My Recollections of Bill Wulf

by Gabriel Robins
March, 2023

also available in HTML format
(The text below includes live Web links below to corroborative sources and high-resolution photos.)

Bill Wulf (1939-2023) was one of the most impressive leaders, individuals, researchers, and visionaries that I have ever met. He was an inspiring role model and excellent mentor to many people, myself included. Bill often said that "*it is better to build bridges than walls*", and he lived his life accordingly. He was remarkably good at connecting disciplines and creating synergisms, with one impactful example being UVa's Institute for Advanced Technology in the Humanities, which helped revolutionize humanities research in the early 1990's.

Bill was an early steadfast proponent of inclusivity and diversity in all of its forms. In the 1980's Bill coined and popularized the concept of "collaboratories" – i.e. "centers without walls". Bill implemented and operationalized this overarching philosophy as Assistant Director of the National Science Foundation (NSF) and as President of the National Academy of Engineering, which in turn inspired many high-profile collaborative organizations and centers, including UVa's new School of Data Science and it's various partnerships. Bill strongly supported cross-disciplinary research long before it was in vogue.

Bill was widely recognized as a superb communicator of engineering and science policy. He often emphasized the importance of ethics and societal impact in engineering and science. Bill insightfully noted that "*there is only one nature - the division into science and engineering is a human imposition, not a natural one; indeed, the division is a human failure - it reflects our limited capacity to comprehend the whole.*" Bill's holistic approach to engineering, research, and invention has proved very prescient, and will continue to inspire and guide new generations of thinkers and scientists who welcome discovery across disciplinary boundaries.

Bill's humility, dignity, graciousness, and good humor are also legendary. Following the stellar and effusive introductions by hosts before his speeches, which typically enumerated Bill's long list of impressive accomplishments, Bill would often quip "*this is the kind of introduction that my dad would have appreciated, and my mom would have believed!*" ☺ Bill's empathy, collegiality, and diplomacy were always in high demand, and he was often called upon into "elder statesman" roles to help advise and coach institutions and agencies that sought improvement.

Bill always elevated and empowered everyone around him, and was very generous in sharing credit with others. I often observed that when colleagues deliberated complex or thorny issues, their discussion would inevitably pivot to the rhetorical question "what would Bill have said about this?" My very high esteem of Bill and his ethos is widely shared by everyone that Bill mentored, taught, or worked with (including our colleague Randy Pausch who credited Bill with much of his own success).

Bill was the kind of ethical and courageous leader that naturally inspired people into their own "I'm Spartacus!" moments (e.g. his famously heroic and principled stance helped resolve UVa's 2012 administrative crisis - see related photos below). Bill and I shared a strong sense of history, and his personal collection of classical computer artifacts became the basis of UVa's Computer Museum (located on the top floor of UVa's Rice Hall). Bill's love of gardening and "country living" inspired my own gardening and home projects.

Bill's wife, Anita Jones, shares all of Bill's values and philosophy, and she too is a formidable leader, mentor, visionary, and pioneer. UVa recruited both Bill and Anita in 1989, when Anita became Chair of Computer Science, and in the 1990's she managed the U.S. Department of Defense's multi-billion dollar R&D budget as Director of Defense, Research, and Engineering (DDR&E). Both Bill and Anita have always emphasized the value of collegiality, collaboration, civility, patience, cooperation, healthy social dynamics, and the critical importance of good science and technology policy. Anita introduced me to defense science and national security boards and panels, which led to the most fascinating experiences and site visits of my life.

I was always very impressed to observe that both Bill and Anita possess excellent "meta-cognition" - the ability to reason about thinking itself, including a keen awareness of the more subtle yet powerful effects of one's words and actions on other people. This rare and critically valuable strategic skill greatly enhanced their ability to better understand people, resolve issues, motivate colleagues to reach new levels of excellence, and inspire people to become the best versions of themselves. Bill and Anita made a wonderfully amazing team, and their contributions and achievements are likewise intertwined. Together as a "power couple", Bill and Anita were instrumental in propelling UVa into the technological and scientific powerhouse that it is today.

