



## Dennis J. McFarland

March 2, 1949 - April 29, 2020

Dennis John McFarland (age 71) of Albany, NY, died of natural causes on April 29, 2020. He was the cherished husband of Loretta Malta and the devoted father of John, Christopher, and Michael McFarland. Dennis was born on March 2, 1949 in Stamford, Connecticut to Louis John McFarland and Luella Ruth Wedding McFarland (both deceased). He and his brother Neal (also deceased) were raised in Covington, Kentucky in a house that their father built. Dennis was an offensive tackle on his high school varsity football team and a lifelong athlete who skied, roller-skated, and hiked weekly in the Adirondack and Catskill Mountains. His final hiking trip was to Bald Mountain on April 20, 2020.

Dennis earned a PhD in Physiological Psychology with a minor in Pharmacology from the University of Kentucky in 1978. He was a Research Scientist at the New York State Department of Health Wadsworth Center from 1978 until his retirement in 2018. Dennis was a pioneer and principal founder of the now burgeoning field of brain-computer interface (BCI) research. BCIs allow paralyzed people to use their brainwaves to communicate and improve neuromuscular control for conditions such as stroke and cerebral palsy. Dennis was the co-inventor of a BCI developed at the Wadsworth Center, which honored him with a Pangborn Award. He was an internationally renowned innovator and holds a number of important patents. His

contributions shaped BCI research and development from the beginning and will guide it far into the future. His work was featured in a 1993 front-page story in the New York Times, a 2008 episode of 60 Minutes, and a 2006 Today Show episode in which Katie Couric spelled the word “peace” with her brain waves.

Dennis also conducted seminal research on auditory processing and auditory processing disorders. He was instrumental in developing the concept of modality specificity as a criterion for validating diagnoses, and was honored by the American Speech-Language-Hearing Association for his significant contributions to research and to the professions of Speech-Language Pathology and Audiology. Dennis published over 120 peer-reviewed articles. His papers received awards from the IEEE Engineering in Medicine and Biology Society and the American Speech-Language-Hearing Association, and he served as an Associate Editor for their journals. He edited a book on mental abilities and co-authored/co-edited books on BCI and auditory processing.

In addition to possessing an encyclopedic grasp and deep understanding of the development, history, and status of psychology as a scientific enterprise, Dennis was a superb applied mathematician, statistician, and computer programmer. His programming skills were described by a colleague as placing him in “an elite class all his own” and were all the more impressive given that he was self-taught. Dennis was also respected for his high standards and even higher integrity. He will be greatly missed by his immediate colleagues, his students, and his many friends and collaborators throughout the world who valued him as a unique, erudite, and always welcoming advisor and unimpeachable authority. His gift for teaching and mentoring did not end in the lab, as his three sons are pursuing careers in physics, biophysics, and

software engineering.

Dennis was a caring, honest, and unpretentious man with a wonderful, dry wit. His sensibility blended an openness to experience with careful thought and deliberation. Dennis was a voracious reader and conversant on topics ranging from psychology, neuroscience, virology and physics, to evolution, genetics, and politics. He was an accomplished cook, who was known for delicious quiches, stir-fries, and chili. He was beloved by all knew him as a kind and gentle man who always put others ahead of himself. He made an indelible impression even on those who only knew him for short time. As noted by a former collaborator, "His loving temperament was a rare gift for all those around him."

A memorial service will be held at a future date. His eulogy is below.

## Eulogy

It is with intense sadness that I write this eulogy for my beloved husband, Dennis, on behalf of myself and his sons John, Christopher, and Michael. There are many words that describe Dennis: loving, brilliant, funny, honest, ethical, kind, and gentle. His vast personality encompassed contradictions. He was analytical, but emotional and romantic. He was an abstract thinker, but practical. He was skeptical and critical, but never judgmental. He was intellectual and opinionated, but unassuming. He was a renowned scientist, but modest and unpretentious. But the word that kept coming to my mind was

essential. Dennis was my oxygen. I fell in love with him soon after our first date on April 29, 2000, remarkably 20 years to the day he died. But the day that sealed it for me was when he shoveled my car out of the snow after an epic storm. Dennis shoveled snow the way he did everything else, that is, impeccably. He cleared a good three feet all around the car so that there was absolutely no way I couldn't get out. It was award-winning, and he won my heart for good that day.

Dennis was a loving and dedicated father. He was extremely proud of his sons, all intelligent, accomplished, and kind gentlemen like their father. He spoke often of their hiking and ski trips: of skiing behind his sons and lifting them up to straighten their skis when they fell; of complaints on an arduous hike on Giant Mountain; of streams fallen into, a tree set on fire in an attempt to smoke out a nest of wasps that had stung them, of food stolen by bears; of giving up and simply turning away when warnings to not get too close to the edge were ignored. Dennis accepted and loved his sons unconditionally. He was that rare parent who provided guidance and support without judgment. He was their best friend and they were his.

