

composition grants from the New York State Arts Council and the National Endowment for the Arts. Morrill worked on a special jazz project for Wynton Marsalis, and authored *A Guide to the Big Band Recordings of Woody Herman and The American String Quartet – A Guide to the Recordings*. In 1984, he received a NEA grant to compose his most prominent work, *Getz Variations*. It was written for, and premiered by saxophonist Stan Getz, and incorporated jazz improvisation and computer-generated sounds. During the 1980s, Morrill developed a MIDI trumpet instrument with Perry Cook, and performed in many concerts around the world. His compositions received performances in the United States, Canada, Australia, Argentina, Brazil, Great Britain, Poland, Czechoslovakia, and most West European countries, and for ensembles including the Northern Illinois Philharmonic and the Syracuse and Baltimore Symphonies. Throughout his career, he was active in composing for ensembles and conventional instruments and recording works with solo artists. Dexter passed away July 2, 2019, of complications from Progressive Supra Nuclear Palsy (PSP).

### **In Memoriam: Mark Ballora (1962-2019)**

by Dafna Naphtali and Margaret Schedel

Ballora was an influential computer musician, data sonification expert, researcher, author, composer, a tireless and ingenious comic/prankster, devoted father and husband, and a very beloved Professor at Penn State. An alum of Theater Arts program at UCLA, Ballora completed two masters degrees at NYU (Music Technology, Music Composition) before moving on to McGill University to complete his PhD. He joined the faculty at Penn State University in 2000, since then teaching courses to a generation of students in music technology, history of electroacoustic music, musical acoustics, and software programming for musicians, and authoring several books.

Even in our community of kind weirdos who love sound, Mark stood out as one of the kindest and most wonderfully weird composers of electroacoustic music. Schedel always pictured a nimbus of ideas swirling around his head, so it was not so surprising when older pic-

tures of him showed a full head of curls, still with that same grin that let you know you too could have fun and rigor in a field you loved.

Mark constantly collapsed contradictions, born in the Bay Area, he was a deadhead who followed the band around and got into electronic music because of the culture of bootleg recordings and the amazing Meyer sound speakers the band designed in collaboration with John Meyer. It was the achievement of his lifetime to be able to create sonifications for Mickey Hart and the Mickey Hart Band, on their albums *Mysterium Tremendum* (2012) and *Superorganism* (2013), the film *Rhythms of the Universe* (2013), which Hart conceived with cosmologist George Smoot, and Hart's performance *Musica Universalis: The Greatest Story Ever Told*, presented at the American Museum of Natural History (2018). One of his sonifications of a pulsar was played as a memorial at Virginia Tech Cubefest this year. Mark was so humble about this work, but couldn't contain his glee at scoring backstage passes to the Dead reunion tour. At a NAMM a couple of years ago, I saw how much Hart respected Mark as a musician and a scholar, and how Mark years into the project still

couldn't quite believe that he was working with one of his early idols.

Mark had a special power of making you believe you could do anything you set your mind to. Schedel had the privilege of watching him teach in March of this year. He was immaculately prepared but left so much room for the students to talk and bring their own perspective into the lecture. He was clearly loved by most of his students, and Penn State will not be the same without his whirling kinetic energy. Through his work with sonification he was embedded into multiple facets of the university. Schedel is working on a book about interdisciplinary in the academy and through Mark was able to meet at least twelve people who generously gave of their time. It was clear he was well-respected at the university, and beyond respect, his colleagues were somewhat in awe of his ability to move between science and music.

In his sonifications, Ballora had a commitment to both to data and aesthetics — he truly wanted to create musical compositions from the data and he spent hours tweaking every single parameter of his

code to create compelling sound-scapes that also elucidated the data. His significations of tropical storms and hurricanes were some of his most funded, and popular work. In June 2017, he was co-recipient of two prestigious interdisciplinary seed grants awarded by The National Academies Keck Futures Initiative (NAKFI) and the Gulf Research Program that will involve working with marine biologists to create sonifications of ocean-related data. When Schedel was visiting him, he was in the process of putting this work online and they discussed how to make his work accessible, and posted in such a way that it wouldn't break when web audio inevitably changed its backend. He wanted people to not only understand the relationship of the sound and the data, but also the programming behind it and was in the process of creating Jupyter notebooks to allow the public to manipulate his code and mappings. He was justifiably proud of his work, but was also very open to others building upon his initial IP.

Schedel was Mark's paper chair for the International Conference on Auditory Display (ICAD) that he chaired. Mark fully supported her idea to have a call specifically about aesthetics and

they spoke a length about how to make the conference as inclusive to sound study scholars in addition to musicians/coders. At the time, Schedel's father was very sick, and she stayed an extra day at home before coming out to the conference. Mark not only took over her duties for the first day, he took (and made her take) time on the second day to truly talk to me about her feelings in the midst of running an international conference. When she posted on Facebook that her father passed, Mark called her as soon as he saw and was incredibly comforting in a difficult time. Many people have expressed that their stomachs dropped the when they found out about Mark's untimely passing via Facebook. The outpouring of support for him and his family and all the anecdotes about his life made Naphtali and Schedel realize that this guy who they thought was so special was also truly special to so many people around the world.

Schedel will never forget the ICAD concert where he put the audience backstage in a huge theater at Penn State. He created intimacy in a cavernous space through lighting, and the concert had the impact and re-

sonance of a huge hall with the closeness of a living room concert, once again collapsing contradictions. That was Mark in his element as the master of ceremonies, introducing the concert in such a way that we cared for the works before even hearing them, and putting everyone at ease while explaining complex ideas. He will be sorely missed, Schedel will be looking for that bald head bobbing atop that loose-limbed gait, hoping for one more conspiratorial grin for years to come.

Mark wrote a myriad of articles describing uses of sonification (rendering scientific datasets with sound) in the areas of cardiology and computer network security. His work will live on. A celebration of Ballora's life was held at Penn State on September 29th, drawing family and friends, students and PSU colleagues, and a legion of former colleagues and students from around the world, including a large contingent from his days at NYU. Many more who could not attend sent messages to be read at the event. It was abundantly clear to those in attendance that Ballora had a profound influence on his colleagues and students, not just in the information conveyed and ideas researched, but also in the genuine

care and investment he made in all he came in contact with personally and professionally.

Ballora will be missed by all of his former colleagues. No doubt this is especially true for those (like Naphtali) who were in the trenches with Ballora in grad school at NYU in the 90's, and who count Ballora as part of their extended family. A large number of NYU colleagues made the trip for his memorial at Penn State because our outsized few years together sharing a cramped office influenced everything we have done since.

He was intellectually curious, a great educator, thorough and relentless researcher, and brought humor to it all. Ballora is survived by his wife flutist Agatha Wang and son Ian.

Ballora's family has requested that memorial gifts be made to the Penn State School of Music <https://raise.psu.edu/RememberingMarkBallora>.

All gifts will be directed by the School of Music in consultation with the family to best celebrate Ballora's academic legacy.