



RAJEEV MOTWANI

*A Memorial Celebration*



*Memorial Church, Stanford University ~ September 25, 2009*



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*Pre-Service Music*

Professor Donald Knuth, Organist

Pastorale in F Major - *J.S. Bach* • Adagio and Allegro for Mechanical Organ - *Mozart*  
Blue Rondo a la Turk - *Dave Brubeck* • Sonata I - *Paul Hindemith* • Toccata in D Minor - *J.S. Bach*  
Take Five - *Paul Desmond*

Rabbi Patricia Karlin-Neumann, *Senior Associate Dean for Religious Life*

*Stanford University Welcome*

John L. Hennessy, *President, Stanford University*

*Opening Blessings*

Robert P. Goldman, *Professor of Sanskrit, University of California Berkeley*

*Music*

*Song of the Soul* ..... *Naitri Jadeja*

*Family Introductions*

Ram Shriram

*Reflections*

Sergey Brin • Jennifer Widom • Sep Kamvar • Gautam Bhargava • Lakshmi Pratury

*Closing Prayer*

Robert P. Goldman, *Professor of Sanskrit, University of California Berkeley*

*Closing Remarks*

Ron Conway

*Music*

Grand Chœur Dialogué - *E. Gigout*



## *The Song of the Soul*

- I am not the mind, nor intellect, nor ego,  
nor the reflections of inner self; I am not the five senses  
I am beyond that.  
I am not the earth, nor the fire, nor the wind  
***I am, indeed, that eternal knowing and bliss, that  
love and pure consciousness.***
- Neither can I be termed as energy (prana),  
nor five types of breath (vayus), nor the seven material  
essences, nor the five coverings (pancha-kosha)  
Neither am I the five instruments of elimination,  
procreation, motion, grasping, or speaking.  
***I am eternal knowing and bliss, love and  
pure consciousness.***
- I have no hatred or dislike, no affiliation or liking,  
nor greed, nor delusion, nor pride or haughtiness,  
nor feelings of envy.  
I have no duty (dharma),  
nor any money,  
nor any desire (kama),  
nor even liberation (moksha).  
***I am eternal knowing and bliss, love and  
pure consciousness.***
- I have neither merit (virtue), nor demerit (vice).  
I do not commit sins or good deeds,  
nor have happiness or sorrow, pain or pleasure.  
I do not need mantras, holy places,  
scriptures (Vedas), rituals or sacrifices (yagnas).  
I am not the observer or one who experiences,  
Neither am I the process of observing or experiencing,  
or any object being observed or experienced.  
***I am eternal knowing and bliss, love and  
pure consciousness.***
- I do not have fear of death, as I do not have death.  
I have no separation from my true self,  
no doubt about my existence,  
nor have I discrimination on the basis of birth.  
I have no father or mother, nor did I have a birth.  
I am not the relative, nor the friend,  
nor the guru, nor the disciple.  
***I am eternal knowing and bliss, love and  
pure consciousness.***
- I am all pervasive.  
I am without any attributes,  
and without any form.  
I have neither attachment to the world,  
nor liberation of it.  
I have no wishes for anything  
because I am everything,  
everywhere,  
every time,  
always in equilibrium.  
***I am eternal knowing and bliss, love and  
pure consciousness.***













## *Music*

(Some of these being Rajeev's favorite numbers)

Professor Donald Knuth, Organist

### **J. S. Bach, Pastorale in F major (S. 590)**

A delightful piece from Bach's first master period, originally written for a pedal harpsichord but perfectly suited to a pipe organ.

### **W. A. Mozart, Adagio and Allegro for Mechanical Organ (K. 594)**

This work was commissioned by a Bohemian count, Joseph von Deym, who had opened an art gallery and wax museum in Vienna. In the spring of 1791, von Deym created an exhibit to commemorate the Austrian military hero Ernst von Laudon. He asked Mozart to compose appropriate memorial music, which was played every hour by a special mechanical instrument controlled by elaborate clockwork — actually the nearest thing to a computer, in those days. Stanford organ students Walter Hewlett (1980) and Jim Dawson (1991) based their doctoral studies on this fine piece.

### **Dave Brubeck, Blue Rondo a la Turk**

Here is Brubeck's pioneering introduction of 9/8 rhythm into jazz music, forming the nine beats with a 2+2+2+3 grouping from Turkish folk rhythms instead of using the classical 3+3+3. (Such rhythms were also explored extensively in ancient Indian compositions.) This piece was the lead track on Brubeck's album "Time Out" (1959). Its title consciously echoes Mozart's well-known piano piece "Rondo alla Turca".

