

Remembering Dr. Javad Ashjaee, Pioneer and Visionary

DR. JAVAD ASHJAEI
 Founder and CEO of JAVAD GNSS
 1949–2020



Photo: Javad GNSS

Javad Ashjaee, founder of Javad GNSS, died in Moscow, Russia, on May 30 after a three-week fight with COVID-19.

A tribute on the company website shared, “It is with heavy hearts that we share the news of the passing of our founder Dr. Javad Ashjaee, a GPS/GNSS pioneer and visionary. Over the course of 37 years, Javad made an incredible and far-reaching impact on the GNSS community. He pioneered the world’s most advanced GNSS technology through a multi-national effort that combined GPS and GLONASS and established more than a quarter century of partnership between Silicon Valley and Moscow. He was always proud of this ‘success story of cooperation.’ Javad was a true industry disrupter long before the term and concept became popular. His whole way of doing business was challenging and disrupting to the status quo.”

Dr. Ashjaee described the founding of his company on the JAVAD GNSS website. “In 1998 I founded Javad Positioning Systems (JPS) and introduced Legacy, Odyssey and Regency products, followed by HiPer. It was a 76-channel geodetic receiver. Other companies later copied HiPer.

“In 2007, after my obligations to Topcon ended and

according to the provisions of our agreement, I founded Javad GNSS and introduced Triumph products. These were 216-channel receivers, integrated with several communication channels. We also introduced their Alpha, Delta, and Sigma versions. We were again the first to offer European Galileo and Japanese QZSS tracking in mass production. Triumph technology has been shown to have the best signal quality and best multipath reduction capabilities against all others tested by the German Aerospace Center. We also introduced GLONASS inter-channel (group/carrier delay) calibration to 0.2 millimeter which made GLONASS FDMA as good as GPS CDMA. Javad GNSS is growing fast and gaining market share.”

A Journey from Iran to the U.S.

Dr. Ashjaee’s nephew Dr. Sol Adibnejad provided a short biography on his uncle via social media: “Javad was born in 1949 in Qom, Iran. After finishing his bachelor’s degree in electronic physics from the University of Teheran in Iran, he left Iran in 1972 to continue his education at the University of Iowa and earned his graduate degree, a doctorate in 1976.

“He went back to his native country Iran to teach at the university. He became the chairman of the Department of

MESSAGE FROM THE ASHJAEI FAMILY

“Once in a while an individual comes along with a spirit seemingly superhuman, a resolve and constitution seemingly indestructible. Javad Ashjaee was one such individual. His talent, intellect, commitment and sheer guts were head and shoulders above the rest, much to the chagrin and frustration of his competitors and naysayers. But those closest to him know that he was also simply, beautifully, erringly human. He brought out in the rest of us the strength and wisdom we could not always see in ourselves. Yes, he was a force of nature, as many describe, but Javad never did anything alone. Throughout the years, he has had a sizable family and team, by blood as well as by love, behind each of his many achievements and contributions to his field. He once told us his name, Javad, means ‘generous.’ And that he was. All that he has given to, and all that he has inspired in, his family, team, and professional industry, forms a legacy that will continue for years to come. We, his family, his team, his protégés and protectors, are here to stay and stronger than ever. If he were here, he would surely wonder how his competition would proceed without that fire only he could ‘light up their asses.’”



A SAMPLING OF JAVAD ASHJAEI'S KNOWLEDGE SHARING IN *GPS WORLD*

"How GPS and GLONASS Got Together — and Other Recent Events," June 2011, p. 60.

"Dealing with Interference: A Proactive Approach for More Efficient Spectrum Use," December 2012, p. 30.

"Expert Opinions: What is the biggest challenge facing designers of multi-constellation GNSS receivers today?" January 2018, p. 8.

"The Key to Accuracy for High-Precision Applications," February 2019, p. 40.

Computer Engineering at the Aryamehr University of Technology where he founded and managed a UNIVAC-100 computer center. There, he created the first Iranian microprocessor lab. In 1978 he created one of the earliest student online and interactive registration systems in the world. In a few years and after the 1978 revolution and the political turmoil, things happened and he had to flee the country in 1981.

