

## CURRICULUM VITAE

**NAME:** Krishnaswami Alladi

**PRESENT POSITION:** Professor

**ADDRESS:** Department of Mathematics  
University of Florida  
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**BORN:** October 5, 1955, Trivandrum, India

**DEGREES:** Ph.D., U.C.L.A. - 1978; Advisor-E.G. Straus  
M.A., U.C.L.A. - 1976  
B.Sc., Madras University, India - 1975

**RESEARCH INTERESTS:** Number Theory - Analytic Number Theory,  
Sieve Methods, Probabilistic Number Theory,  
Diophantine Approximations, Partitions,  
q-hypergeometric identities

### **PROFESSIONAL EXPERIENCE:**

T.H. Hildebrandt Research Assistant Professor, University of Michigan, 1978-81  
Visiting Member, Institute for Advanced Study, Princeton, New Jersey, 1981-1982.  
Visiting Associate Professor, University of Texas, Austin, Texas, 1982-1983.  
Visiting Associate Professor, University of Hawaii, Honolulu, Hawaii, 1984-1985.  
Associate Professor, Institute of Mathematical Sciences, Madras, India, 1981-1986.  
Associate Professor, University of Florida, 1986-1989.  
Professor, University of Florida, 1989-present.  
Visiting Professor, Pennsylvania State University, 1992-93, and Fall 94  
Chairman, Department of Mathematics, University of Florida, 1998-2008

### **AWARDS AND HONORS:**

Chancellor's Fellowship for the Ph.D., 1975-78, UCLA.  
Alumni Medal for one of 5 best Ph.D. theses (all subjects) at UCLA in 1978.  
CLAS Research Awards at University of Florida thrice: 1987, 1994, 2000  
TIP Award for distinguished teaching at the University of Florida in 1994-95.  
STEP/SPP Awards for distinguished performance as Full Professor: 2001, 2010.  
Elected Inaugural Fellow of the American Mathematical Society in 2012-13  
Conference in honor of my 60th birthday, University of Florida, Mar 2016  
<https://qseries.org/fgarvan/alladi60.html>  
*Awarded Honorary Doctorate of Science (Honoris Causa)*, Sept. 2022, by SASTRA  
University for my distinguished contributions to mathematics.

**GRANTS:** (Peer reviewed individual investigator research grants)

NSF Grant at University of Michigan, Ann Arbor (1979-80), MCS 78-02685

NSF Grant at University of Florida, Gainesville (1994-98), DMS-9400191.

NSF Grant at University of Florida, Gainesville (2000-04), DMS-0088975.

NSA Grant MSPF-06G-150 - Krishnaswami Alladi (PI), Alexander Berkovich (Co-PI), Frank Garvan (Co-PI) - at University of Florida, 2006-09.

NSA Grant MSPF-08G-154 - Krishnaswami Alladi (PI), Alexander Berkovich (Co-PI), Frank Garvan (Co-PI) - at University of Florida, 2008-11.

**A SELECTION OF PROFESSIONAL ACTIVITIES:**

Elected to Panel of Visiting Lecturers, Math Association of America, 1991-1994.

Member of Program Committee (to select one hour speakers) of the Southeastern Section of the American Mathematical Society, 2002.

Chair of Program Committee (to select one hour speakers) of the Southeastern Section of the American Mathematical Society, 2003.

Organizer of annual Int'l Conferences on Number Theory and Related Topics at SASTRA University, Kumbakonam, India (Ramanujan's hometown) since 2003.

Chair: SASTRA Ramanujan Prize Committee- since 2005.

Chair: Accreditation Teams of BS and MS Math Programs at various universities in the Middle East:: American University of Sharjah, UAE (2007, 2011, 2018), University of Sharjah, UAE (2007, 2018), King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia (2009), Khalifa University, UAE (2022).

Member: Accreditation Teams of BS and MS Math Programs at various universities in the Middle East: NYU - Abu Dhabi, UAE (2015), King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia (2012), United Arab Emirates University, Al Ain, UAE (2017), University of Balamand, Dubai, (2017).

Member, American Mathematical Society Committee on Committees, 2009-11.

**EDITORSHIP:**

Editor-in-Chief and Founder of *The Ramanujan Journal* - an international journal devoted to areas influenced by Srinivasa Ramanujan, published by Springer.

Founder and Editor of book series - *Developments in Mathematics* (Springer)

Editor - *Notices of the American Mathematical Society*, 2009-15.

Editor - *Springer Briefs in Mathematics*, 2011-14

Editor - *The Mathematics Student* (India), since 2015.

