

## By Inches and Yards In Honor of Viji Sundar

Bob Stein, Susie W. Håkansson, Carol Fry Bohlin, Veronica Chaidez, Angelo Segalla,  
Shandy Hauk, and Mark K. Davis

ABSTRACT. The mathematics education community was saddened by the passing of its eminent member, Viji Sundar (18 March 1943 – 17 November 2021). The Editors invited some of the many who worked with Viji over the years to share stories. In celebration of a life well-lived and a legacy with staying power the Dr. Viji Sundar Memorial Fund <<https://stanforacause.csustan.edu/project/29635>> was established to support the ongoing influence of her passion for learning.



Born in Kerala, India, Viji Sundar completed a bachelor's degree in the department of Mathematics, Physics and Chemistry at the University of Poona, India. She went on to earn both a master of science and doctorate in mathematics at the University of Illinois, Urbana-Champaign. In 1978, she joined the faculty at California State University Stanislaus (Stan State). In the ensuing 42 years, in addition to becoming a full professor (1988) she served the students and department in many ways (including as department chair, 2005-2008). She also served the region and state as the director of the Central California Mathematics Project (1993-2016). Dr. Sundar's contributions to teaching, learning, and supporting excellence in science, technology,

engineering, and mathematics education were acknowledged by many awards. Among these were the Wang Family Excellence Award and three Outstanding Professor awards at Stan State as well as distinguished service awards from outside the university, including recognition by the Stanislaus County Commission as one of 2008's Outstanding Women and the 2015 Distinguished Service Award from the San Joaquin Engineers Council.

### I Said Yes

Bob Stein, Editor-in-Chief, Journal of the California Mathematics Project (JCMP)

Viji Sundar was the animating force behind the creation of this journal. Although a tiny woman physically, her passionate devotion to mathematics education and to helping women in the field were colossal. I knew her first from statewide meetings of the California Association of Mathematics Teacher Educators (CAMTE) then from lecturing a couple of times as a guest at her invitation. I was so impressed by her enthusiasm for seizing opportunities that when she invited me to serve as editor of JCMP I quickly agreed.

Viji envisioned this journal as providing opportunities for people working in mathematics education, particularly those early in their careers, to publish their work and, more generally, for sharing ideas and experiences about mathematics education. I am proud to remember Viji and to carry on, devoted to her spirit and ideals.

## Memories of Viji Sundar

Susie W. Håkansson

Dr. Viji Sundar was the Site Director and Faculty Advisor of the Central California Mathematics Project (CCMP) since its inception in 1984. Although I interacted with her for many years as a regional CMP site director, it wasn't until 1999 when I became the CMP Executive Director, that I observed and experienced the thoughtful, kind, and caring human being she was. Since we are both short, we connected immediately. I visited her summer institutes for many years and observed her expertise and compassion as she worked with teachers in the teaching and learning of mathematics. Through her guidance, CCMP provided a variety of professional development programs to increase teachers' effectiveness in the classroom. In many of the CCMP summer programs, teachers from Thailand were invited to participate. This partnership with Thailand broadened the perspectives on teaching and learning of mathematics for all teachers.

In 2009, CCMP established the *Journal of the Central California Mathematics Project* to share with the broader mathematics education community what had worked for them. In my introduction to the first issue of the journal, I wrote the following:

To prepare for the writing of this journal, CCMP held a summer institute during 2008 for participants interested in writing articles for this journal. Consultants with expertise in mathematics and/or writing supported the participants, reading many drafts and providing technical assistance. I had the privilege of visiting CCMP during this institute and fit right in since I had a writing task to complete that week. It was great to see the participants so engaged in their writing efforts, so much so that they were often oblivious to their surroundings.

Viji provided the opportunity for those who were interested in writing to realize their passion. She also provided the venue to share the best practices that her teachers had found. Subsequent to that initial volume in 2009, in 2012 the publication became the *Journal of the California Mathematics Project*. Viji's vision of communicating what is effective in teaching mathematics continues to be realized as evidenced by the continuation of the journal.

Viji provided an opportunity for me in 2001. She invited me to accompany her to visit the mathematics educators from Thailand who had attended the CCMP summer institute. I was excited to have the opportunity to interact with the Thai mathematics educators in their environment. However, that was the year of 9/11, so we decided not to go in November. Unfortunately, when Viji rescheduled, I was not able to go. She was so thoughtful and brought back a shoulder padding for a seat belt from Thailand, which I still use to this day.

