

2011 **FIRST**® **LEGO**® LEAGUE CHAMPIONSHIP TOURNAMENT JUDGES

FLL CHAMPIONSHIP TOURNAMENT CO-JUDGE ADVISOR

Kim McDonald, IPFW, Associate Dean, College of Engineering, Technology & Computer Science and Professor of Organizational Leadership and Supervision
B.A. Communication
M.A. Communication
Ed.D. Ball State University

Dr. McDonald has been a faculty member at IPFW for over twenty years. Recently she became associate dean for the College of ETCS. Prior to this appointment, she was chair of the Division of Organizational Leadership & Supervision. She has taught a variety of leadership courses at both the graduate and undergraduate level. Her research focuses primarily on career development issues. This is her eighth year as a judge.

Jeffrey Nowak, IPFW, Associate Professor of Science Education
B.S. Biology from Ohio Northern University
M.A. Geology, Ball State University
Ph.D. Science Education, Indiana University

Jeffrey A. Nowak, Ph.D. received a B.S. in Biology degree from Ohio Northern University, Ada, OH in 1992, and a M.A. in Geology degree from Ball State University in Muncie, IN in 1994. From 1994 to 1997, he taught Biology, Chemistry, Geology and Physics at Columbus East High School in Columbus, IN. From 1997 to 1999, he was an Associate Instructor of Science Education at Indiana University in Bloomington, IN. From 1999 to 2000, he taught Middle School Science and the eighth-grade Gifted and Talented Science Program at Northside Middle School in Columbus, IN.

Dr. Nowak joined the School of Education at Indiana University - Purdue University Fort Wayne in 2000 and now serves as an assistant professor of Science Education. Along with teaching various workshops such as LEGO Robotics for Teachers, Dr. Nowak teaches EDUC Q200 - Science Skills, E328 - Science Methods for pre-service elementary teaching majors, and E548 - Advanced Science Methods for elementary teachers. His research interests include how to incorporate and utilize "best practice" technologies and inquiry-based instructional strategies such as Problem-based Learning (PBL) in the K-12 science classroom. This will be Dr. Nowak's eleventh year working with the state FLL tournament and ninth year as a Judge Advisor.

PROJECT PRESENTATION JUDGES

FLL Championship Lead Project Presentation Judge

Chris Douse, IPFW, Director of Multicultural Services, Office of Diversity and Multicultural Affairs.
B.A. Communication, IPFW
M.S.M., Indiana Wesleyan University

Mr. Douse advises students and coordinates the academic support and various pre-college summer programs supported by the office including the Summer Youth Program. He also serves as a consultant for L.E.A.D. (Leadership, Empowerment, Action, and Development), specializing in the area of communication and empowerment. Mr. Douse was instrumental in collaborating on a number of STEM outreach programs with the ETCS Outreach Office which included his office's 2006 Summer Youth Program that focused on VEX Robotics. He is also a collaborator with the InSITE (Indiana Students Investigating Technology and Engineering) Challenges for high school students. This is Mr. Douse's tenth year as a judge and his eighth year as Lead Judge in the project category.

Scott Armstrong, Management consultant and IPFW adjunct faculty member
B.A. Physics, William Jewell College
M.S. Physics, University of Missouri
Ph.D. Optical Engineering, University of Rochester

Dr. Armstrong has spent his 33 year career in advanced product development for space based electro-optical and rf/microwave sensor systems. He is retired from ITT where he held leadership positions in space systems engineering, program management and business development. Earlier in his career, he held a number of engineering management positions in the US government, at The Aerospace Corporation and Aerojet Electronic System Division in Los Angeles where he and his family lived for 17 years. Scott has been involved in every aspect of product development including concept development, systems engineering, design, integration and test as well as user support. Dr. Armstrong has been involved with FLL for 12 years and this is his tenth year as a judge.

Deborah Baresic, IPFW, Clinical Assistant Professor Nursing,
Director Lafayette Street Family Health Clinic

MS, RN, WHNP-BC
BS in Nursing- University of Evansville
MS Education- Indiana University Fort Wayne
Women's Health Nurse Practitioner- IUPUI
Board Certified Women's Health NP

Michael Columbia, IPFW, Associate Professor, Department of Chemistry
B.S. Chemistry, Indiana University South Bend
Ph.D. Analytical Chemistry, Iowa State University

Dr. Columbia has taught courses in general chemistry and analytical chemistry at IPFW for sixteen years. His research projects have probed chemistry at solid surfaces with emphasis on catalysis and electrodeposition. He is also interested in developing new laboratory experiences for introductory courses that expand the uses of digital data acquisition and demonstrate the role chemistry plays in producing color in works of art. Dr. Columbia also serves as the Judge Coordinator of the Northeast Indiana Regional Science and Engineering Fair. This is Dr. Columbia's fifth year as a FLL judge.

