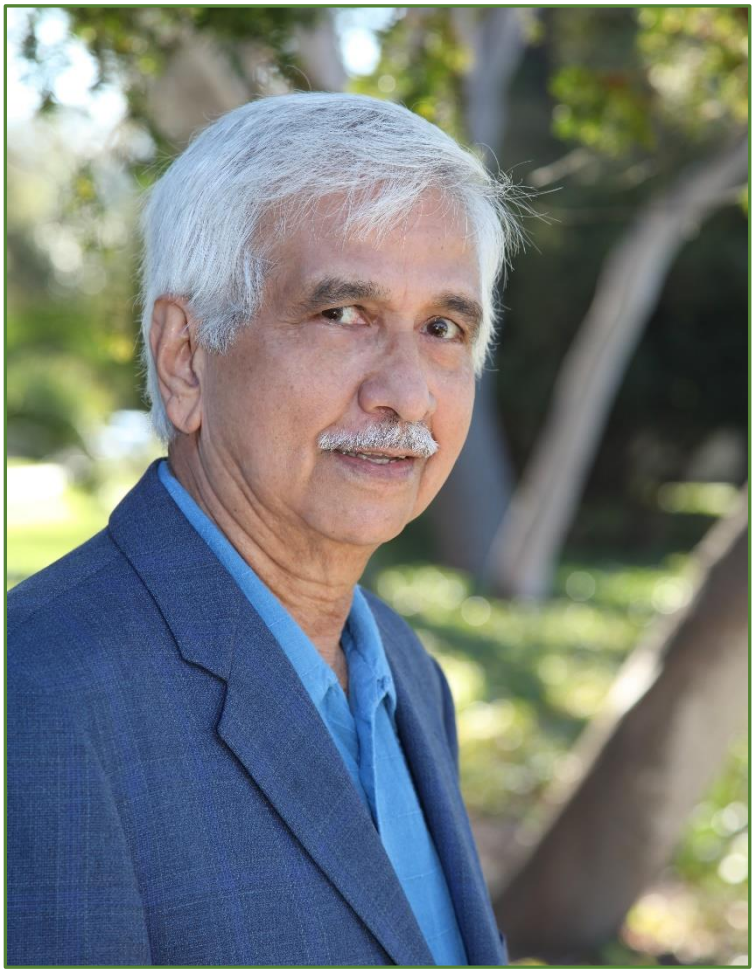
Memories of Professor Atma Mandrekar

Department of Statistics and Probability, Michigan State University



Professor Vidyadhar (Atma) Mandrekar, friend, colleague, and mentor to many in the mathematics community, passed away on June 23, 2021. Atma had a distinguished career with research contributions in probability, statistics, and mathematics more generally, and collaborated with colleagues from varied disciplines. He guided and mentored many students, faculty members, and postdoctoral scholars during his career, and was a kind and generous colleague to all. Atma was a faculty member in the Department of Statistics and Probability at Michigan State University beginning in 1968 and he served as chairperson of the department from 1975-1985. The MSU Distinguished Faculty Award was one among many honors. The remembrances here, from some of those whose lives Atma touched, give a sense of his profound and positive influence on those whose lives intersected with his.

Professor Leszek Gawarecki

Department of Mathematics, Kettering University

"To me Atma was a mentor who helped me build my life. His students are a family and he instilled in us the sense of curiosity and scientific rigor. Atma's mentorship extended beyond math. He was a captivating storyteller and a source of useful advice. On my complaint about washing too many dishes, he told me to pick my wife's most precious piece and accidently break it in the sink. I still have to act upon this one. Right before my son was born, I was quite stressed out and asked if I could take a few days off. Atma responded with kindness and generosity and allowed me to take care of my family for as long as I needed. This response truly put me at ease. He remains in my mind and heart and is still my mentor and friend. Thank you Atma"