She also knew how to celebrate and have fun. She invited me to her daughter's wedding that was held in the Los Angeles area. I remember the groom coming to the wedding on a horse, the elaborate ceremony, and the feast afterwards. What I experienced was a meaningful celebration embracing attendees as an extended family and sharing in the joy.

Viji cared about others, She cared about all the teachers she worked with. She cared about her students at CSU Stanislaus. She empowered her teachers and students to communicate their successes so that others may also experience success. It has been my privilege to have known and worked with Viji. May her vision of sharing what works carry on.

## Reflecting on the Life of Dr. Viji Sundar

Carol Fry Bohlin

The incomparable Viji Sundar will certainly live on in the memories of those who were fortunate enough to have crossed her dynamic path. California Mathematics Project (CMP) site leaders who learned of her passing during the CMP Directors Meeting in December 2021 were stunned and saddened, but we found comfort among others within that special professional family in which Viji had served as the influential and longtime Director (1993-2016) of the Central California Mathematics Project based at California State University, Stanislaus.

While short in stature, Viji was a giant in her impact. She was passionate about empowering, supporting, mentoring, and celebrating her students and her colleagues. She used her gentle but persuasive powers to motivate individuals to contribute their time and talents to efforts that served students of all ages and the professional community. The *Journal of the California Mathematics Project*, the High School Mathematics Access Program (HiMAP), Preparing Women for Mathematical Modeling and Robotics (PWMM-R), and the Sundar Institute are just a few efforts that benefitted from her leadership.

Viji stepped forward when there was a call for candidates to run for secretary of the California Association of Mathematics Teacher Educators (CAMTE). In addition to serving as secretary, she also served on CAMTE's Advocacy Committee and presented on preparing future middle school mathematics teachers within the CAMTE strand at two California Mathematics Council – North conferences.

Although Viji was always actively involved professionally, she never lost sight of the human side of life and cultivated friendships with care. She often surprised students and friends with thoughtful gifts. After I gave birth to my son, Viji brought two gifts to the next CMP Directors Meeting, a book for Christopher and a bracelet for me. As she held my hands in hers and looked into my eyes, she said with sweet conviction that a new mother should be celebrated as much as her child, yet this is too rarely done.

That was Viji – always teaching, always challenging, always inspiring! May her memory continue to inspire all who knew and loved her!

## Standing in Dr. Viji Sundar's Shadow

Veronica Chaidez

I once self-identified as the epitome of an at-risk youth. I unapologetically claimed such title as a means to justify and make sense of my life. I was born into a low-income minority family who did not push an educational agenda. Out of respect, I must note that my parents, through no fault of their own, did not understand the value of an education since elementary was the highest educational level they had achieved. I grew up in a high poverty and high crime neighborhood with little prospects. Recognizing that I had limited options and no hope for a bright future, I became involved with gangs and gang activity before the age of 13.

I navigated through life numb, recklessly, and without purpose. However, my most cherished memory, during this time, was and is when I became a teenage mom, to a healthy baby, at the age of 14. I remember being so scared of giving birth. Not because of the pain of childbirth. Not because I was a child giving birth to another child but because of a more sinister reason. At the time when I became pregnant, I was still affiliated with a gang. Once they discovered I was

pregnant by someone in an opposing clique, I was perceived as damaged goods and no longer worthy of being a member, so I was jumped out. Meaning, I was beaten senselessly for 13 minutes, by both male and female gang members who I once considered my friends, my allies, my family. All I could do was curl up in a fetal position on the pavement of a dark alley to try to protect my womb, my baby girl.

The birth of my daughter sprung me into action. I owed her and the only way to pay the debt was to actually provide her a good life. I vowed to finish high school and get a good job so she would be immune to my destiny. But that was easier said than done. I found myself navigating through adolescent life, school, work, and parenting, alone. The pressures eventually just became too much and shortly after giving birth I dropped out of high school. I worked several mediocre minimum wage jobs to make ends meet with no avail; I eventually became a homeless teenage mother living off the kindness of others, food banks, and homeless shelters.

Then my life took a turn for the better, I was granted government assistance which included a monthly cash stipend, food stamps/vouchers, and health care for my daughter and me. As a result, for the first time in my life I had a sense of security and independence. I remember feeling happy because I was providing for my daughter. I was living large on the \$400 per month – an enormous amount of money, more than I had ever seen. My world came crashing down once the government gave me an ultimatum to either go to school or lose my benefits. I remember feeling anxious, desperate, and hopeless, afraid for my daughter's future. So, under the threat I apprehensively went back to school.

