



LEAP Awards' first year proving to be a huge success

Paul J. Heney | VP, Editorial Director

When we launched the LEAP Awards this past Spring, I wasn't sure what to expect. Looking at similar "best product" type competitions across multiple industries, it seemed reasonable to expect a few dozen entries in this inaugural awards program. So, I was very pleased when we received more than 100 entries!

The categories for LEAP are roughly divided across three of our flagship publications' brands: Design World, Fluid Power World and EE World. These eleven categories represent products and components across the engineering spectrum.

- Additive Manufacturing
- Advanced Materials
- Connectivity
- Embedded Computing
- Fluid Power
- Industrial Automation
- Mechanical
- Motion Control
- Power Electronics
- Switches & Sensors, and
- Test & Measurement.

Our company's publications have acted as important information sources for readers over the past dozen years. We've presented new products across the mechanical and electrical engineering space, talking about their launches, looking at the applications where they're being used, and investigating how they fit into the bigger system design picture. LEAP now gives us a new

avenue in which to bring you additional, unique product information — what's truly innovative as well as what stands out among an always-crowded field.

Critical to LEAP's success is the involvement of the engineering community. No one here at WTWH selected the finalists and winners. Instead, our editorial team did the arduous work of assembling a top-notch independent judging panel, comprised of a cross-section of OEM design engineers and academics—18 professionals in total. This judging team was solely responsible for the final results.

For this year's awards competition, products had to have been released within the past two years and be available for commercial purchase in the United States. Finalists and winners in each of the 11 categories are listed on the following pages. The winners were announced at a gala awards banquet in conjunction with DeviceTalks West in Costa Mesa, California last month.

I'm pleased to introduce you to our esteemed judging panel.



Bonnie Baker
Consultant
ATW, LLC

Bonnie Baker is the author of six books, including *A Baker's Dozen: Real Analog Solutions for Digital Designers*. Baker holds a Master's of Science in Electrical Engineering from the University of Arizona and has authored more than 500 technical publications including magazine articles, app notes, seminar sessions, data sheets, and a few patents. She is also frequent presenter at technical conferences and shows.

She has been involved with analog and digital systems for more than 30 years. Baker started as a manufacturing product engineer, supporting analog products at Burr-Brown. From there, she moved up to IC design, analog division strategic marketer, and then corporate applications engineering manager. In 1998, she joined Microchip Technology. This expanded her background to not only include analog applications, but microcontroller solutions as well.



Carl Dekker
President
MET-L-FLO Inc.

Carl Dekker is President of Met-L-Flo Inc., a Contract Manufacturer specializing in 3D Printing and Additive Manufacturing. The company has been providing these services since 1991 and uses multiple different technologies for its clients. Dekker has presented his work at various conferences globally and has been published in various industry journals. He is currently the Chair of the ASTM F42 Committee on Standards for Additive Manufacturing, VP of the Additive Manufacturing Users Group, and a Past Chairperson of the SME's Rapid Technologies and Additive Manufacturing (RTAM) Community (formerly the RPA). He is also a proud recipient of the SLA "Dinosaur" award.

Past and present positions held include: Rapid Prototyping and Manufacturing Conference Advisor (2002-2018), Industry Advisory Board Member for RapidTech (2010-2014), RapidTech National Visiting Committee Chair (2011-2014), T.E.A.M. NAB (Technician Education in Additive Manufacturing National Advisory Board) Member 2011-2014, 2017, Museum of Science and

Industry Fab-Lab Advisory Board Chicago (2009-2012), Waubensee Community College Industry Advisory Board (2008-10), Valley Industrial Association Board Member (2009-12), National Design and Manufacturing Conference Advisor 2005, National Plastics Exposition Conference Advisor 2006 and 2009 and Secretary of the 3D Systems North American Stereolithography Users Group 2003 and 2004. He has also served as the Chair of many specialty programs and conference sessions.



Plamen Doynov
Research Professor
University of Missouri-Kansas City

Plamen Doynov became a research professor in physics last year, after a long and storied career that included stints as the Principal Engineer at MRIGlobal, a Biomedical Engineer at Flint Hill Scientific, and VP of Electrical Engineering at Aviation Simulation. He holds a PhD in Electrical Engineering and Computer Sciences from the University of Missouri-Kansas City and a Master's in Electrical Engineering from The Catholic University of America.

