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Medtronic LaRC-SI and Radar Technologies International WATEX are the 2016 Space Technology Hall of Fame Inductees

02/25/2016

COLORADO SPRINGS, Colo. (Feb. 25, 2016) - The Space Foundation's 32nd Space Symposium will culminate on April 14 with ceremonies celebrating the induction into the Space Technology Hall of Fame® of two innovations developed for space that now improve life on Earth.

The 2016 inductees are:

- **Medtronic LaRC-SI**, revolutionary insulation for the treatment of heart irregularities
- **Radar Technologies International WATEX**, using satellite technology to locate water

The induction will be held during the 32nd Space Symposium at The Broadmoor in Colorado Springs, Colo., USA. These three events will honor the inductees:

- The Space Technology Hall of Fame® Private Induction Ceremony
- The Space Technology Hall of Fame® Cocktail Reception
- The Space Technology Hall of Fame® Dinner, co-sponsored by SpaceX

The Private Induction Ceremony is by invitation only, and the reception and dinner are open to all Space Symposium attendees. Reserve tickets in advance at www.SpaceSymposium.org.

The Space Foundation's Space Technology Hall of Fame was established in 1988 to increase public awareness of the benefits that result from space exploration programs and to encourage further innovation. Since then, 75 technologies have been inducted.

About Medtronic LaRC-SI[Share This](#)[Connect](#)[Feedback](#)

An Interactive Exhibition



Like so many prized finds, this discovery was accidental. While at NASA Langley developing materials for high-speed civil transport and lightweight rocket bodies, Dr. Robert Bryant noticed that an experimental polymer that should have turned into a powder instead remained soluble. Others repeated his experiment with the same results.

When Dr. Bryant left the research program there were no known applications for the material, but he continued research and developed what is now known as LaRC-SI: a durable thermoplastic readily fabricated in very thin form. The critical characteristic that led to medical applications is that it is biologically non-reactive and solvent resistant.

Once Bryant had refined production of the compound, several NASA centers began exploring applications, including small mechanical parts, flexible circuits, advanced fiber and ceramic matrix composites and durable coatings.

Medtronic became aware of the material and its unique qualities when LaRC-SI was recognized as an 'R&D 100' award winner.

Headquartered in Dublin, Ireland, with operational headquarters in Minnesota, Medtronic is a medical device company with a core business segment focused on electrical stimulation to treat irregular heartbeats.

Medtronic was interested in replacing the insulation layer applied to leads carrying electrical impulses directly to the heart. LaRC-SI showed great promise. Convinced of the enormous benefits of this new material, Medtronic spent more than 10 years and tens of millions of dollars to secure FDA approval.

The new insulation revolutionized the treatment of heart irregularities. The thinner, more flexible material allowed surgeons to get electrical impulses into areas previously too difficult to reach. And the more resilient new insulation significantly reduces lead failure over time and the number of high-risk procedures to correct the problem. In short, LaRC-SI use has led to decreased mortality rates and improved quality of life for thousands of people.

Since receiving FDA approval in 2010, more than 660,000 of the new leads have been sold and Medtronic continues research of LaRC-SI use in other medical devices.

About Radar Technologies International WATEX

Dr. Alain Gachet founded Radar Technologies International in 1999 to use satellite generated remote-sensing data to identify probable locations of precious metals. Analyzing satellite data in pursuit of precious metals in the Libyan Desert, Dr. Gachet made a surprising discovery. He identified a significant water leak in the Libyan water pipeline and realized that he could use satellite data to locate water.

Dr. Gachet developed the WATEX system to pinpoint drilling locations with the highest probability of success. The system uses a variety of data with the primary sources being: NASA's Shuttle Radar Topography Mission; NASA's Spaceborne Imaging Radar; and the joint NASA and U.S. Geological Survey's Landsat Program.

These three sources provide roughly 80 percent of the data inputs to the WATEX analysis. Depending on the region of the earth being analyzed, additional data are used to increase accuracy. These sources have included the Canadian Space Agency and the Japan Aerospace

Exploration Agency.

The first significant system success came in 2004 during the Darfur crisis -- a major armed conflict in western Sudan. Some 250,000 people were forced into refugee camps. The United Nations High Commissioner for Refugees contacted RTI for assistance in locating water sources for the evacuees. Over the next four months, RTI located enough water to sustain the camp.