Professor Juan Du

Department of Statistics, Kansas State University

"It has been almost six months since I saw Prof. Mandrekar leave us, I still cannot believe he is gone. Clearly in my mind, Prof. Mandrekar is my academic father, guiding me and caring for me just like a father would for his child. It feels like it was yesterday, by the door to the stairs in Wells Hall, a modestly dressed professor met me who was suffering from depression at that time. He kindly asked about my research interest and introduced me to his former student who is well known in this field. As my local major advisor, Prof. Mandrekar, a very brilliant probabilist, always had my best interest in mind and helped me in all the ways. His unwavering faith in me was my greatest strength and motivation to get through my difficult time and complete my PhD. Prof. Mandrekar was there mentoring and encouraging me when I got stuck in writing a research paper, when I gave first rehearsal talk and when I gave a presentation in the department later, etc. I worked with him for just a few years, and yet he has had such a profound impact on my life. I am highly grateful to him for all his help and advice. I really miss him, his principles, kindness, and warm smile. To Prof. Mandrekar's family, please accept my deepest and heartfelt condolences. He will always be a part of our lives…"

Professor Jim Stapleton

Department of Statistics and Probability, Michigan State University

"I promised to write a few words of remembrances of Atma Mandrekar. I apologize for the delay. I will probably make errors with respect to dates. If anyone spots them feel free to make changes. Feel free to omit anything or to change wording.

Atma arrived with Ghophi Kallianpur , a very distinguished probabilist, in, I think, 1962. Atma quickly became, along with Dennis Gilliland, a top-level doctoral student. Two years later Kallianpur and Mandrekar left for the University of Minnesota - a blow to the department. After a year at Berkeley in 1966-67 I became acting chairman. I remember a 30-minute telephone conversation with Kallianpur 51 years ago about an appointment of Atma as an assistant professor. Atma was then a visiting scholar in Wisconsin. He had been very successful at Minnesota, particularly in finding Veena, a very charming and intelligent young woman, daughter of a professor. That began a 50-year career at MSU. There is a near tie among Mandrekar, Hannah, Koul, Gilliland and myself for the length of service. He served as chairman during 1975--1985.

Over the years, in order to learn a bit about stochastic processes, I attended many of Atma's classes. His lectures were always polished, his lecture notes always well organized. Over the years, particularly during my years after retirement in 2007 he would stop by my office for chats. He particularly liked to talk about Veena and their work for the MSU museum, and his very successful boys. Tushar was a good high school friend of our youngest, Sara. We often talked about his latest writing project, some of which I understood. I was particularly interested in his work with Kallianpur on the mutual orthogonality of Gaussian processes. "

Professor Luda Sakhanenko

Department of Statistics and Probability, Michigan State University

"I miss meeting professor Mandrekar in the hallways. He was always so excited to hear about my next research project and he was knowledgeable and fun to discuss it with. But I also offer my non-related to everyday work memory of professor Mandrekar. He was a generous, honest, and direct person. Shortly after I joined the STT department in July 2002, Atma and Veena invited me and Uttara to Wharton center to watch The Phantom of the Opera (January 2003). It was wonderful and intimidating at the same time. But Mandrekars were talking about music, children, food, anything but probability and put me at ease. I still have the CD with the music from Phantom of the Opera and it reminds me of professor Mandrekar…"

Professor Michael DeLaura

Department of Statistics and Probability, Michigan State University

"One of the best stories I have about professor Mandrekar is when he encouraged a disruptive student to ask out the girl he was talking to during class after for coffee. I still laugh when I think about it. He was so calm and serious about it, but his intent was just to have fun with him a little bit for disrupting him. Everyone who knows professor Mandrekar knows how gifted he was. He saw things no one else did. He could point someone in the next direction during a colloquium. He was the real deal, and he knew it too. That doesn't mean he was arrogant, he wasn't. He had an incredible presence. I think nearly everyone he encountered, even if they didn't know his credentials could feel that. That is how I remember him. Beyond us. And despite that he went out of his way to help me on my path. He saw something in me when no one else did. I really couldn't believe that when I heard it to be honest. All I did was ask him a bunch of questions about how topics in class related to some interesting physics concepts I was curious about. That's something that I still don't understand. How did I of all people get this man's attention? In believe it's as simple as, I simply was curious. Mandrekar perhaps saw that I had a creative side. I know he had that too in him, because he was the only one to ever tell me that I would eventually have to let go of using visualization to better understand things, especially in an abstract sense. I knew Mandrekar for what feels like a long time, but it really was only about five years. Although time will pass and memories will fade, I will always remember what he told me. I'll remember that he saw potential in me. Someday I will be old, and when I am old, I certainly will remember him. It's important that what I say is not taken as another generic passage because I will remember, just as I do now, as in stories I tell, as in memories I have, what an honor it was to know this man."