We are all very fortunate to know both Bill and Anita as colleagues, mentors, leaders, role models and friends. We will always continue to "pay forward" Bill and Anita's teachings, wisdom, and ethos. Their legacy and positive impact will endure and benefit many generations to come.

Bill's insights can be seen in his various speeches and presentations, including the following:

1. Bill Wulf's interview at UCSD, 2008

2. Bill Wulf luncheon address at the MIT Engineering Systems Symposium, 2004

3. Bill Wulf's remarks following his ACM Policy Award, 2017

4. Bill Wulf's thoughts on Engineering Education in the 21st Century, 2009

5. Bill Wulf's IEEE Keynote Address, 2010
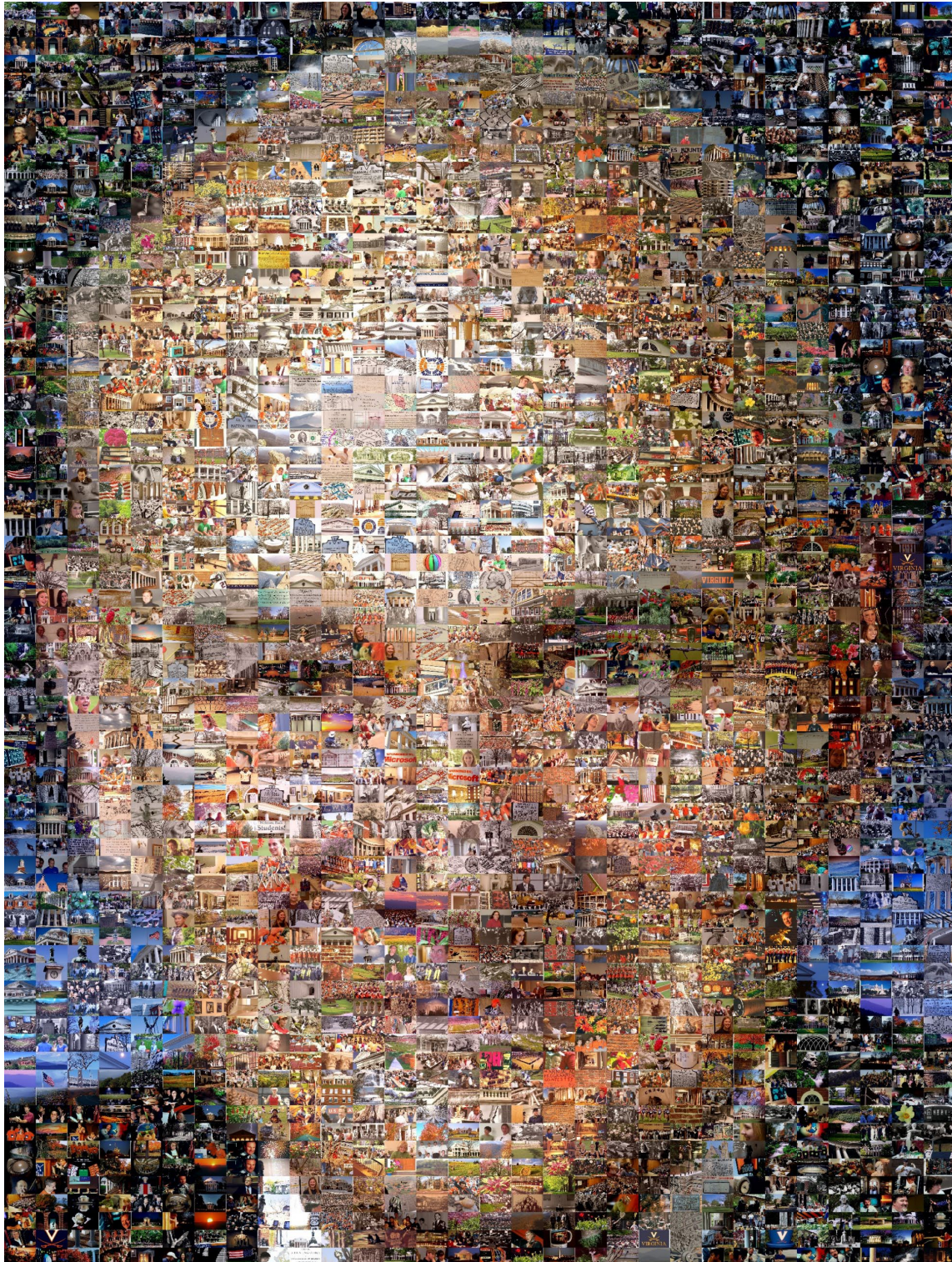
6. Bill Wulf's talk on Improving the U.S. Innovation Ecology, 2009

