

2012 **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.C. Communication, Bowling Green State University
M.A. Communication, University of South Florida
Ed.D. Adult & Community Education, Ball State University

Dr. McDonald has been a faculty member at IPFW for over twenty years. She is the 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. Currently she is serving as Editor-in-Chief for the academic journal, *Advances in Developing Human Resources*. 2012 marks her ninth year in judging.

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 12th year working with the state FLL tournament and 10th year as a Judge Advisor.

PROJECT PRESENTATION JUDGES

FLL Championship Lead Project Presentation Judge

Rebecca Gallagher, IPFW, Associate Faculty, Dept. of Communication
B.A. Mass Communication, Taylor University
M.A. Professional Communication, IPFW

Mrs. Gallagher began working with IPFW's FLL team the first year it was held here while employed at IPFW's University Relations & Communication office. She has taught online communication and public relations courses since 2001, and has continued to help with the FLL tournament in a variety of positions each year. This will be Mrs. Gallagher's 12th year working with the Championship FLL tournament and her first year as Head Project Judge.

Sean Carroll, Professor of Electrical and Computer Engineering, Trine University
Ph.D., Electrical Engineering

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 sixth 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 10th year as a judge in the project category.

Sarah Harris

Heather Krull, DNP, FNP-BC, Assistant Professor in the Nursing Department, Family Nurse Practitioner at IPFW Health and Wellness Center

B.S. Education, Hannibal LaGrange College

M.S. Nursing, Ball State University

Doctorate in Nursing Practice, Ball State University

Dr. 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 completed her doctorate in 2012. This is her third year judging at the Championship Tournament.

Paresh Mishra, Assistant Professor, IPFW Division of Organizational Leadership and Supervision

Ph.D. Indiana University, Bloomington

Dr. Mishra is an Assistant Professor in the Division of Organizational Leadership and Supervision of IPFW. He earned his Ph.D. from Indiana University, Bloomington. His research examines the role of emotions in management and leadership. He has worked in the corporate sector at Tata Motors, India (the largest automobile company of India) for close to 5 years. He has also worked with children of various age groups for about 8 years.

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.

Mary K. Ross, BSW, MSW, LCSW, Field Preceptor, Indiana University School of Social Work, University of St. Francis

Ms. Ross has provided clinical services in the psychiatric and medical social work field for over 25 years with medically indigent, under-served and marginalized populations in both private practice and non-profit organizations. She served as the Director of the Northeast Indiana Area Health Education Center (2009-2012) through Health Resources and Services Administration (HRSA) and the IU School of Medicine providing health career services for students in K-16 and students enrolled in health professional training programs throughout northeast Indiana. Mary is a field preceptor for the Indiana University School of Social Work MSW Program and the University of St. Francis BSW Program. She has been active serving as a judge for both Future City and the Northeast Indiana Regional Science and Engineering Fair since 2010.

ROBOT DESIGN JUDGES

FLL Championship Lead Robot Design 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 18 years, and has been involved in the testing area for the last 17 years. He primarily focuses on validation of commercial truck and bus steering and brake systems, and has recently

started conducting noise, vibration, and harshness testing. 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 fifth year judging at the state level.

Divya Blaugh, Senior Test Engineer, Logikos
B.S. ECET, Purdue University

Ms. Blaugh has been a Senior Test Engineer for 5 years at Logikos Inc. Currently developing validation tests for embedded systems within medical devices using the C programming language as well as National Instruments TestStand. She also served as a software verification engineer for the following test efforts: Software for Bose home audio devices, an RFID Based Tracking and Verification System for radiation oncology facilities, and the Onstar Telematics Module among other projects. Ms. Blaugh previously held positions at Omron Automotive and Delphi Electronics & Safety. While at Omron she worked as a Project Manager/Lead Engineer on an RF Transmitter Receiver Module for General Motors vehicles. At Delphi E & S, she worked as a Systems Engineer within an engine control module design team. This was also for a product for General Motors vehicles. She first became interested in robotics while working on her senior design project at Purdue University, West Lafayette. She is also a Certified LabVIEW Associate Developer and enjoys working with National Instruments hardware and software.

William Decker, Instructor, 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 instructor 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 demonstrating his teams robots at the VEX Robotics Summer Exploration Camp at IPFW.

