

## 2010 FIRST® LEGO® LEAGUE CHAMPIONSHIP TOURNAMENT JUDGES

### **FLL CHAMPIONSHIP TOURNAMENT JUDGE ADVISOR**

**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

From 1994 to 1997, Dr. Nowak taught Biology, Chemistry, Geology and Physics at Columbus East High School in Columbus, IN. From 1997 to 1999, he was an Associate Instructor of Elementary Science Education at Indiana University in Bloomington, IN. From 1999 to 2000, he taught Middle School Science and the eighth grade gifted and talented (G&T) science program at Northside Middle School in Columbus, IN. He joined the School of Education at Indiana University-Purdue University, Fort Wayne in 2000 as a Visiting Instructor of Elementary Science Education.

Currently an Associate Professor of Science Education at IPFW, Dr. Nowak teaches EDUC Q200 Science Skills, E328 Science Methods for Pre service Elementary Teaching Majors, E548 Advanced Teaching of Science in the Elementary School and F500 - LEGO® Robotics for Teachers. His research interests include how to incorporate and utilize "best practice" technologies and inquiry based instructional strategies in the K 12 science classroom. Dr. Nowak has recently established the Northeast Indiana STEM Website which will become a resource for all teachers and students who seek information about NE Indiana organizations offering educational and outreach programs. This will be Dr. Nowak's tenth year working with the state FLL tournament and eighth year as Indiana State 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 ninth year as a judge and his seventh 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 11 years and this is his ninth year as a judge.

**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 fourth 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 **eighth** year as a judge in the project category.

**Kim McDonald**, IPFW, Professor, Chair, Division of Organizational Leadership and Supervision  
B.S. Communications  
M.S. Communications  
Ed.D. Ball State University

Dr. McDonald has been a faculty member in the Division of Organizational Leadership and Supervision at IPFW for over twenty years. She has taught a variety of leadership courses at both the graduate and undergraduate level. She has been chair of the division for the past 13 years. Her research focuses primarily on career development issues. This is her seventh year as a judge.

**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 seventh year as a judge in the project category.

## **TECHNICAL 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 16 years, and has been involved in the testing area for the last 15 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 as the chairman of a subcommittee 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 third year judging at the state level.

**Todor Cooklev**, IPFW, Director of the IPFW Wireless Technology Center  
Ph.D. Electrical Engineering, Tokyo Institute of Technology, Japan

Dr. Cooklev is the Founding Director of the IPFW Wireless Technology Center at IPFW and holder of the endowed ITT Chair in Wireless Communication. His research interests include many aspects of modern wireless systems. Previously he was with San Francisco State University. He has received research grants and has served as a consultant for several major corporations and government organizations, including Hitachi America Ltd, France Telecom, Agilent Technologies, the U.S. Air Force Research Laboratory, the Government of Canada, and other smaller technology and investment companies.

In addition to his academic experience, he has several years of full-time industry experience, working for 3Com Corporation of Santa Clara, California, and Aware, Inc., of Lafayette, California. He has been involved with the development of several standards for wireless communication such as the Bluetooth and the IEEE 802 standards for wireless communication. This is his second year as a technical judge for the Championship Tournament.

**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's Space Physics Laboratory where he developed electro-optical remote sensing systems NASA. His projects have flown on Rockets, Balloons, Aircraft, the first Space Shuttle science mission, large and small satellites, and one interplanetary probe.

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 parts manufacturers and pharmaceutical research.

During his decade in Fort Wayne, he created the climate change monitoring business at ITT and was the technical lead for the development of fiber laser based sensors for monitoring climate change, weather and the protection of US personnel overseas. Mr. Dobbs holds nearly a dozen patents.

**Vicky Hogge**, Raytheon

A.S. Electrical Engineering Technology, IPFW

B. S. Computer Engineering Technology, IPFW

Ms. Hogge has been with Raytheon, Network Centric Systems for two 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 third year as a technical judge at the 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 (starting as a software engineer) in CompuServe (Verizon), Sterling Commerce (ATT), Lucent (Alcatel-Lucent), Bay Networks/Nortel Networks, and River Delta Networks (Motorola). Dr. Liu's research interests include wireless ad hoc and sensor networks, network security and information assurance, pervasive and grid computing, and optical networks.