I enrolled in the local community college to complete my general education diploma (G.E.D.). I had no idea what I was doing but I knew I had to be there for my daughter. After I completed my G.E.D. I stayed enrolled. To be honest it was mostly out of fear of losing my benefits. Surprisingly, this is where the trajectory of my entire family's life changed. A professor from the community college, offering his guidance, said that I should consider a career in education and suggested that I attend a talk about mathematics education being given by a passionate educator named Dr. Viji K. Sundar.

I remember walking into the room feeling like I did not belong. I was sure I was going to be found out. They—everyone in the room—would be able to read me and discover my past and label me as unworthy or tainted. The fear overcame me so much so that the audience transformed before my eyes into a mob. I remember wanting to curl up in a fetal position, in the back of the room in order to protect my being. Then she began talking. She was so energetic and passionate about mathematics education, women in education, women in science, technology, engineering, and mathematics fields, and serving marginalized communities that I just became enthralled.

On that day, from just that 45-minute talk, I learned to forgive myself. I learned that I could be a mathematics teacher regardless of my past experiences, gender, race, and socio-economic background. But most importantly, I learned that I could make a difference in the world. So, I committed to becoming an educator. Specifically, I committed to becoming a female, minority mathematics teacher. I remember telling myself that if I ever got to the point where I could stand in her shadow, I would know that I had made it. From that day forward, Dr. Viji K. Sundar became my beacon of hope. I now proudly self-identify and claim that I have reached that shadow and stand up in it, as a result of Dr. Viji K. Sundar's reach.

*Inch by inch, math is a cinch. Yard by yard it is very hard. (Viji Sundar)*

Angelo Segalla

Viji Sundar's love of life, family, students, colleagues, mathematics, and mathematics education will work its magic for some time. The memorial marker for Viji is not physical, it is the vast swath of honest teaching of a subject whose beauty is too often hidden behind pedagogical masks with fixed smiles; too many students are rightfully apprehensive.

As in the quote above, Viji pushed for curriculum and teaching to be upfront and honest, mathematically and pedagogically honest, with straightforward (human) help extended to students who needed help. She went for the heart, not the quasi-learning offered by computer-assisted tutoring and instruction in procedures.

This journal is one of Viji's ideas. I could not (she would not let me!) say "no" to being a co-editor. I relented but was worried about the extra work, of course. The work did not faze Viji amidst her busy schedule, nor did the fact that the title was inappropriate (since, at the time she asked me, the journal had little to do with the CMP). Viji's solution to this concern? We attended a meeting of the CMP and she floated the idea and name of the journal to the attendees. "Any opposition?" (I was ready for an onslaught!) None! Rather "It's a good idea, Viji." Whew!

My admiration for Viji is huge. She was a mathematician and mathematics educator whose contributions advanced the science of mathematics education. As Viji's friend Dolores Arnett put it: Viji was like an atom - tiny and full of energy. She was always busy and brimming with new ideas. Whenever she encountered an obstacle, she tried over, under, around, and possibly through other dimensions. Viji was very caring and compassionate as well. I will miss this good friend.

### A Subset of Joy Named Viji

Shandy Hauk and Mark Davis

What we learned from and through Viji Sundar would fill a stadium. We haven't got that kind of space here. So, we'll hit some highlights. Among other things, we learned the following.

- **Impatience!** – don't put off until tomorrow what can be done today and, if it should have been done yesterday, there's no time like the present.
- **Give love** – first by saying, "Thank you," and then in any other way you can. Even if the love is not returned, there is sweetness in it because the intersection of love and giving resides in joy, or mathematically:  $\{Viji\ Sundar\} \subset \{love \cap giving\} \subset \{joy\}$
- **Always reach** – to extend a helping hand, to ask for assistance, to embrace life.
- Kindness is important and **Celebration** is even more valuable – celebrate now, don't put it off until tomorrow (see above, Impatience!).

Now called the *Journal of the California Mathematics Project*, this venue for communication founded by Viji Sundar embodies all of these principles. The editorial policy is to work with authors in sharing practices, decisions, research, and ideas in support of a better world through education inside and outside of California, with/in/through/from/for mathematics.