Bill Wulf, Anita Jones, and their dog, at their house with Gabe Robins in 1994:

Bill Wulf was an excellent woodworker and an avid gardener. He purchased fertilizer and mulch by the truckload, and he used his two tractors to cultivate his garden - see below:

Below is a photomosaic of Bill Wulf, algorithmically composed of over 2,000 UVa-related individual photos, illustrating his impact and influence on science, engineering, and UVa. A high-resolution version of Bill's photomosaic is also available (created in 2006 by Gabriel Robins), which may be freely used for all purposes, including in publications, Web sites, and news articles.
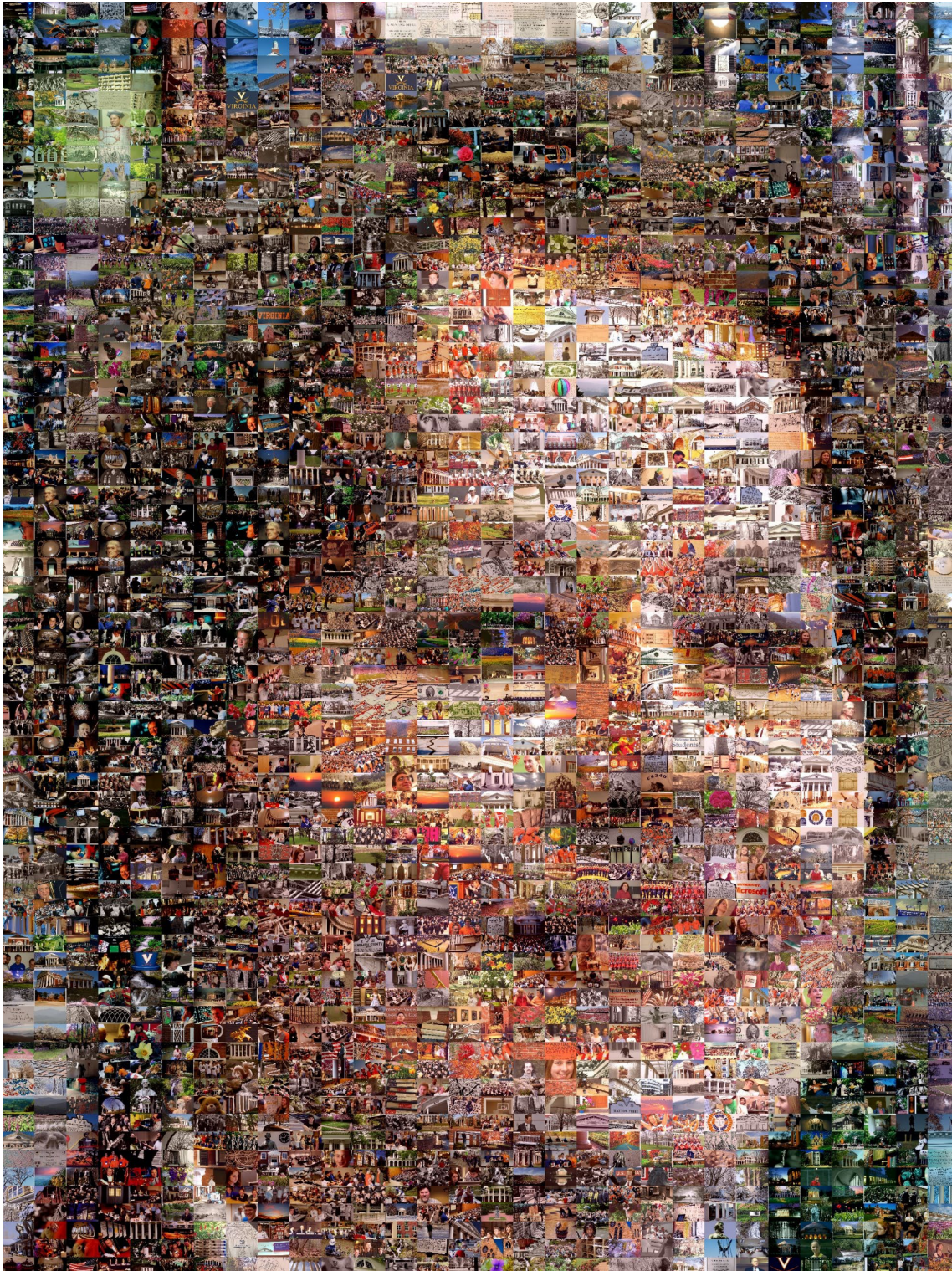
An example of Bill Wulf's influence and leadership, which helped resolve UVa's 2012 administrative crisis. A high-resolution version of this photo is also freely available.

