

Intellectual Trajectories

George Hirasaki, A. J. Hartsook Professor in Chemical Engineering and Chemical & Biomolecular Engineering Emeritus

George Hirasaki's loyalty to Rice and his research transcends expected norms.

"I am living my dream," says ARRUF member George Hirasaki. "As a PhD graduate student at Rice, I dreamed that one day I would be a faculty member at Rice University. I would spend the final years of my career doing research while teaching the next generation how it is done and travel the world teaching about our discoveries. This year, I spent one week co-teaching at the Delft Summer School on wettability and I lectured and consulted for three days with SINOPEC in

Shanghai. I continue to teach the same courses and do the same research as when I was a regular faculty member."

His passion for research on Enhanced Oil Recovery (EOR) and Formation Evaluation with Nuclear Magnetic Resonance (NMR) matches his love of extreme sports.

"I can no longer windsurf in Maui, heliski, and climb the highest mountains but I can still windsurf in Galveston Bay, ski in Jackson Hole, and go hiking in the Alps," he says. This July, he trekked the "Tour du Mont Blanc" in the French Alps with wife

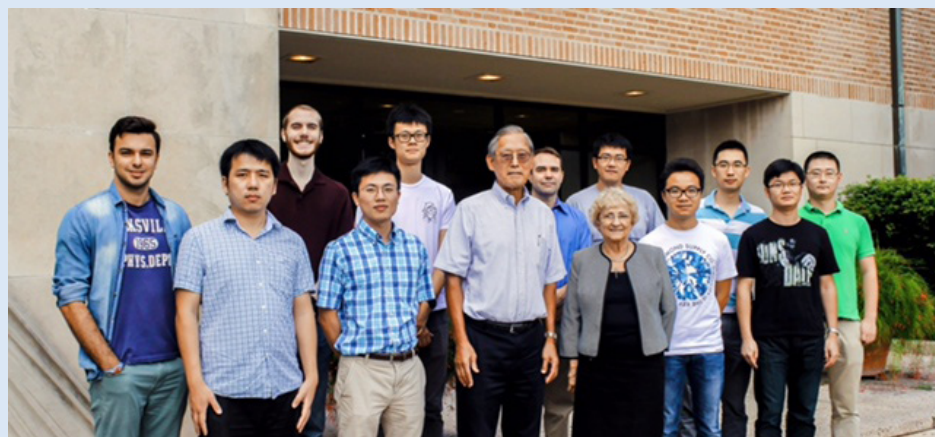
Darlene. They relaxed, sipping coffee in Chamonix after he revisited the site of his climb to the peak of Mont Blanc, the tallest peak in Western Europe.

They live in Bellaire in a Japanese-style home designed by a Rice graduate architect. Before they travel to Japan, they take refresher classes at the Glasscock School of Continuing Studies. "I started school the year after World War II and some students identified me as the enemy and picked fights. I fought them and they did not bother me anymore. Yet because

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The sweeping Shumard Oak in front of Abercrombie Lab was dedicated to Dr. George Hirasaki.



Dr. George Hirasaki's chemical engineering research team in front of Abercrombie Laboratory.



(above) George Hirasaki – with pilot – discovered that paragliders at Mont Blanc can rise up from launch point. (at left) George Hirasaki windsurfing on the north coast of Maui. Photos by Darlene Hirasaki.

of that, we stopped speaking Japanese.”

He is the son of the late Tokuzo Hirasaki and the grandson of K. Kishi, founder of the Japanese colony in Orange County in 1907. The colonists originally raised rice, and formed a petroleum company once oil was discovered on the property.

“My father would sometimes talk with me when we were alone and he said that he hoped that one of his children would grow up to be a diplomat or scientist. At that stage in my life, I was not very diplomatic so I inferred that he wanted me to be a scientist. I believe that he wanted to be an engineer himself. He worked his way through college by land surveying in California. Now I realize that in the 1920s, engineering was not a profession open to Japanese in California. Thus, he got a degree in horticulture from UC Davis because there were many Japanese farmers in the US. I discovered his college chemistry book when I was in the 8th grade. I was doing organic synthesis before I took high school chemistry. I dedicated my PhD thesis to my parents. The next time I came home, he was sitting in his chair reading my thesis. I asked him if he understood what was written there. He said, “Just a little.”

George earned his PhD in Chemical Engineering from Rice in 1967. His thesis was awarded the Ralph Budd award for the best PhD thesis in engineering.

Hirasaki joined the Rice faculty after a 26 year career with Shell Development and Shell Oil Company. His research in fluid transport through porous media ranged from the microscopic scale intermolecular forces governing wettability to the megascopic scale numerical reservoir simulators for field-wide modeling.

The walls of his office are lined with books. “Books are like treasures,” he says. “After I learn the contents, I like to refer back. I seldom have time to read entire books but I am reading sections from books on NMR, wettability, and organic shales. The last film we were trying to see while returning from Europe was, “Hidden Figures,” a story of the early Black women ‘computers’ for NASA as the USA was competing with the Soviet Union in the space race.” The film was nominated for three Academy Awards in 2017, including Best Picture.

“I also have an industrial consortium

on Processes in Porous Media,” he says. “A reoccurring theme throughout this research is the dominance of interfaces in the determination of fluid transport processes. Fluids flow through rock and soil in pore spaces that are on the order of microns.

One may find the magnetic man in Room B-245 in Abercrombie Laboratory, where his graduate students gather to share their latest findings. He continues his role as an associate at Lovett College. He became Emeritus in 2013. “I still teach the same courses and co-advise with

Webster. George and Riki collaborated in NMR research when George first joined the faculty full-time.

Among the honors from industry, government agencies and professional societies, he is proud of his election to the National Academy of Engineers in 1991. He also received the Lester C. Uren Award from the Society of Petroleum Engineers (SPE) in 1989 for distinguished achievement in the technology of petroleum engineering. He won the SPE/AIME Lucas Gold Medal and the Offshore Technology Conference’s Heritage Award,



Under the snow slope: hikers rope together on the glaciers of Mont Blanc for safety in case one slips or falls into a crevasse.

younger faculty members.

“When my mother and uncle spoke about the Rice Institute, they did it with a different tone of voice,” Hirasaki recalled. “I knew it was a very special place because of the way they spoke about it. I later learned that they had a cousin who graduated from Rice in 1939.”

“My father said, ‘One of the Kobayashi boys is on the faculty there (at Rice); you should look him up.’” That faculty member was Riki Kobayashi — another of Rice’s NAE members and the Louis Calder Professor Emeritus in Chemical and Biomolecular Engineering — who’d grown up in another of southeast Texas’ Japanese immigrant communities near

both in 2016.

Hirasaki became the president of the Houston chapter of the Japanese American Citizen League (JACL) in 2002, and was instrumental in compiling an online archive of Southeast Texan Japanese-American family histories. He was awarded the Order of the Rising Sun in a ceremony in 2009 by the Japanese consulate in Houston. The Order was established by Emperor Meiji and is the oldest national decoration awarded by the Japanese government. Hirasaki was pleased to discover that his grandfather received the same award from Emperor Meiji more than 100 years ago.