Michael Dobbs, Director of Engineering, SBMicrosystems, Columbia MD
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. Mr. Dobbs is currently developing point-of-care medical diagnostic devices, as well as implantable sensors for medical research.

James Grim

Michael Kanning
BS, Electrical Engineering, Purdue Fort Wayne
MBA, Indiana University Fort Wayne

Michael Kanning received his BS in Electrical Engineering from Purdue in Fort Wayne in 1992, and his MBA from Indiana in Fort Wayne in 1999.

Mr. Kanning has more than 25 years of IT experience and a wealth of leadership expertise. He has served as IT Director at several Fort Wayne companies. His volunteer experience includes founding President of Young Leaders of Northeast Indiana and Director at Large for the IPFW Alumni Association.

David Liu, Associate Professor, 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 seventh year as a technical judge for the Championship Tournament.

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.

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 19 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
Meteorology major, San Jose State University
M.S. Education, IPFW, Fort Wayne

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 four years. This is his ninth year volunteering as a tournament judge. In retirement, he works with ACRES Land Trust to protect and preserve nature in a tri-state area.

Ali Alavizadeh, Ph.D. Assistant Professor, IPFW Department Manufacturing & Construction Engineering Technology and Interior Design (MCET)
B.S., Applied Physics, Sharif University of Technology, Tehran, Iran
Ph.D., Technology Management, Indiana State University, Terre Haute

Dr. Ali Alavizadeh is an Assistant Professor in the MCET Department at Indiana University-Purdue University (Fort Wayne, Indiana). He has taught at the George Washington University (Washington, DC), and Morehead State University (Morehead, KY) in the fields of Engineering Management and Systems Engineering and in Industrial and Engineering Technology, respectively. His industrial experiences include enterprise architecture, systems analysis, and software engineering for private, governmental, and nongovernmental organizations. His research interests include system-of-systems modeling and simulation, enterprise architecture, and nonlinear dynamical systems.

Anna Baer, Construction Estimator, Blundall Associates, Inc.
BS Construction Engineering Technology, IPFW
AS Architectural Engineering Technology, IPFW

After many years working in the public library system, Ms. Baer was hired as a summer intern at Kewit Western. During her last year of classes, she obtained an internship at Blundall Associates, Inc. After graduation in 2010, she was hired on at Blundall as a construction estimator. At Blundall, she works on all types of projects, including commercial, government, and educational, to assist in determining the cost of projects before they go out to bid.

While at IPFW, Ms. Baer received a theater minor, an Honors Pin, and took part in the National Student Exchange. She was also active in many student groups including the Society of Women Engineers (SWE), Honors Student Group, and Yoga Club. Since graduating, Ms. Baer became involved with SWE Northeast Indiana and is currently serving as president. She has volunteered at the Championship Tournament since 2006.

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

Barbara Kuntz is the visual arts teacher at Fairfield Elementary. She has been a visual arts teacher on the elementary level for Fort Wayne Community Schools for the past nineteen years. She graduated with a bachelor's degree in art education from Ball State University. In 2011 Ms. Kuntz completed her master's degree in education from Indiana Wesleyan University. Ms. Kuntz has been involved with FLL for several years. She has served in a variety of positions at the Science Central qualifying tournament and as a score keeper's assistant and core values judge at the Championship Tournament.

Lynne Miller, Raytheon Network Centric Systems
B.S., Computer Science, Purdue University
MBA, Indiana Wesleyan University

Ms. Miller has worked at Raytheon Network Centric Systems since 2008 in various roles including software manager, senior software staff, and product line lead. She has over 20 years' experience working in the defense industry. In her previous positions, she worked in a variety of roles throughout her career including software architect, developer, systems, integration & test, software lead, and project lead. Ms. Miller has worked on a broad range of programs from rapid quick-turn demos to large, long-term products in use by the military. She has conducted numerous technical training classes.

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.

Adam Renie, Engineer, Attero Tech, LLC
B.S. Computer Engineering, Purdue University

Mr. Renie is currently a hardware design engineer at Attero Tech, LLC in Fort Wayne. He has worked at Attero Tech since 2007 and became a part owner in 2011. He graduated from Purdue University in 2007 with a B.S. in computer engineering.

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".

AGAINST ALL ODDS

Rama Cousik

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.