Professor Uttara Naik-Nimbalkar

Department of Statistics, University of Poona, Pune, India

"Professor Mandrekar introduced me to Probability theory. He also gave me his copy of Feller Volume I. I was a graduate student in the mathematics department at Michigan State University (MSU). We were told that some credits from Mathematics could be used to obtain a Master's degree in related subjects. I went to the office of the Statistics department to enquire about a program in Operations Research

and Statistics. Professor Mandrekar happened to be there. He suggested an MS in Statistics and listed the possible courses I could take, out of which three were in Probability and Stochastic processes. The MS degree in Statistics helped me to get a position at the University in Pune, the city in India I wished to return to.

Later he became my Ph.D. thesis supervisor even though he was a faculty in the Department of Statistics and Probability, and I was a student in the Math department. I was interested in Functional Analysis. Prof. Mandrekar and Prof. Shapiro from the Math department were running a seminar in the area of Banach spaces, Harmonic analysis, and Probability. I wanted to work in this area and when it was time to start work for the thesis, I approached Prof. Shapiro, but he was going on a sabbatical that year. Prof. Mandrekar agreed to mentor me, and I continued to work with him.

Prof. Mandrekar was always willing to visit the Pune Statistics department whenever he visited India. My colleagues have good memories of the academic and non-academic discussions with him. From 2015 to 2019, Prof. Mandrekar had been visiting Pune every December as his wife, Veena is coordinating a project between the MSU-Museum and the Bhandarkar Oriental Research Institute in Pune. During these latter visits, I learned topics in Stochastic Differential Equations in Hilbert spaces from him and we managed to publish two articles, one of which was accepted just a few weeks before his sudden demise. His lucid explanations and his two books; L. Gawarecki and V. Mandrekar, (2011), Stochastic Differential Equations in Infinite Dimensions, and V. Mandrekar and B. Rüdiger, (2015), Stochastic Integration in Banach Spaces: Theory and Applications, helped me learn the results required for the articles.

When I first came to MSU from India in September 1975, I stayed with the Mandrekars till I got accommodation on campus. They have hosted many new students. The stay was very pleasant and memorable, with Veena's delicious cooking, Prof. Mandrekar's occasional prawn curry, two very friendly kids, and melodies of Pandit Bhimsen Joshi (Indian classical singer) that were played very often. Besides academics, Prof. Mandrekar helped me in other matters also.
I will miss Prof. Mandrekar's visits to Pune and his talks on probability, statistics, and applications, and the martinis he prepared at dinners in their home."

Professor Hao Zhang

Department of Statistics, Purdue University
"Dr. Mandrekar was my Ph.D. advisor when I was studying at MSU from 1990 to 1995. Over the years, I probably have become one of his former students that came back to visit the most. Most of the time I was able to pay a visit to him and Venna at their home, and always enjoyed their hospitability and the time together. It was particularly hard for me to lose such a devoted scholar and a good friend.

Dr. Mandrekar suggested some research problems in random fields shortly after I arrived. My poor English then limited my ability to provide a subtle No, so I said blatantly to him that I was not interested in random fields, and that I was interested in time series. That did not make him disappointed or unhappy. We kept our weekly meeting, and I would present whatever progress I've made in the previous week. Eventually, I completed three different projects during my years at MSU, and only of them is related to the random field.

It was in my third year when I had made steady processes toward my dissertation on time series that Dr. Mandrekar still wanted me to work on some random field problems. I recall that one day I said to him I needed some motivation and wanted to know what kind of applications this stuff can be applied to. He told me that it can be used in pattern recognition and introduced me to Professor A. K.

Jain in Computer Science. I ended up taking a class offered by Dr. Jain and published a paper on applying random fields to texture classification.

I appreciated the freedom that Dr. Mandrekar let me to choose my own research problems. It certainly helped me become independent in research. The experience of freely choosing to do whatever I was interested in research led me rapidly switch my research area from time series to spatial statistics after I began my career in academia. My knowledge in random fields enabled me to make some unique contributions to spatial statistics. It turns out to be tremendously beneficial to my career."