Gary R. Dostal, Retired – Verizon Manager of Employee Communications
B.S., M.A., ABD Journalism & Communications, University of Minnesota

Mr. Dostal is a Verizon retiree with twenty-five years as a public affairs professional with managerial experience in both public relations, lobbying and employee communications. Since retiring Mr. Dostal has taught at the University of Saint Francis and Ivy Tech Community College. Prior to his telecommunications career, he taught for thirteen years in higher education at the University of Wisconsin - River Falls, St. Cloud State University and Normandale Community College where he also was the Director of Forensics and coached several award winning speech teams. This is Mr. Dostal's ninth year as a judge in the project category.

Heather Krull, IPFW, Assistant Professor, Nurse practitioner
B.S. Education, Hannibal LaGrange College
M.S. Nursing, Ball State University

Mrs. Krull currently teaches graduate and undergraduate nursing students at IPFW and works as a nurse practitioner at the IPFW Health and Wellness Clinic. She has also worked as a nurse practitioner specializing in Infectious Disease, Pulmonary, Gastroenterology and Sleep Medicine. Prior to working as a nurse practitioner, Mrs. Krull worked as a Registered Nurse and a 6th Grade Language Arts Teacher. She is currently working on her doctorate and plans to graduate in May of 2012.

John McGauley, Allen County Recorder
B.S. Journalism, Ball State University

Mr. McGauley was elected in 2006 to a four-year term as Allen County Recorder and re-elected in 2010. He previously served as Allen County Public Information Director, where he oversaw efforts to expand access to County Government, including projects to launch a new County Internet site and to begin broadcasting County government meetings on cable television. A former journalist, he has written about science and technology for Fort Wayne Monthly, The Fort Wayne News-Sentinel, Florida Today, Air & Space Magazine and Space.com. This will be his eighth year as a judge in the project category.

Andrea Mitofsky, Trine University, Assistant Professor, Electrical and Computer Engineering
B.S., M.S., and Ph.D. Electrical Engineering, University of Illinois at Urbana-Champaign

Ms. Mitofsky is currently an Assistant Professor in the Electrical and Computer Engineering department at Trine University in Angola Indiana. She has been at Trine University since 2008.

Sarah Nichter, Manager of Information & Development, Ft. Wayne Parks and Recreation
B.A. Journalism, Indiana University
M.A. Professional Communication, IPFW/Purdue University

Ms. Nichter is a corporate communication specialist, who has worked for a number of large firms including Magnavox and GTE. While at these diverse industries, she worked with engineers and wrote feature articles that explained unique technologies to laymen and the general public. Ms. Nichter has also taught college-level communication classes and was the Forensic Speech coach for IPFW's student team As Manager of Information & Development for the Fort Wayne Parks & Recreation Department, she has been responsible for marketing, fundraising and community relations. She also served as Public Information Officer for seven years during her tenure with the City.

ROBOT DESIGN JUDGES

FLL Championship Lead Technical Judge

Edward M. DeWitt, Senior Engineering Analyst at Navistar, and Associate Faculty at IPFW
B.S.M.E. and M.B.A. from IPFW

Mr. DeWitt has been employed by Navistar for over 17 years, and has been involved in the testing area for the last 16 years. He primarily focuses on validation of commercial truck and bus steering and brake systems. Mr. DeWitt has a commercial driver's license, and holds a patent for instrumented testing of vehicle steering systems. He is active in the Society of Automotive Engineers, and a former chairman of two subcommittees in the SAE Truck and Bus organization. He has published papers through SAE and the Midwest Business Administration Association. In addition to his employment at Navistar, Mr. DeWitt teaches an Electrical and Computer Engineering Technology class at IPFW focusing on instrumentation, data acquisition, and data analysis. He teaches his students the LabVIEW programming language, uses it at Navistar, is a Certified LabVIEW Associate Developer, and co-founded a local user's group based on the language. This is his fourth year judging at the state level.