"He went straight back to the U.S. and started the next chapter of his journey in life, which led to the pioneering of GPS. He spent the rest of his life designing and manufacturing many generations of his [GNSS] products at JAVAD GNSS, JAVAD ArWest and JAVAD EMS in Silicon Valley. Dr. Javad Ashjaee is listed as the primary inventor in 102 granted patents, the last one in April 2020." 🌐



Photo: GPS World

DR. ASHJAEI LED THE SIGNALS TEAM of the "Satellites vs. Signals" after-dinner debate at the *GPS World* Leadership Dinner held during ION GNSS 2008.

Industry Stalwarts Remember Change Agent Javad Ashjaee

The GNSS community was deeply saddened by the loss of Dr. Javad Ashjaee — Javad, as he liked to be called — on May 30. Following are excerpts of comments by *GPS World* Editorial Advisory Board members and others, all of whom also expressed their heartfelt sorrow.

JULES MCNEFF

VP OF STRATEGY & PROGRAMS

OVERLOOK SYSTEMS TECHNOLOGIES

//Javad was a brilliant innovator, although he could be a bit infuriating at times. He loved to place ads in *GPS World* in part to poke fun at the DoD for our Selective Availability policies, for which I was the principal defender at the time. Javad was a unique and talented person of tremendous fortitude and intellectual confidence who was never afraid of controversy. The GNSS community will miss his energy."

MITCH NARINS

CISSP/FRIN

STRATEGIC SYNERGIES, LLC

//When I think of Javad, the words that come to mind are 'brilliant, dedicated, driven, and committed.' The last time I saw Javad at an ION GNSS+ conference he knew he was on the side of an argument opposing many other experts in our GNSS community. That did not bother Javad. He was never one to go along to get along — which was one of the reasons he was able to develop such innovative and capable systems. Our GNSS community has lost a leader, innovator, and contributor to the science and engineering behind position, navigation, and time."

PAUL MCBURNEY

PH.D., CTO AND CO-FOUNDER

ONENAV

//Javad was a one-man army who was not afraid to fight. From his days at Trimble, where he developed major advancements in receiver software, and through all of his endeavors, Javad produced an impressive amount of truly innovative solutions. He used the LightSquared crisis as an opportunity to add novel front-end filtering to his

products, and cleverly marketed it. His writing was unmistakable, featuring the wordsmithing of both an engineer and a salesman. He was a role model to many aspiring GPS entrepreneurs."

TIM BURCH

DIRECTOR OF SURVEYING

SPACECO

//Javad's contributions to the surveying profession helped turn every practitioner into a geospatial information provider. From his early days at Trimble pioneering the commercial-grade receiver to creating his company at Ashtech and embracing GLONASS with GPS, he continued to expand the capability of the GNSS receiver. Many surveyors today, however, only know his name through his latest company, JAVAD GNSS, and its unique line of receivers and measuring devices, with their distinct green color. Javad was a big part of the GNSS revolution, so the next time someone starts up his/her receiver to collect survey data, take a moment to thank him. His departure leaves a giant hole in the geospatial world."

MICHAEL SWIEK

MANAGING DIRECTOR, EXECUTIVE

BRANCH AND INTERNATIONAL

GPS INNOVATION ALLIANCE

//The 'Original Cast' of GPS innovators is dwindling. Javad was a complicated, self-made, innovative, and entertaining man. In the many years we knew each other, we worked on shared visions, many challenges, laughed a lot, and disagreed and argued more than a bit. We always remained friends, honest to each other. Javad was a true GNSS pioneer."

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JAVAD

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ELLEN HALL

PRESIDENT AND CEO

SPIRENT FEDERAL SYSTEMS

//What a loss for everyone. Such a talented person who truly made his mark on the world"

GREG TURETZKY

CONSULTANT

//I have very fond memories of Javad from the many years we attended ION GNSS+ and other industry conferences. I will always remember a spirited 'Satellites vs. Signals' debate we had at a *GPS World* Leadership Awards Dinner. We were equally passionate about the debate — despite not having chosen the opposite sides to which we were attached. These are the memories of Javad I treasure. He was passionate, informed, innovative and really good at playing the game. His spirit of innovation

will be missed, but I am confident it will be carried on by other members of the GNSS community of which he was such an important part."

ALISON BROWN

PRESIDENT & CEO

NAVSYS

//I am so sorry to hear about Javad's passing. He was an innovator and an originalist. We worked together after he left Trimble and was in the process of starting Ashtech. I particularly remember his championing the cause, with me, against Selective Availability. He ran an ad with the iconic image of the Mona Lisa as part of this cause, with the slogan "Why ruin a work of art?" It is tragic that Javad fell victim to COVID-19. He will be sorely missed." 🌐