Doynov has been active in and a local board member of the IEEE and has won numerous honors and awards from the MRIGlobal Council of Principal Sciences, Boeing and the Bulgarian Society for Biochemistry and Biophysics. He has experience in electronics, electrical and biomedical engineering, as well as research and development of specialized scientific systems.



Bradford L. Goldense
President
Goldense Group Inc.

Bradford L. Goldense is a subject matter expert in the management and processes of product development, innovation and performance measurement. He has authored or been cited in more than 300 articles and books and holds nearly 150 registered copyrights.

Brad was a faculty member of the Graduate Engineering School Executive Program at The Gordon Institute of Tufts University for 19 years. He is internationally recognized and has

consulted with more than 200 of the Fortune 1000 in 500 manufacturing locations around the world. GGI has helped many companies to increase their stock price by improving R&D innovation and execution, and by improving communications of prowess to the marketplace and investor community.

He previously held positions at Texas Instruments, Price Waterhouse, Knight & Associates, Index Group, and a family engineering business before founding GGI. Brad has a BSCE from Brown University and an MBA from Cornell's Johnson School. He holds four professional certifications: New Product Development Professional by the Product Development and Management Association, Certified Manufacturing Engineer by the Society of Manufacturing Engineers, Certified Computer Professional by the Institute for Certification of Computer Professionals and Certified in Production and Inventory Management by the American Production and Inventory Control Society.

Brad was a founding member of the Society of Concurrent Engineering and founder of the Society of Concurrent Product Development which he ran until 2006. He retired from the board in 2012. His non-profit corporation lives on, with appreciated support and funding from 3M.



Geoffrey T. Haigh
Principal/Senior Partner
Haigh Consulting LLP

Geoffrey Haigh holds a BS in Physics and Instrumentation from Drew University and is a Principal Partner and Senior Scientist from Haigh Consulting, which creates IP and solves problems for clients. Haigh has 31 patents issues worldwide and was the originator and inventor of the ADI ICoupler technology during his time working for Analog Devices Inc. Devices he has designed and patented are on Mars rovers.

He also previously worked for Analogic Corporation on factory automation systems and nuclear measurement instrumentation.



Russ Hempstead
Senior Development Engineer
Just Right Surgical

Russ Hempstead has been working in the medical device industry for more than 25 years. He has focused on early stage design and development through manufacturing

of class II medical devices. Biomedical engineering was an obscure specialty when he attended college, so he pursued his degree in mechanical engineering with an emphasis in polymer science.

Hempstead has extensive experience in clinical settings for the purposes of early concept generation, as well as product launch. Clinical settings include animal and cadaver labs for product validation activities and hospital operating rooms for procedure familiarization and observation. He has led engineering teams in various facets of device development and manufacturing for the last 13 years. In all of those instances, he was an individual contributor in addition to the project manager. Hempstead has been considered a subject matter expert in the areas of plastic material selection for biocompatibility and sterilization, design for injection molding, design for manufacturability, and finite element analysis.



Sam John
President
Innovative Products Inc.

As President of Innovative Products, Sam John is responsible for the design and manufacturing of various custom-built automatic machines for different industries. He also resolves design and manufacturing issues, conducts project meetings and issue status reports, manages budgets, submits project proposals, and directs projects. He's worked with clients as varied as Medtronic, Tinker Air Force Base, GE Oil and Gas, and AVARA Pharmaceutical Services. Previously, he worked for Sorb Technology (now Fresenius) and Akzo-Nobel.

A member of the ASME, John has an MBA from Oklahoma City University, a Master's in Mechanical Engineering from the University of Oklahoma and a BS in Mechanical Engineering from the University of Calicut.



Dan Jones
President
Increment Associates

Dan Jones started as a production worker at a motor company in the late 1950s, balancing ac squirrel cage rotors and pressing shafts into rotors. He earned his BSEE from Hofstra University in 1965 and a Master's in Math from Adelphi University in 1969. He has more than 50 years' experience as a motor design engineer, manager, chief engineer, marketing director, vice president of marketing,

and consultant.