An example of Bill Wulf's influence and leadership, which helped resolve UVa's 2012 administrative crisis. A high-resolution version of this photo is also freely available.

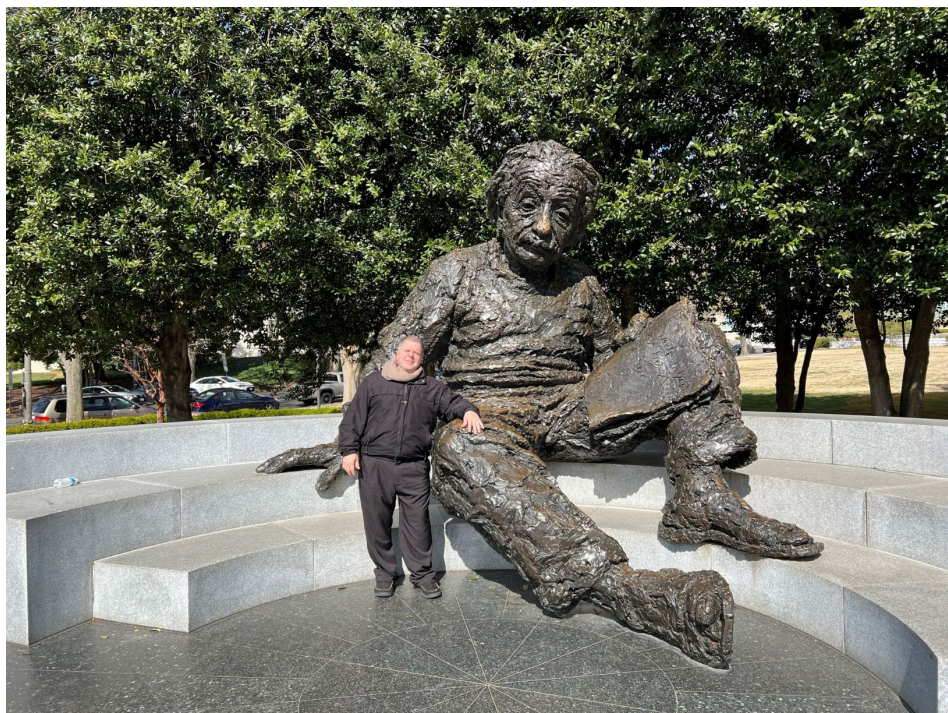Close-up of the top of the above photo, showing a placard referring to Bill Wulf as "our hero":

Photomosaic of Anita Jones (Bill Wulf's wife), composed of over 2,000 UVa-related individual photos, illustrating her own impact on UVa, science, engineering, and U.S. national security and defense. A high-resolution version of Anita's photomosaic is also available (created in 2006 by Gabriel Robins), which may be freely used for all purposes, including in publications, Web sites, and news articles.

My visit to Bill's National Academy of Engineering (NAE) office building in DC, on March 11, 2023, the day after he passed away (I visited Bill there in the late 1990's when Bill served as NAE President):

The iconic Albert Einstein Memorial / statue is located right outside Bill's NAE office:

Bill Wulf's UVa obituary can be found here:

[In Memoriam: Renowned Worldwide, William Wulf's Love for Computers and Teaching Grounded Him at UVA](#), March 13, 2023, University of Virginia Engineering