James M. Chen, IPFW Visiting Assistant Professor, Dept of Manufacturing Engineering & Technology and Interior Design (MCET)

B.S. Chung-Hsing University, Taiwan

M.S. National Taiwan University, Taiwan

Ph.D. The George Washington University, Washington DC

Dr. Chen is an Honorary Fellow of Australian Institute of High Energetic Materials (AIHEM). He has been doing research work and publishing journal articles in many diversified areas, including multiscale modeling of mechanics/physics and materials, nano energy harvesting, theoretical and computational solid/fluid mechanics, computational nanoscience and thermo-electro-mechanical coupling at nano-scale.

Michael Dobbs

B.S. Electrical Engineering, University of Michigan

Mr. Dobbs has nearly three decades of experience in the development of innovative electrical-optical sensors and biotech systems. He began his career at the University of Michigan Space Physics Laboratory. The instruments that he has designed there have flown on Rockets, Balloons, Aircraft, the first Space Shuttle science mission, small and large satellites including the one that recently reentered the earth's atmosphere.

Ever the entrepreneur, he went on to start-up three high tech companies in Ann Arbor. These companies developed products and provided engineering services for commercial space, automotive, and pharmaceutical research. Mike spent 10 years at ITT developing a business base and laser-based instrumentation systems for Climate Monitoring. Once again an entrepreneur, Mike's consulting business has recently supported the development of a Microsatellite and is currently developing prototype systems for Home- Health and Point-of-Care Diagnostics and Neurological Research.

Vicky Hogge, Raytheon

B. S. Computer Engineering Technology, IPFW

Ms. Hogge has been with Raytheon, Network Centric Systems for three years working in Systems Engineering. Prior to working for Raytheon, she worked as a Systems Engineer with ITT Corporation, Space Systems Division. Ms. Hogge teaches part-time for the IPFW Department of Computer & Electrical Engineering Technology & Information Systems and Technology (CEIT). She enjoys teaching courses in Microprocessors, Computer Operating Systems, and Computer Networks. Ms. Hogge is currently pursuing her Master's degree in Technology at IPFW.

Very active in the Fort Wayne community, she is involved with Raytheon Women's Network, the Northeast Indiana Society of Women Engineers (SWE), the Fort Wayne Engineers Club (FWEC), and the Institute of Electrical and Electronic Engineers (IEEE). This will be Ms. Hogge's fourth year as a technical judge at the Championship Tournament.

Amanda Lambert, Raytheon
B.S. Computer Science, Indiana University

Miss Lambert has been with Raytheon for the last year and a half working as a Software Engineer. In 2010, Miss Lambert graduated from Indiana University with a bachelor's degree in Computer Science. One of her favorite classes covered Autonomous Robotics, where she and her classmates designed and programmed Vex Robotics Kits to perform tasks autonomously.

Miss Lambert has been involved with the Raytheon Women's Network and is currently volunteering to help with science experiments at Shawnee Middle School. This is her first year as a technical judge for the Indiana FIRST LEGO League Championship Tournament.

David Liu, Associate Professor and Graduate Program Director, IPFW Department of Computer Science
Associate Director, IPFW Information Analytics and Visualization Center
Ph.D. Computer Science and Engineering, Ohio State University

Before joining IPFW, Dr. Liu worked as a principle software engineer at Motorola, Nortel Networks, Alcatel-Lucent, IBM, and Verizon. Dr. Liu's research interests include wireless ad hoc and sensor networks, network security and information assurance, mobile and pervasive computing, and cyber-physical system. This is his sixth year as a technical judge for the Championship Tournament.

Richard L. Malecki, Navistar, Director, Defense Product Development

Mr. Malecki has been with Navistar for over 26 years and during that time, he has held various Product Development and Engineering Leadership positions, supporting Commercial Truck, Bus and Engine Products and Programs. Mr. Malecki has also had various assignments Leading Global and Off-Shore Product Development / Engineering Teams. Prior to Navistar, Mr. Malecki also worked at Tokheim Corporation, at the Magnavox Industrial Group and at HURCO (in Indianapolis), holding various Program Management and Product Development / Engineering positions. Mr. Malecki has USA, European and Canadian Patents Granted and some Pending. He is a 1976 BSET Graduate from IPFW, he attended Purdue West Lafayette and has been a Industrial Advisory Committee member at IPFW CIET / ECET / CPET for over 20 years. Mr. Malecki taught ECET 491 (Senior Design Project - 1st semester) for two semesters (Fall 2004 and Spring 2005) at IPFW.