Jones is experienced in custom motion marketing activities, surveys and strategic planning meetings and is a Life member of IEEE. He employs SPEED and MotorCAD for the design of all types of linear, radial, flux, and axial flux machines, PM brushless, switched reluctance and induction machines. Jones is the author of more than 250 seminars, papers and technical articles on a wide range of motion control subjects. He was project manager for the design and development of six specialty DC motors used on the two Mars Viking Landers in 1976.



Robert Kollman
Director
Kollman Power Engineering

Robert Kollman is a power electronics designer and researcher with more than 45 years of experience, mostly with Texas Instruments. There, he led the development of high-volume power supplies for commercial production at TI's strategic customers. Kollman's Group developed more than 5,000 power supply designs — ranging from mW to kW of output power.

Kollman is a prolific author, with more than 150 published contributed articles including the well liked "Power Tips" series. He was heavily involved in the Unitrode Power Supply Design Seminars including writing articles and making presentations.



Thomas E. Manley
Engineering Manager
Feedall Automation

Thomas Manley is Manager of Engineering at Feedall Automation, where he directs and designs the machine orders that come through the engineering department. He is also a part-time engineering instructor at Lakeland Community College and is the designer of 14 U.S. Patents for various companies that he has worked for.

Manley has worked with high-profile companies such as Harley-Davidson, American Axle, Meritor, Caterpillar, and Ford Motor Company, among others. He helps companies and engineers implement automation systems into their plant, while adhering to their desired budget and goals.



Kristin Morris
Lead Electrical Engineer
Pacific Diabetes Technologies

Kristin Morris is the Lead Electrical Engineer at Pacific Diabetes Technologies, a Portland-based startup developing an integrated solution for glucose sensing and insulin delivery. She is involved in every level of design, from the low-level PCB and firmware, to mobile applications and data processing.

Morris holds a Master's of Engineering Degree in Computer Engineering from Portland State University. During her studies, she also received valuable work experience via internships at large corporate companies such as Intel, Mentor Graphics and Electro Scientific Industries (ESI). She then kicked her career off by continuing on at ESI full time, before making the leap into the startup world in 2013, where challenges, inspiration, failures and successes awaited.



Russell Olmsted
Project Engineer
Arrow Tech Company

Russell Olmsted is a Mechanical Engineer with experience in product development, product management, and distribution sales. He also has expertise in compressible and in-compressible fluid applications, fluid power applications and components focused on filtration, pump, and motors, and specialty and compressed gas components.

Olmsted is currently a Project Engineer at Arrow Tech Co., where he reviews and evaluates current work-flow processes with Arrow Tech and M&D Welding daily. His expertise involves developing contact-record-management (CRM) capabilities, providing technical support to marketing and operations to resolve any issues with existing products, and developing solutions to production problems related to materials, processes and tooling.



Ernie Parker
Retired Professor
Hennepin Technical College

Ernie Parker started his education at Granite Falls AVTI (now Minnesota West Technical College) and went to work at the Char-Lynn Company after graduating. He then joined the Army, where he was trained as a Radar Technician and served in Vietnam.

In 1971 he returned to Char-Lynn (now Eaton Corp.). He worked in various capacities as an Engineer, Assistant Purchasing Agent, Draftsman, Electronic Tech, and Hydraulic Tech. While at Eaton after the service, he attended evening school and obtained his teaching licenses. He eventually began teaching in the Fluid Power Technology area at Hennepin Technical College and became the manufacturing Department Chair in 1995. In 1977, he started Hydra Tech Inc., a consulting and fabrication company for hydraulics and pneumatics.

Parker has built more than 200 test benches, training benches, and all kinds of different equipment for companies like Boeing, Donaldson Co., 3M, John Deere, Caterpillar, Eaton and many others.

He is on both the Education Board and the Certification Board of the IFPS. Parker also works with the NFPA (National Fluid Power Association) with their bicycle vehicle challenge for university capstone projects. Hennepin Technical College Foundation receives his help as a Board of Directors member to support scholarships for students. He feels very honored that he has been able to help individuals find their direction in life and educated over 1000 students and industry personal over his career. In 2009 he received the "Educator of the Year" award from the Board of Trustee for the State of Minnesota that includes 37 two-year and four-year colleges, 54 campuses and more than 11,000 full and part time faculty.