Dennis came from a wonderful family. Sadly, his mother died before I met him; and I only met his father once before he died. But Dennis spoke of them often. His father was a WWII veteran and contractor who built their house. Dennis resembled his mother, who by all accounts was as kind, patient, and as gentle as he was. His stories about his sons echoed those he told me about hiking with his brother Neal, who died last year. Neal was very much like Dennis, right down to having a caring Italian-American wife, Sandy. She and their children Neal Jr., Billy, and Marcy are now grieving their father and their uncle. I like to imagine that Dennis and Neal are together on a great hike in the sky. Dennis also spoke fondly of their Florida fishing trips on visits to their uncle

and aunt. He was proud of his cousin Douglas McFarland, a Distinguished Professor Emeritus in Animal Science at South Dakota State, who also inherited the McFarland clan's intelligence and proficiency for science.

The high regard and deep affection in which Dennis was held by his many friends, colleagues, students, and collaborators around the world was apparent in the heartfelt condolences we received. His obituary evidences his brilliance and scientific contributions. At work and at home, Dennis was essential. He was the guy in the background who quietly rolled up his sleeves and did the math. Dennis could handle anything. He was the calm in a storm. He was my personal statistician, IT consultant, and everyday hero. He excelled at anything to which he applied his formidable mind. He woke me gently every day with a cup of coffee, cooked delicious meals, grew our garden, and coaxed our grass to flourish. He was a wonderful travel companion. Dennis was authentic, funny, and always interesting. His mind was expansive and deep, and sometimes difficult to follow, but always worth the journey. On one early date I was so smitten that I started singing Cole Porter's "You Do Something To Me" and it became our song. I was graced and so lucky to live 'neath Dennis' spell for 20 years, embraced by the quiet strength of his love that permeated my life. Dennis was my oxygen. He was essential and he became my essence. Dennis was, is, and always will be my best friend and soulmate.

# Tribute Wall



“ *Dennis J. McFarland*

October 08, 2023 at 09:24 PM



“ *Dennis was very special to me. I found his unique demeanor and sense of humor very endearing. I very much valued his one-of-a-kind scientific knowledge and perspective. It was comforting to know that he was a phone call away whenever we encountered something peculiar with our research protocol or results. He will be missed. Dean J. Krusienski, Ph.D.*

**Loretta Malta** - June 14, 2020 at 07:16 PM



“ *Dennis has been one of my favorite people to collaborate with and he has made a tremendous impact on my research and career. He was always so generous with his time, offered to help wherever he could, and was genuinely excited to discuss new research ideas. Knowing him has been a true privilege. Ellyn A Riley, PhD*

**Loretta Malta** - June 14, 2020 at 07:14 PM

LM

“ Dennis was my first mentor back when I was a lab technician in 1993. I could not have been more fortunate. Kind funny, patient - he knew just how far to push you and was never demeaning - though he was so smart! I learned a great deal from him and hoped to learn more. I will try to carry as much as my personality will allow of his great qualities. He was humble, his style of conducting experiments, honing in on one question, so clearly executed. He had a beautiful laugh. I will carry that memory and so many others along with me in my scientific career. Lynn McCane, M.S.

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**Loretta Malta** - June 14, 2020 at 04:36 PM

LM

“ Dennis conquered many mountains in his time, both in nature and academics. Bill Sarnacki

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**Loretta Malta** - June 14, 2020 at 03:41 PM

LM

“ I am very shocked and saddened to hear about the loss of Dennis. He was my first research mentor, a fantastic role model, and an excellent scientist. What he taught me that first summer I worked at NCAN has proven invaluable in my daily life at my current career, and I'm forever indebted to him for those lessons. Even just having the pleasure of knowing him for the last few years, I am deeply upset by his loss--he will be sorely missed. William Schmitt

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**Loretta Malta** - June 14, 2020 at 03:40 PM

LM

“ Dennis was such a lovely and kind-hearted man. When I started my PhD in 2003, Niels and Andrea send me almost immediately for a training to Albany. Dennis made such an impression on me with his knowledge and his humor. I remember I once worried about something and he told me that he always asked himself: “how likely is it that this thing will still bother me in 5 years time?”. If it wasn't likely to bother him in 5 years time, it was worth bothering about it now. As a young student such supervisors, the ones that calm you down, are so important. I still to this day teach with some of his papers. I remember him so fondly. Femke Nijboer, PhD

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**Loretta Malta** - June 14, 2020 at 03:37 PM

LM

“ I got to know Dennis a bit more closely many years ago during an NIH-sponsored trip where we ventured to meet BCI researchers around the world. He was truly funny and very sharp and down to earth and down to enjoy the adventure. He made the trip much more enjoyable and informative to me! My thoughts are with his family and friends who have to mourn through social distancing. I know that Dennis' contributions to the world of science will continue to give guidance. May his humor and wit keep his happiest memory alive in all our hearts to cheer us through the journey ahead. Walid Soussou, PhD

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**Loretta Malta** - June 14, 2020 at 03:34 PM

LM

“ I will never forget him. His gentle and honest nature and loving temperament was a rare gift for all those around him. Dr. Niels Birbaumer

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**Loretta Malta** - June 14, 2020 at 03:31 PM

“ I first met Dennis when he transitioned from another lab within the NYS Health Department system to the Wolpaw lab at Empire State Plaza, in Albany, circa 1985. At the time, Dennis was studying the behavioral effects of viruses on the brain. His strong background in animal behavior was a good fit to study auditory and visual psychophysics in humans. When we add his skills in electroencephalography, electrophysiology and his acumen in computer programming, our interactions expanded and solidified. In fact, if you compare Dennis’ skills to even the most competent high level programmers, they don’t match up. They don’t even come close. Dennis was in an elite class all his own.

