Rensselaer Polytechnic Institute Hosts *FIRST*® Robotics Kickoff Event
High school students from the region and beyond set to take flight in FIRST® STEAMWORKS^{SM} Challenge

Troy, N.Y. — The *FIRST*® Robotics Competition season is now underway, following the kickoff event held on Jan. 7. This year, Rensselaer Polytechnic Institute will once again host the New York Tech Valley Regional competition March 16-18 on the Rensselaer campus in the East Campus Athletic Village. Thirty-six teams of high school students from the Capital Region, New York state, South Carolina, Canada, India, and Turkey will participate in the competition.

The kickoff program featured remarks from several guests including Shekhar Garde, dean of the School of Engineering at Rensselaer; Kimberly Ireland, community and customer program manager at National Grid; John Prybylowski, director of technology in the Naval Nuclear Laboratory at Bechtel Marine Propulsion Corporation (BMPC); David Torrey, manager of electrical machines laboratory at GE; and Thomas Caulfield, GlobalFoundries Fab 8 senior VP and general manager and chairman of the New York Tech Valley FIRST Executive Advisory Board.

Following the remarks, the full details of the 2017 competition challenge were revealed via a global live broadcast led by inventor and FIRST® Founder Dean Kamen before a crowd of more than 1,000 people at Southern New Hampshire University in Manchester, N.H., hometown of the FIRST headquarters. This year, more than 83,400 high school students on 3,336 teams at 123 venues around the globe in Australia, Canada, China, Dominican Republic, Israel, Mexico, Turkey, and the United States joined the 2017 Kickoff via Twitch Livestream.

"A lot of kids will tell you, 'I don't like science and math.' But they all love [science fiction]. Well, the only difference between science fiction and science is timing," said Dean Kamen, president of DEKA Research & Development. "We want kids, through their *FIRST* experience, to realize that whatever is in their imaginations could become reality if they develop the tools – science, technology, engineering – and apply those tools into innovations to turn today's science fiction into tomorrow's science."

The 2017 robotics challenge *FIRST* STEAMWORKS^{SM} invites two adventure clubs from an era in which technology relied on steam power to prepare their airships for the ultimate long-distance race. Each three-team alliance scores points and prepares to take flight by building steam pressure, gathering materials to start the rotors, and boarding robots onto their airships. The adventurer club with the highest score at the end of the match is the best prepared for the race and wins.

During the kickoff, teams were shown the game field and challenge details, and received a Kit of Parts made up of motors, batteries, control system components, construction materials, and a mix of additional automation components – along with limited instructions.

"The FIRST Robotics Competition isn't just about the robots," said Paul Schoch, associate professor in the Rensselaer Electrical, Computer, and Systems Engineering department, and director of the university's Center for Initiatives in Pre-College Education (CIPCE), who is serving as a co-chair along with Mary Burke, manager of special projects at NYSERDA. "The competition is about team management, fund raising, outreach, brainstorming, prototyping, and game strategy,in addition to the technical skills of mechanical design, computer-aided design, programming, electronics, and autonomous and tele-operated control. The competition season culminates in a series of high-energy, sports-like tournaments around the globe that match the excitement and glamour of varsity sport playoff games."

Schoch also noted that FIRST creates powerful mentoring relationships between students and a broad range of professional mentors, who are working in the fields of engineering, science, management, and manufacturing.

"Many of our mentors are from some of the most respected companies in their region, and the experiences and guidance that they offer to students is far beyond what happens in the classroom," Schoch said. "Students have an opportunity to work closely and learn from these mentors which can also inspire them to consider future careers in STEM."

In its fourth year, the New York Tech Valley *FIRST*® Regional Robotics Competition is the ultimate Sport for the Mind™ where imagination and innovation come together. By combining the excitement of sport and beauty of art with the rigors of science and technology, teams of high school students are challenged to design a team "brand," hone teamwork skills, and build and program robots to perform tasks against a field of competitors, according to the organization.