Merritt Webb, Exelis Geospatial Systems, Opto-Mechanical Systems Engineer
B.S. Mechanical Engineering, Purdue University
M.S. Mechanical Engineering, Stanford University

Mr. Webb has been at Exelis Geospatial Systems for 18 years working as an Opto-Mechanical Systems Engineer in the design of Metrological and remote sensing space and airborne instruments. These instruments are part of the NASA/NOAA systems that predict weather and monitor the climate. Prior to that, he worked at Lockheed Martin in Sunnyvale California in the Mechanism Analysis Department. In that position Mr. Webb analyzed spacecraft separation systems, antenna and solar array deployment systems on a number of different spacecraft including the space shuttle and space station.

Mr. Webb graduated from Purdue University with a BSME, specializing in modeling of dynamic systems. While working at Lockheed he earned a Master's degree in Mechanical Engineering at Stanford University specializing in Control Systems.

Mr. Webb is active in the Fort Wayne community through his involvement with the Fort Wayne Engineers Club (FWEC), and Artlink. Merritt has been a technical judge at the Indiana FIRST LEGO League Championship Tournament in the past.

CORE VALUES JUDGES

FLL Championship Team Work Head Judge

David Brumm, Retired Teacher, Fort Wayne Community Schools
B.S. Psychology, United States Air Force Academy, 1968
Meteorology major, San Jose State University, 1970
M.S. Education, IPFW, Fort Wayne, 1985

Mr. Brumm was a teacher at South Side High School in Mathematics, General Science, Computer Science, Government, International Baccalaureate Theory of Knowledge, and the Technology Coordinator 1985-2006. From

1983-1986, he taught at Memorial Park Middle School in the areas of Mathematics, Science, Physical Education, and Home Economics. In addition, Mr. Brumm founded South Side's FIRST Robotics team in 2001. Mr. Brumm has worked with the VEX Robotics Summer Exploration Camp at IPFW for the past four years. This is his eighth year volunteering as a tournament judge. In retirement, he works with Acres Land Trust to protect and preserve nature in a tri-state area.

Bill Decker, Teacher, Anderson Preparatory Academy
A.A. Business, Edison State College
B.S. Finance, University of South Florida
M.A. History, University of North Carolina, Greensboro

Mr. Decker is a high school teacher in Anderson, Indiana. From 2003-2005 Mr. Decker was the Mentor for the South Side High School FIRST Robotics team. In 2005, he co-founded Youth-Building Our Tomorrow (Youth-BOT), a Northeast Indiana High School Robotics League which uses VEX robotics in the competitions. Mr. Decker works directly with VEX teams mentoring them in their building and programming of robots. He also volunteers each summer demonstrating his teams robots at the VEX Robotics Summer Exploration Camp at IPFW.

Art Friedel, Professor Emeritus, Chemistry, IPFW
B.S. and M.S. Chemistry Education, University of Pittsburgh
Ph.D., Science Education, Ohio State University

Dr. Friedel taught general chemistry, methods of science teaching, and supervised student teachers of science in middle and high school since his arrival at IPFW in 1967. Although recently retired, Dr. Friedel continues to be active with many IPFW organizations. He was the Director of the Northeast Regional Science and Engineering for 20 years and serves on the Advisory Committee. Dr. Friedel has been a judge for the FLL tournament since 2003.

Kyle Jackson, Navistar
B.S. Mechanical Engineering, University of Toledo

Mr. Jackson is a native of Cleveland, Ohio. He is employed at Navistar Inc. Fort Wayne Operations for 14 years where he is an Associate Product Structure Analysis Engineer and serves as a board member for the organization of the National Society of Black Engineers Alumni chapter of Fort Wayne.