Our first publication came over 3 decades ago, inspired by Jon Wolpaw and focusing on a brain-to-computer interface using EEG. This challenge came after a bet Jon made with an executive at IBM. At the time (1986), IBM sponsored programs for people with disabilities. To develop a method that would allow people who lost all motor control to communicate with others via a computer interface would be an extraordinary achievement. I had the distinction of being the first subject that provided proof of principal for the concept that this strategy could work and of course, as fate has it, this method would evolve exponentially over time till the present day. Dennis was intimately involved in this project.

Over the course of time, Dennis became interested in auditory processing and auditory processing disorders. He was instrumental in developing the concept of modality specificity as a criterion for validating the diagnosis. While controversial at the time, much headway was made in this area. In a review paper that we wrote in 1998 “Cacace, A.T., and McFarland, D.J. Central auditory processing disorder in school-aged children: A critical review. *J. Speech Lang. Hear. Res.*, 41, 355-373 (1998), ” this work was recognized nationally and we received the Editor’s Award, 1999, from the American Speech, Language and Hearing Association, *Journal of Speech, Language, and Hearing Research, Section on Hearing*. Dennis and I published 33 peer-reviewed articles together,

*14 book chapters, 1 co-edited book, made many national and international presentations that resulted in 33 published abstracts, and had 3 invited national presentations.*

*I*

*Dennis had a burning passion for his decades of work on the brain-to-computer interface. His technical expertise in this area was second to none. He was an individual with high standards and even higher integrity. These ethical standards prevailed in all of our work! Dennis was also notorious for writing letters-to-the-editor, particularly when people mischaracterized information about topics like auditory processing and its disorders. He laid out arguments clearly and emphatically, making it difficult to have a credible opposing view. To say I will miss him, would be a gross miscarriage and an extraordinary understatement. Indeed, I will miss the many interesting discussions we had among ourselves, where we often discussed novel scientific areas and ideas applicable to our work; I will also miss the many notable but contentious arguments we had with individuals that opposed our point-of-view at scientific meetings. These interactions were civil, respectful, and always well thought out. Nevertheless, all of these things have served to advance the field of auditory processing and will help retain the personal memory of my dear friend, so deeply engrained in my consciousness. What remains beyond dispute is the fact that the permanent record preserved in the archives-of-science will serve as a tribute and uphold the legacy, novelty, and importance of his lifelong work. RIP good friend! Anthony T. Cacace, PhD*

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**Loretta Malta** - June 14, 2020 at 03:27 PM

JW

“ *Dennis was my friend and valued colleague for 35 years. I benefitted tremendously from both his friendship and his remarkable scientific knowledge and deep understanding. He made fundamental contributions to the new field of brain-computer interface research and development, as well as to the growing scientific understanding of auditory function in the brain. He was a unique and uniquely valued advisor and expert resource for several generations of students, as well as for his Wadsworth colleagues (perhaps most of all myself) and for colleagues and collaborators throughout the world. His death is a huge personal and professional loss for neuroscientists everywhere. We will all miss him. Liz and I send our heartfelt condolences to Loretta and to all of the McFarland family.*

*Jon Wolpaw*

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**Jon Wolpaw** - May 31, 2020 at 07:57 PM

MM

“ *Dennis was my brother-in-law and he will be greatly missed. He was a good man and anyone could see just how much he loved my sister, Loretta. My family and I will be forever grateful for the kindness and love he showed my parents. He welcomed them into his and Loretta's home and helped her care for them. I am thankful to have known him and feel very blessed that he was a part of our family.*

*Maria Malta*



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**Maria Malta** - May 26, 2020 at 03:46 PM

MP

“ Loretta,  
May he Rest In Peace. It seems like yesterday we were all together  
at a family wedding. God bless his soul and give you strength. Our  
thoughts and prayers are with you and the family.  
Mario & Gina Pizzonia

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**Mario Pizzonia** - May 23, 2020 at 06:32 PM

TK

“ My thoughts and prayers are with you Loretta as well as sons and  
family.  
My recent memories with both Loretta and Dennis centered around  
our dining experiences with great food and great friends. Once in  
SOCAL Laguna Beach, my neck of the woods, as well as NORCAL  
in San Francisco.  
I attended Loretta and Dennis's lovely wedding. I was so very happy  
for them to have found such easy and gentle love. So very beautiful.  
My heart is with you all- at this time.~ Tracy Kuhar.

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**tracy kuhar** - May 23, 2020 at 05:18 PM