



**Geological Society of America
Structural Geology & Tectonics Division**

**2022
Career Contribution Award
Presented to Peter Molnar**

Citation by Elizabeth Schermer

We are honored to present Peter Molnar the Career Contribution award of the SGT division of GSA, and heartbroken to have to present this award posthumously. Peter made unparalleled contributions to tectonics for more than 50 years, starting from the early days of plate tectonics. His research in seismology, geodynamic modeling, geomorphology, structural geology, paleontology, and climate all related to tectonics. Peter especially enjoyed doing field work and valued the importance of field data to constrain tectonic models. Together with students and colleagues at MIT, the University of Colorado, and around the world, Peter made contributions to our fundamental knowledge of plate tectonics, continental tectonics, and the tectonics-climate connection. He further contributed to our community through his mentoring of students from the US and abroad and who continue this research.

Peter began research on central Asian tectonics in the mid-70's as part of a greater passion to understand continental deformation. Peter always focused on the big questions and looked for simple physical explanations, asking fundamental questions such as: how did the topography and lithospheric structure in the Himalayas and Tibet develop?, why are Tibet and the central Andes so high and flat?, and when and how did they reach their present elevations? How can we distinguish a tectonic signal from a climatic one? Subsequent publications focused on surface uplift, the paleoaltimetry data that constrain the timing and magnitude of uplift, and geophysical constraints on the kinematics and rates of deformation from the surface to the deep lithosphere beneath Asia. The 1993 Reviews of Geophysics article by Molnar, England, and Martinod, whose title "Mantle dynamics, uplift of the Tibetan Plateau, and the Indian monsoon" indicates Peter's range of interconnected interests, resulted in a new and still ongoing debate on the timing and cause of uplift of Tibet. Peter's early publications are still highly cited and are used to teach the current generation of university students, and his recent publications have broken new ground.

Peter's work touched the field of structural geology in fundamental ways. In the early days of plate tectonics, Peter recognized the important differences between continental and oceanic lithosphere, and related experimental rock mechanics results to mountain-building. His 1988 Nature paper "Continental Tectonics in the Aftermath of Plate Tectonics", showed very clearly how and why plates with continental and oceanic crust behave differently, bridging concepts from rheology and structural geology to global tectonics, and from plate kinematics to dynamics.

Peter's expertise spanned an enormous range of topics, space, and time-scales, from Archaean sea level to the elevation of modern orogenic plateaus, and from the lower mantle to the top of the highest peaks. With the 1990 Nature article "Late Cenozoic uplift of mountain ranges and global climate change: chicken or egg?" with coauthor Philip England it could be argued that he spurred a new research direction in SGT, that of the interactions between tectonics and climate, and two generations of SGT researchers have followed in these footsteps.

Peter developed strong collaborative relationships with scientists from around the world. He committed time to learning about the culture and language of the places he traveled for science. These global colleagues were welcomed by Peter and his beloved wife Sara to their home in the mountains of Colorado where they were treated to constant lively scientific discussions over food and drink.

Peter was a role model and inspiration for many, not only for his approach to science, but also for being kind and supportive, especially to younger colleagues. We are delighted that SGT has chosen Peter Molnar as the recipient of this year's Career Contribution award. He will be greatly missed by all in our community.

Response by Vivian Molnar (Peter's Granddaughter)

On behalf of my family, I'm honored to accept the Career Contribution Award given to my grandfather Peter Molnar. Thank you to Liz and Mary for nominating him. He was very pleased when he found out he was to be given this award.

My grandfather, as he said in his Craaford acceptance speech, studied mountains. However, this was not the only thing he took interest in. When I was four months old, He took me in his arms and gave a dry lecture on positive degree days.

I fell asleep.

The next day, he sat down with me to talk about erosion.

I fell asleep again.

Of course, that was his goal.

As I grew older, we began to have discussions, both academic and not. Of course they were always pedantic. Peter loved to argue, and passed that on to me.

We spent a lot of time quibbling while doing the dishes together. I distinctly recall a discussion regarding appropriate dinner food for canoe camping. He claimed that spaghetti every night was perfectly adequate.

He was wrong.

Peter loved a good adventure, and some say that he used his research as an excuse to get as many good adventures as possible. I got to go with him to some beautiful places – Sweden, Ecuador (including the Galapagos islands) and, much closer to home, the beautiful Rocky Mountains.

Ever a teacher, Peter was the one who showed me how to filter the water the first time we went backpacking. He also taught me to keep a close eye on the chipmunks And how to light a stove.

These skills have come in handy in subsequent adventures.

If Peter were here to accept this award, he would be thanking everyone who was part of his career. All of you were incredibly important in his life. Though we saw a different side of him – as family rather than colleagues – we are sure we share the same Peter-shaped hole in our hearts. Many people have told us they are sorry for our loss. We are sorry for yours as well. Peter meant a lot to all of us.

Thank you.