At this time, the US Agency for International Development (USAID) had been providing assistance to another two million refugees. When they learned of RTI's success, USAID engaged Dr. Gachet and his team who located more than enough water to sustain the refugees.

USAID and the U.S. State Department brought in Dr. Saud Amer to evaluate RTI's approach. Dr. Amer, a remote-sensing specialist with the US Geological Service (USGS), recognized that RTI's approach was truly unique. Prior to RTI's involvement, the NGO's responsible for locating water sources had a success rate of around 33 percent. Using RTI, success soared to 98 percent.

The U.S. Government appointed Dr. Amer to coordinate work with RTI during the Darfur crisis. He has continued his role for the past 10 years, helping RTI locate crucial water sources in some of the most challenging parts of the world -- including Afghanistan, Ethiopia, Kenya and Iraq.

NASA, the USGS and other space agencies have made remote sensing data openly available. This free exchange of information and knowledge allowed Dr. Gachet and RTI to develop the unique WATEX system, and to significantly improve the lives of millions of people around the world.

2016 Individual Inductees

The following individuals are being inducted into the Space Technology Hall of Fame®.

For Medtronic LaRC-SI:

- **Dr. Robert Bryant**

For Radar Technologies International WATEX:

- **Dr. Alain Gachet**

Commendation:

- **Dr. Saud Amer**

2016 Organizational Inductees

The following organizations are being inducted into the Space Technology Hall of Fame®.

For LaRC-SI:

- **Medtronic**
- **NASA Langley - Advanced Materials & Processing Branch**

For WATEX:

- **NASA**
- **Radar Technologies International**

About The Judges

The distinguished panel of judges who selected the 2016 Space Technology Hall of Fame® inductees comprised:

- Anousheh Ansari, CEO, Prodea Systems
- Amir Blachman, Managing Director, The Space Angels Network
- Richard Cooper, Vice President, Emerging Issues & Research, U.S. Chamber of Commerce Foundation
- Gabriel Figueiró, Education Outreach/Technical Advisor, Brazilian Space Agency
- Laetitia Garriott de Cayeux, Co-founder & President, Escape Dynamics
- Dr. Sandra Magnus, Executive Director, AIAA
- WingCmdr Rayna Owens, Wing Commander, Royal Air Force, UK Ministry of Defense
- Nobuto Yoshioka, Deputy Director, WDC Office, Japan Aerospace Exploration Agency (JAXA)

Nominate Technologies for 2017 Space Technology Hall of Fame

The deadline to submit nominations for induction during 2017 will be Aug. 15, 2016. Anyone may submit a nomination of a technology that was developed anywhere in the world for use in space and then modified or adopted for use on Earth. Nomination information, including online and downloadable nomination forms, is available at www.SpaceTechHallofFame.org.



About the Space Foundation

Founded in 1983, the Space Foundation is the foremost advocate for all sectors of space, and is a global, nonprofit leader in space awareness activities, educational programs and major industry events, including the annual [Space Symposium](#), in support of its mission "to advance space-related endeavors to inspire, enable and propel humanity." Space Foundation World Headquarters in Colorado Springs, Colo., USA, has a public [Discovery Center](#), including El Pomar Space Gallery, Northrop Grumman Science Center featuring Science On a Sphere® and the Lockheed Martin Space Education Center. The Space Foundation has a field office in Houston and conducts government affairs from its Washington, D.C., office. It publishes [The Space Report: The Authoritative Guide to Global Space Activity](#), and through its [Space Certification™](#) and [Space Technology Hall of Fame®](#) programs, the Space Foundation recognizes space-based innovations that have been adapted to improve life on Earth. Visit www.SpaceFoundation.org, follow us on [Facebook](#), [Instagram](#), [LinkedIn](#), [Pinterest](#), [Twitter](#), [Google+](#), [Flickr](#) and [YouTube](#), and read our e-newsletter [Space Watch](#).

Media Contacts

Carol Hively, Director - Public Relations and Team Communications
Media@SpaceFoundation.org
HQ: +1.719.576.8000

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4425 Arrowswest Drive, Colorado Springs, CO 80907 USA • HQ: +1.719.576.8000 • +1.800.691.4000

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