### **Paul Hindemith, an excerpt from his Sonata I for organ (1937)**

Hindemith developed a unique mathematics-based scheme of harmony and melody, nicely illustrated in this second movement from his first major composition for pipe organ.

### **J. S. Bach, Toccata in d minor (S. 565)**

Bach's most famous organ composition, probably written about 1705, has often been used to demonstrate dramatic organ music, sometimes by fanatical performers such as (mad?) scientists. In modern times it has often been featured in movies — notably Disney's "Fantasia" (1940), where it was the opening number — and more recently in millions of downloads from YouTube (as well as in ring tones).

### **Paul Desmond, Take Five**

This piece in 5/4 time, a long-time favorite of Rajeev and his family, became famous when Dave Brubeck's quartet recorded it as the third track of "Time Out" (1959).

### **Eugène Gigout, Grand Chœur Dialogué**

This dialog between different chambers of organ pipes, written in 1881, remains one of the best-loved compositions of all time.





### **Stay Engaged**

Go to [www.rememberingrajeev.com](http://www.rememberingrajeev.com)

To share your memories and join us in taking  
Rajeev's key areas of interest forward.



## Tributes



Rajeev was a wise theoretician that had the rare knack and desire to turn theory into practical applications. Rajeev was always willing to lend an ear and a brain to anyone, even to me as a confused student.

With his always open door and clever insights, Rajeev was instrumental in the early work that led to Google. Everyone who works at Google and everyone who uses Google please join with me in offering tremendous gratitude to Rajeev and his whole family. — **Larry Page**

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“Rajeev’s friendship was a very special one. His gentle manner, his serenity, his incredible humility, his gracious attitude, and the way he taught by example, these were all unique qualities that touched me. Always very helpful and generous with both his time and his mind, his insights on the world around us always cast a forever shining light, that will help me see the world more clearly” — **Vasudev Bhandarkar**

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Right from his grad student through to his venture capital days, Rajeev was at all times generous, down-to-earth and witty. He was a man of many accomplishments, of course, but what we’ll miss most is his warm friendship, his ready laughter. Rest in peace, Rajeev. — **Isha Ray**

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Rajeev, our friend and mentor, who we will never forget:

*You taught us so much through your intellectual, intuitive and understated, even-keeled style. We will follow your example of humility, thoughtfulness and generosity in helping and teaching others.*

*You have created a tremendous legacy in Silicon Valley and the world, and it is our responsibility to attempt to fill this void you have left by carrying forward your unfinished works and dreams. We will honor you by doing so.* — **Ron Conway**

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Rajeev Motwani was an incredible faculty member: a great scholar who made insightful and deep research contributions. A dedicated teacher and adviser, who always found time to help students, and a natural and successful entrepreneur. He was also a good friend and colleague to those of us in Computer Science. His loss is deeply felt by those who had the pleasure of knowing him personally, especially his Stanford colleagues, by the world-wide computer science research community, and by the many people whose lives he touched in Silicon Valley.

— **John L. Hennessy**

## *Tributes*



From a casual beginning 5 years or so ago, Rajeev became an instrumental part of August Capital. As a Venture Partner here, Rajeev attended all of our investment meetings and sat on the boards of many of our portfolio companies. His contributions to those companies and our partnership cannot be overstated. Rajeev spoke the languages of Silicon Valley and academia so credibly that no accent was apparent to either constituency! Rajeev always gave great, objective advice to his students/entrepreneurs. We miss him terribly... — **David Marquardt**

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Rajeev, who we called Jamaisaheb, was to the world a famous scientist, entrepreneur, and mentor. For Yogi and me, he was the rock star of an elder brother that we never had. When our dear sister Asha married Rajeev, we used to pinch ourselves and wondered how we ever got so lucky — that this brilliant, humble, and incredibly handsome man entered our family and immediately became part of a large, cantankerous family — with such ease. In our 20 years of close association, we never saw Rajeev ever lose his cool, was always generous even to people he did not know, and became the darling son of our parents, and all aunts and uncles in the family. He will be with us forever. — **Yashwant Jadeja and Yogi Jadeja (Asha's younger brothers)**

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Rajeev Motwani was a dear friend, a distinguished colleague and a warm human being. I had the pleasure of knowing him for more than twenty five years as our paths intertwined through IIT Kanpur, Berkeley and Stanford. His different personas — the computer science theorist, the entrepreneur, the bon vivant — intersected to form a personality that became larger than life. I will miss him a lot, and wish Asha and his children the strength to cope with the loss. — **Jitendra Malik, UC Berkeley**

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“Rajeev had many great attributes and accomplishments. But above all, he was an amazingly sincere, warm and caring person who had a positive impact on everyone he met. It has been a huge privilege and a joy to have known Rajeev as a very close friend. His warm smile and friendship will never be forgotten and is missed every day.” — **Asheem Chandna, Greylock Partners**