Karl H. Schultz
President
Schultz Associates

Karl Schultz is the President of Schultz Associates, specializing in manufacturing and technical management consulting in the electric motor industry. He is also considered an expert in implementing lean/world class

business processes.

Schultz is an experienced hands-on manufacturing management consultant who has had both line and staff positions in the electric motor industry. He was the division Director of Manufacturing Engineering for Emerson Electric for 10 years, supporting four plants in the U.S. and Mexico. He was then the Business Director of Manufacturing Engineering at GE Motors for three years. Consulting has taken him worldwide in many various successful projects. He has more than 25 years in the electric motor industry.

Schultz holds a BSME in Machine Design from Western Michigan University. He was a member of the Electrical Manufacturing and Coil Winding Association, serving as the VP and a Board member. He is a senior member of the Society of Manufacturing Engineers and a past member of the Society of Automotive Engineers. He has received numerous awards such as Best Industry award (General Signal), Most Valuable Player award (BMI), performance awards (GE Corporate & Motors), and others. He is an adjunct instructor at the Oregon Institute of Technology – Wilsonville, teaching junior and senior level management courses such as Lean/6 Sigma and Organizational Behavior.



Bill Schweber
Engineer, Author, Editor
Jaffa Engineering

Bill Schweber is an electronics engineer who has written three textbooks on electronic communications systems, as well as hundreds of technical articles, opinion columns, and product features.

At Analog Devices Inc., he was in marketing communications, so he has been on both sides of the technical PR function, presenting company products, stories, and messages to the media and also as the recipient of these.

Prior to Analog, Schweber was associate editor of the company's respected technical journal, and also worked in their product marketing and applications engineering groups. Before those roles, he was at Instron Corp., doing hands-on analog- and power-circuit design and systems integration for materials-testing machine controls.

He has an MSEE from the University of Massachusetts and a BSEE from Columbia University. He is a Registered Professional Engineer and holds an Advanced Class amateur radio license. Bill has also planned, written, and presented on-line courses on a variety of engineering topics, including MOSFET basics, ADC selection, and driving LEDs.

**Tom Solon**

Director of Sales and Marketing
RH Murphy Co. Inc.

Tom Solon has a diverse engineering background in roles as both an OEM and supplier, spanning many industries, from housewares and consumer products, to semiconductor manufacturing and medical equipment technology. A recognized authority in linear motion products, plastics, and semiconductor handling, Tom has authored numerous articles and technical papers.

Tom earned his BSME in Machine Design and BA in Economics from Brown University and is a licensed Professional Engineer. He devotes much of his free time to public education as a school board member and technical education advisory board member.

**Michael Torres**

Chief Avionics Support Equipment
Engineer Naval Air Warfare Center,
Weapons Div. Point Mugu

Michael Torres' technical expertise is the design, development, and testing of advanced avionics (flyable electronics) that meet speed, size, weight, and power requirements of these systems. He focuses on the development of software mathematical algorithms to facilitate design solutions that meet these requirements.

Torres has developed and patented automated test systems for avionic systems and their test equipment. He holds nine Navy patents and is an expert in the development of manufacturing fixtures that simplify the manufacturing of components, reducing the manpower requirements and producing better and more repeatable results.

Torres holds a Master's of Science in Electrical Engineering specializing in Electronic Warfare from the Naval Post Graduate School, a Master's of Science in Electrical and Computer Engineering from University of California at Santa Barbara, and a Bachelor of Science in Electrical Engineering from UCLA.

**Mike Vasquez**

CEO
3Degrees, LLC

Dr. Mike Vasquez is a 3D Printing expert, specializing in pushing the boundaries of advanced 3D printing technology. He is the Founder of 3Degrees, a Chicago-based consulting company focused on helping organizations maximize their investment in the technology.

Over the past decade, Vasquez has worked side-by-side with some of the top machine manufacturers, material producers and end users in the industry, consulting with them to identify novel applications, test new materials, and develop frameworks to maximize R&D efficiency and boost ROI. He has also created a software tool called Trace. It aims to assist companies formalizing their use of 3D Printing to ensure they can meet quality and technical standards outlined by their supply chain and industry requirements.

Vasquez completed his PhD in Additive Manufacturing at Loughborough University and received both his Bachelor's and Master's from MIT in Materials Science and Engineering.