**John Tanik**, Ph.D., IPFW, Assistant Professor, Computer Science, Software/Systems Engineering  
B.S. Electrical Engineering, University of Texas at Austin  
M.S. Electrical Engineering, University of Alabama at Birmingham  
Ph.D. Computer/Software Engineering (System architecture), University of Alabama at Birmingham

John Tanik, Ph.D. is currently a tenure-track assistant professor at IPFW. He has experience as a systems architect and researcher supported by a NASA Fellowship Training Grant in computer/software engineering at UAB. This is his first year judging for the Championship Tournament.

**Steve Walter**, IPFW Professor Director, Center for Systems Engineering  
B.S. Physics, University of Maryland  
M.S. and Ph.D. Physics, University of Colorado

Dr. Walter has worked in the NASA Jet Propulsion Laboratory at the California Institute of Technology where he developed new and innovative microwave, millimeter-wave and sub millimeter-wave remote sensing systems. His research and development activities have contributed to a number of systems with applications to climate change, weather forecasting, deep space communications and national security. In 2000, he joined Northrop Grumman Electronic Systems and has served in a variety of systems engineering and program management roles. Most recently, Dr. Walter managed the space sensors technology office at the Northrop Grumman C4ISR and Space

Sensors Division in Azusa, CA. In that role, he was responsible for developing advanced concepts for space and airborne surveillance and remote sensing systems. In 2006 he moved to Fort Wayne to accept the position as the IPFW Professor of Systems Engineering and Director of the Center of Excellence for Systems Engineering.

He is a member of the International Council on Systems Engineering, Project Management Institute, Institute of Electrical & Electronics Engineers, and the American Association for the Advancement of Science. This is his fifth year judging.

**Merritt Webb**, ITT Geospatial Systems, Hardware Systems Engineer  
B.S. Mechanical Engineering, Purdue University  
M.S. Mechanical Engineering, Stanford University

Mr. Webb has been at ITT Geospatial Systems for 17 years working as a Hardware Systems Engineer in the design of Metrological and remote sensing space and airborne instruments. 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. This will be Merritt's first year as a technical judge at the Indiana FIRST LEGO League Championship Tournament.

## **TEAM WORK 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 seventh 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, Fort Wayne Community Schools  
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 Fort Wayne Community Schools. 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 robots at the VEX Robotics Summer Exploration Camp at IPFW.

**Richard Flickinger**, Retired Teacher, Leo Jr/Sr High School  
B.S. Education, Biology and Math, Manchester College  
M. S. Biology and General Science, University of Saint Francis

Mr. Flickinger retired from teaching this past year after having taught science and math for the past 38 years. He was trained in the PLTW (Project Lead The Way) which is pre-engineering courses for both junior high and high school. Having worked most recently with junior high students, Mr. Flickinger had become especially involved with the Future

City Competition where he took three teams to national competition in the past nine years. He had been involved with the J.H. Bridge Building Competition and Junior Academic Super Bowl. He was also the Director of Engineering and Technology at Leo Jr/Sr High School, which is a Career Majors Academy.

**Robin Hullinger**

B.S. Science Education and Biology, Tri-State University

After teaching middle school science for two years, Ms. Hullinger was an inside sales representative for a manufacturing company. Ms. Hullinger joined Science Central in 2001 and worked for two years as the Educational Programs Manager. As part of her responsibilities she organized and managed weekend special events, directed the Annual Teacher Workshop, and wrote all educational labs and demonstrations for daily school group visits. Ms. Hullinger also serves on the Executive Board of the Northeast Indiana Future City Competition, the Engineers Week Executive Committee and the Science Central FIRST Lego League Board. She has judged the Team Work or Team Spirit Award for eight years and has been Lead Judge for five years.

**Marlaina Lantzy**, RDH, Visiting Instructor, IPFW College of Health and Human Services, Dental Hygiene Program  
M.S. Dental Hygiene Education, Baylor College of Dentistry, Texas A&M Health Science Center

Ms. Lantzy is a visiting instructor teaching radiology and various clinics and labs for first and second year dental hygiene students. This is her first year as a judge for the Championship Tournament.

**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 13 years where he is an Associate Product Structure Analysis Engineer. Mr. Jackson also recruits for Navistar by mentoring college engineering students at Indiana Tech & IPFW and serves as a board member for the organization of the National Society of Black Engineers Alumni chapter of Fort Wayne.

**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".

**TEAM SPIRIT & Against All Odds Judges**

**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.