Vukica Jovanovic, Trine University, Assistant Professor, Design Engineering Technology,
dipl.ing.-M.S. Robotics, Mechatronics and Automation, University of Novi Sad, Serbia
M.Sc. Industrial Engineering, University of Novi Sad, Serbia
PhD Mechanical Engineering Technology, Purdue University

Ms. Jovanovic joined Trine University in January 2011. Before coming to Trine, she was a doctoral student at Purdue University, developing online courses for the aerospace and automotive industry in the areas of product lifecycle management and digital manufacturing. Ms. Jovanovic taught six different mechanical engineering technology and computer graphics technology courses. She spent five years as a teaching and research associate at the University of Novi Sad, College of Engineering, Serbia before she went to Purdue. Ms. Jovanovic worked in the departments of mechatronics and industrial engineering. She taught seven different engineering courses and worked on research projects related to assembly systems design, energy efficiency and RFID technology.

In 2001 and 2002, she was member of the student university team that built a mobile robot for the European robotic cup EUROBOT. It was the first team from her country that ever participated in that competition. They have built all robots from the scratch, with no pre-bought modules, with custom made parts and electronics. She was a volunteer in a EUROBOT organization for French and European competitions in 2002, 2003 and 2006 and a head of the organizing committee of the Serbian National Robotic Cup from 2003 until 2006.

Barbara Kuntz, Teacher, Fort Wayne Community Schools
B.S. Art Education, Ball State University
M.S. Education, Indiana Wesleyan University

Ms. Kuntz has been a visual arts teacher on the elementary level for Fort Wayne Community School since 1994. She has served as the building technology coordinator for the past seven years at Lindley Elementary. She was the technology liaison for the Appleseed Writing Project, the local affiliate of the National Writing Project, for five years bringing her love for technology to other educators. During that time she also volunteered for the FIRST LEGO League

competitions on the local and state levels holding a variety of jobs including head judge for the Fort Wayne competition for two years.

Sharon Parnin, IPFW Continuing Lecturer, College of Education and Public Policy

Ms. Parnin moved to Fort Wayne, IN to open Science Central and her first office was in a construction trailer! Currently, she is a continuing lecturer in the College of Education and Public Policy teaching science education courses. Ms. Parnin's doctoral program was completed at Ball State University in science education.

John Renie, Associate Professor of Mechanical Engineering at Indiana Tech; Adjunct Professor in Mechanical Engineering at IPFW; Adjunct Professor in Math and Science at IVY Tech; Automotive Driveline Consultant BSAE, MS, Ph.D., Purdue University

Dr. Renie studied aerospace engineering at Purdue University majoring in the area of thermal sciences in general and rocket propulsion in particular. During the period of time between 1984 and 1995, he taught at the University of Illinois and Indiana University Purdue University Fort Wayne (IPFW).

In 1995, he left the academic environment to work for the Spicer Outdoor Power Equipment Components Division of Dana Corporation located in Fort Wayne, IN. His primary responsibility at Dana was as Lab Manager, with responsibility for conducting quality assurance and product durability tests on drive train components involved in leisure and utility vehicles. He also had the responsibility of conducting finite element analysis on drive train components as well as NVH measurements. He was employed until 2008 by Torque Traction Technologies, Inc., Dana Corporation, Maumee, Ohio. He is a past member of the Fort Wayne chapter of the Society of Automotive Engineers (SAE) serving as their Chairman for one year and as a Governing Board member. He has participated in FLL since 2000 and has also served as a judge for the Northeast Indiana Regional Science and Engineering Fair. Since 2008, Dr. Renie has returned to academia, currently as an Associate Professor of Mechanical Engineering at Indiana Tech. His major focus is teaching in the thermal sciences and energy engineering area.

Richard Slayback, P.E., Owner, Civil Engineering Services, Fort Wayne
B.S. Civil Engineering, University of Illinois

Mr. Slayback is a registered Professional Engineer in Illinois, Indiana and Ohio and does civil engineering design work for land development projects. He has been a member of the NE Indiana Engineers Week Committee since 1977, and is a founding member/judge of the Student Design Bridge Competition for both High School and Junior High School Students. Mr. Slayback was also an Engineer Mentor for the Future City Competition from 2001-2010 and is currently a committee member for the Indiana Regional Competition at IPFW.

Mr. Slayback is the owner of Civil Engineering Services, established in 1984. His company provides contract design services to many firms and individuals covering the gamut of needs for land development of commercial, industrial and residential projects. He is a long standing member of the Indiana Society of Professional Engineers and the American Society of Civil Engineers, as well as being a member of the International Association of Lions Clubs. He is the Chairman of the Lions District Youth Services and Co-Advisor to the Leo Club "Students Sharing Hearts".