## Tributes



The reflections we have had in the past few weeks capture Rajeev's spirit as a remarkably brilliant yet humane individual, equally beloved for his clarity of thought and his willingness to lend a helping hand. My own relationship with Rajeev stretches the past 10 years, when I first met him as a young entrepreneur. Rajeev was always there with a warm smile and sage advice. He told me the truth, even when I sometimes did not want to hear it. He became my friend, mentor, confidant and teacher. I always left meetings with him clearer and more confident of the future. As our families spent more time together, we experienced Rajeev as husband and father. I feel grateful to have had the chance to spend time with such a witty and kind man, both professionally and personally. Personally I have decided that the best homage I can pay Rajeev is to incorporate the principles by which he lived his life into my own — lending a helping hand and a warm smile to everyone I meet. I am proud to have Adchemy be an ongoing part of Rajeev's legacy. I miss Rajeev's presence every day. — *Murthy Nukala*

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Rajeev was one of those rare people who operated at the highest level of excellence in multiple disciplines. He was exceptionally observant, practical, thoughtful, yet decisive, with an unerring instinct for the right questions or issues around any topic, be it the game of cricket or a startup. I was always impressed by his kindness, fondness, and open door policy with young entrepreneurs. As a close friend, he was always there for us and very striking in his unabated desire to enjoy life! His death is a huge loss to the Silicon Valley and for Komal and me personally. — *Gaurav Garg & Komal Shah*

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We will remember Rajeev as a dear friend, a strong and caring influence in his understated way, on those who were privileged to interact with him. Rajeev was the epitome of a scholar and a gentle man. We will cherish his fine mind, the warmth of his friendship and his love of life. — *Arun and Poornima Kumar*

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I had the pleasure of observing Rajeev closely in both boardroom style settings and mathematical discussions. He was extraordinary in both, and his ability of porting ideas from one to the other was unparalleled. I took classes from him when I was a student, and later became a colleague. He was always there as a mentor, generously helping numerous students and junior colleagues navigate their research, careers, and education. Rajeev was the kind of person you can hope to meet only once in a life-time, and I feel fortunate my life intersected with his. — *Professor Ashish Goel, Management Science and Engineering, Stanford University*

## Tributes



In academic circles, adjectives like brilliant, versatile, original and deep (roughly synonymous with the IIT slang word “*funda*”) are used to describe exceptional talent and achievement. Rajeev was all of these. However, I will always think of him as someone who had a rarer quality: intellectual coolness — an ability to spot interesting, important and fun research problems. I aspire to be as helpful and patient as he was, and to always see the potential in ideas and in people. Rajeev: I will miss you; rest in peace. — **Professor Balaji Prabhakar, Departments of Electrical Engineering and Computer Science, Stanford University**

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Rajeev was remarkable in both his brilliance of intellect and generosity of spirit. He was a teacher, mentor, and dear friend; and through his sincerity, his humility, and his selflessness, he has set an inspiring example for which I am grateful. Rajeev was not only a great computer scientist, but he was also a great man. — **Sep Kamvar**

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Every time I think of Rajeev, I remember the sparkle in his eyes. A sparkle that lit up the life of everyone around him. ...that revealed his free spirit and boyish naughtiness. ...that represented a loving and caring father, husband and friend. ...that showed the amazingly selfless, helpful, generous person he was. The sparkle will always live with all of us whose life he touched. — **Prateek Dhawan**

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To the world Rajeev was renowned as a brilliant scientist, one of the leading authorities on randomized algorithms and their applications. To his friends and colleagues Rajeev was revered as a wonderful human being, one who freely gave his time and advice, generously shared his contacts and resources. It is very rare to come across this combination and it is precisely this aspect of Rajeev that made him such a unique individual, held in high regard by people from all walks of life. Death may have been able to claim his body, but his spirit lives on for each and every person whose lives he has touched, providing comfort, confidence and reassurance, and challenging us to achieve higher standards of excellence. — **Shazia Makhdumi**

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Rajeev was the epitome of the soft-spoken, smart and compassionate person. He showed respect to everyone, he shared his time and skills without reservation. He was extremely successful at anything he touched, and was able to positively affect the lives of so many. He is an example for all of us, and we miss him terribly. — **Louis Monier**

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Rajeev was forever brimming with intellect, thoughtful, a deep thinker at many levels, on many dimensions, and always soft spoken. He was caring, loving and devoted to his family. The best way to honor Rajeev is to celebrate his life’s work and his great values as a parent, teacher, mentor, researcher, and entrepreneur.

— **Ram and Vijay Shriram**