Professor Vince Melfi

Department of Statistics and Probability, Michigan State University

"Although I had the pleasure and honor to call Dr. Atma Mandrekar my colleague since I joined the Department of Statistics and Probability at MSU in 1992, I was fortunate to meet him before that, when I was a graduate student at the University of Michigan and Atma visited for a year (or a semester, I don't remember precisely). Even before his visit, I knew of Atma from his student, Brian Thelen, who was on the faculty at UM at the time, and from my advisor, Mike Woodroofe. Both Brian and Mike spoke very highly of Atma, and I was a bit intimidated to meet him. I needn't have been intimidated. Atma displayed the same generosity and kindness that year that I experienced as his colleague after that. While at UM Atma gave a special topics course focused on point processes, which I sat in on. I particularly remember how he was able to motivate and make exciting the content, some of which was quite difficult and technical.

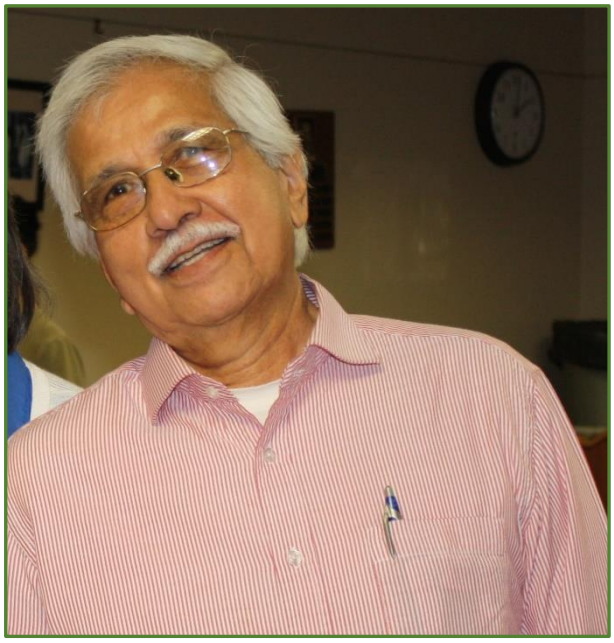
While Atma was of course a renowned probabilist, I want to make a few remarks about his influence and thoughtfulness in a few different areas. I still remember his kindness during my interview at MSU and then after I joined the department. While of course we discussed mathematical topics, Atma also took the time to help me, and my family settle into East Lansing. I remember, for example, that Atma gave advice on choosing snow shovels, which of course are an essential tool in Michigan. Atma also was proud of his teaching and his contributions to the mathematical and statistical education of students at MSU, and I remember hallway conversations about his work towards making courses in statistics for engineers more relevant and powerful for students.

Atma's kindness, his positive outlook on life, and of course his mathematical skill and knowledge provided me with an example of how to be successful in different parts of the life of a scholar, and also had a profound impact on MSU and on the field more generally."

Professor Yimin Xiao

Department of Statistics and Probability, Michigan State University

"I first met Atma at the University of Minnesota in April 2000, when we both attended an IMA workshop on applied probability and random networks. I had accepted the MSU offer in 1999 and was looking forward to joining STT in August 2000. Atma was on sabbatical when I was interviewed in 1999 at MSU, both of us were excited to have the opportunity to finally meet. At this IMA workshop, we attended many talks together and talked to each other every day. Besides mathematics, Atma shared with me how Professor Masani inspired him to pursue his career in mathematics and how he met Veena at the University of Minnesota.



In my earlier years at MSU, Atma gave me a lot of advice on research and career development. I learned not only insightful views from Atma on topics ranging from probability in Banach spaces, random fields, to stochastic partial differential equations but also many interesting firsthand stories about some famous mathematicians in France, Germany, Japan, and China!

Every summer and winter after we return to office, the first thing that Atma and I did was to catch up with each other. Atma would tell me about a new book that he had just finished or a research project he had been working on with his collaborators in Germany and/or India. His passion for probability kept him young, happy, and intellectually very sharp. His high level of energy and enthusiasm for research and helping students inspired many people including me. Thank you, Atma, for being a friend, mentor, and colleague throughout my years at MSU."