of recurrence data, statistical computing
Nakagawa, Norio	Scientist I, CNDE	Ph.D.	University of Tokyo – Physics	Boundary element models of eddy current NDE, use of simulation tools to design strategies for new health monitoring applications, studies of eddy current noise and probability of detection, eddy current techniques to measure stress.
Roberts, Ron	Group Leader-Imaging Techniques, CNDE & Adjunct Associate Professor, Aero	Ph.D.	Northwestern University – Theoretical and Applied Mechanics	Advanced models for effects at tip diffraction, complex part geometries, and material inhomogeneities on ultrasonic NDE. Phased array ultrasonics and other ultrasonic imaging modalities. Effects of guided wave propagation on ultrasonic imaging and acoustic emission source location

Schmerr, Les	Associate Director, CNDE & Professor, Aero	Ph.D.	Illinois Institute of Technology – Mechanics	Ultrasonic NDE modeling Elastic wave propagation and scattering Pattern Recognition and Artificial Intelligence
Thompson, Bruce	Director, CNDE & Distinguished Professor, MSE/Aero	Ph.D.	Stanford – Applied Physics	Ultrasonic characterization of material properties. Effects of microstructure and associated material inhomogeneity on ultrasonic wave propagation and flaw detection. Modeling the effects of measurement geometry on ultrasonic inspection. Use of ultrasonic measurement models to assist in the determination of probability of detection. Electromagnetic acoustic transducers
Utrata, Dave	Associate Scientist, CNDE	M.S.	Illinois Institute of Technology – Metallurgical Engineering	Applications of NDE to manufacturing issues, railroad inspection
Wendt, Scott	Associate Scientist, CNDE	M.S.	Iowa State University - Nuclear Engineering	X-ray physics - laboratory experiments and computer programming; machine shop – machinist; radiation shielding; nuclear reactor operations and decommissioning; and artificial neural networks
Xu, JiaDong				Computer Programming, Software debug, Visualization, Image Processing. Project XRSIM, CTSIM, SCATSIM, ECSIM.