Working with adult mentors, students have six weeks to design, build, program, and test their robots to meet the season's engineering challenge. Teams will participate in one or more of the 145 Regional and District events that measure the effectiveness of each robot, the power of collaboration, and the determination of students. Some participating Capital Region teams are from Albany, Ballston Spa, Cambridge, Colonie, Latham, Shenendehowa, Shaker, Schuylerville, and Voorheesville high schools, among others. Teams also hail from other parts of New York state, including Potsdam, Oneonta, Carmel, and Brooklyn, along with a team from Dorchester, South Carolina, five teams from different regions in Canada, and a team from India and Turkey.

The 2017 *FIRST*® Championships will be held April 19-22 in Houston, Texas, and also on April 26-29 in St. Louis, Missouri. Participating FIRST Robotics Competition students are also eligible to apply for more than $30 million in scholarships from nearly 200 colleges and universities.

FIRST Robotics Competition New York Tech Valley regional sponsors and volunteers come from some of the most highly regarded organizations, including Bechtel, GE, National Grid, Rensselaer Polytechnic Institute, GlobalFoundries, ASML, KLA Tencor, M+W Group, Mattson Technology Inc, Turner Construction Company, Lam Research, SCREEN USA, Wonik IPS, Edwards, Applied Materials, nfrastructure, and PDF Solutions. Sponsors provide resources including time and talent from professional mentors, services, equipment, financial contributions, and volunteers.

The upcoming robotics competition is vital to The New Polytechnic, an emerging paradigm for teaching, learning, and research at Rensselaer. The New Polytechnic is transformative in the global impact of research, in its innovative pedagogy, and in the lives of students at Rensselaer.

NOTE:
For more information about the New York Tech Valley Regional, visit: http://techvalleyfirst.org/

To get a sneak peek of the *FIRST*® Robotics Competition STEAMWORKS theme, visit: http://bit.ly/2jbU3yb

To view the Jan. 7 *FIRST*® Robotics Competition Kickoff broadcast, visit: http://www.firstinspires.org/robotics/frc/2017-broadcast

About *FIRST*®
Accomplished inventor Dean Kamen founded [*FIRST*®](FIRST) (For Inspiration and Recognition of Science and Technology) in 1989 to inspire an appreciation of science and technology in young people. Based in Manchester, N.H., *FIRST* designs accessible, innovative programs to build self-confidence, knowledge, and life skills while motivating young people to pursue opportunities in science, technology, and engineering. With support from over 200 of the Fortune 500 companies and more than $30 million in college scholarships, the not-for-profit organization hosts the [*FIRST*® Robotics Competition](FIRST Robotics Competition) for students in Grades 9-12; [*FIRST*® Tech Challenge](FIRST Tech Challenge) for Grades 7-12; [*FIRST*® LEGO® League](FIRST LEGO League) for Grades 4-8; and [*FIRST*® LEGO® League Jr.](FIRST LEGO League Jr) for Grades K-4. [*Gracious Professionalism*®](Gracious Professionalism) is a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community. To learn more about *FIRST*, go to www.firstinspires.org

About Rensselaer Polytechnic Institute
 Rensselaer Polytechnic Institute, founded in 1824, is America's first technological research university. For nearly 200 years, Rensselaer has been defining the scientific and technological advances of our world. Rensselaer faculty and alumni represent 84 members of the National Academy of Engineering, 17 members of the National Academy of Science, 25 members of the American Academy of Arts and Sciences, 8 members of the National Academy of Medicine, 7 members of the National Academy of Inventors, and 4 members of the National Inventors Hall of Fame, as well as a Nobel Prize winner in Physics. With 7,000 students and nearly 100,000 living alumni, Rensselaer is addressing the global challenges facing the 21st century—to change lives, to advance society, and to change the world. To learn more, go to www.rpi.edu.

Contacts
FIRST
Ana Martinez
Mobile: (917) 361-2257
Email: anayz@firstinspires.org

Jessica Otitigbe | News and Editorial Services| Rensselaer Polytechnic Institute
Office: (518) 276-6050 | Mobile: (518) 466-3907 | Email: otitij@rpi.edu
Follow Rensselaer Polytechnic Institute on Twitter at: http://www.twitter.com/RPInews
For more story ideas, visit the Rensselaer research and discovery blog at: http://approach.rpi.edu