**PHD STUDENTS:**

S. T. Dhavakodi (1992), Zoltan Reti (1994), Frank Daniels (1994), Todd Molnar (2017), Ankush Goswami (2019).

**SERVICE AS CHAIR OF THE MATHEMATICS DEPARTMENT:**

As Chair, I initiated several programs to get increased visibility and recognition of our research and in enhancing collaboration with other disciplines:

The *Erdős Colloquium* in Pure Mathematics launched in 1998-99

The *Ulam Colloquium* in Applied Mathematics launched in 1998-99

The *Center for Applied Mathematics Colloquium* launched in 2001-02

The *Ramanujan Colloquium* launched in 2007

*Special Year Programs* launched in 2001-02 (ran for six years)

The *John G. Thompson Research Assistant Professorship* launched in 2002-03

A vibrant program in biomath launched in 1999-00

In recognition of my services as Chair, I was invited by the Board of Mathematical Sciences to speak at the Annual Mathematics Chairs Colloquium, held at the National Academy of Sciences, Washington D.C. in November 2002. The title of my talk was “Enhancing visibility and strengthening ties with other disciplines.”

In recognition of my services as Chair, I was invited to be one of four Workshop Leaders for a three year period starting 2005 for the Mathematics Chairs Workshops by the American Mathematical Society in conjunction with their Annual Meetings in Atlanta (Jan 2005), San Antonio (Jan 2006) and New Orleans (Jan 2007)

#### **SELECTED INVITED ADDRESSES AT CONFERENCES SINCE 1995**

Conference on Special Functions, q-Series and Related Topics, organized by The Fields Institute, Toronto, Canada, June 1995. (one hour)

Int’l Congress on Algebra and Combinatorics, Hong Kong, August 1997 (45 mins)

Japan Number Theory Conference, Research Institute of Mathematical Sciences (RIMS), Kyoto, November 1997 (one hour)

Conference in honor of George Andrews, Penn. State Univ., Oct 1998. (one hour)

Conference in memory of Paul Erdős, Hungarian Academy of Sciences, Budapest, July 1999 (30 mins)

Illinois Number Theory Conference, Urbana, September 1999 (one hour)

Millenial Number Theory Conference, University of Illinois, May 2000 (30 mins)

Weissman Public Lecture, City University of New York, November 2002 (one hour)

Int’l Ramanujan Conf. on Number Theory and Secure Communications (inaugurated by President of India), Kumbakonam, India, Dec. 2003 (one hour)

Conference in honor of George Andrews for his election to the National Acad. Sci., Penn. State Univ., April 2004. (one hour)

International Conference on the Renaissance of Combinatorics for Doron Zeilberger’s 60-th birthday, Nankai University, China, Aug 2010 (one hour)

Ramanujan 125-th Anniversary Legacy Conference, Ramanujan Mathematical Society, New Delhi, India, Dec 17-22, 2012 (one hour)

Erdős Centennial Conference, Budapest, Hungary, July 4, 2013 (30 mins)

Conference on the Combinatorics of Partitions in honor of George Andrews for his 75-th birthday, Nankai Univ., Tianjin, China, Aug 2013 (one hour)

Penn State Univ Conf.(for 80th Birthday of George Andrews), June 2018 (one hour)

Invited Address, Conf. at The Royal Society to commemorate the Centenary of Ramanujan’s Election as FRS, London, England, Oct. 2018

#### **SELECTED REFEREED PUBLICATIONS**

1. (with P. Erdős), “On an additive arithmetic function”, *Pacific J. Math* **71**, (1977), 275-294.
2. “Duality between prime factors and an application to the prime number theorem for arithmetic progressions”, *J. Number Theory* **9** (1977), 436-451.
3. (with M.L. Robinson), “Legendre polynomials and irrationality”, *J. Reine Angew. Math.* **318** (1980), 137-155.
4. “Asymptotic estimates of sums involving the Moebius function”, *J. Number Theory*, **14** (1982), 86-98.
5. “Asymptotic estimates of sums involving the Moebius function, II”, *Trans. Amer. Math. Soc.*, **272** (1982), 87-105.

6. “The Turan-Kubilius inequality for integers without large prime factors”, *J. Reine Angew. Math.*, **335** (1982), 180-196.
7. “Moments of additive functions and the sequence of shifted primes”, *Pacific J. Math.*, **118** (1985, Straus memorial issue), 261-275.
8. “An Erdős-Kac Theorem for integers without large prime factors”, *Acta Arithmetica, Erdős 75th birthday issue* **49** (1987), 81-105.
9. “Multiplicative functions and Brun’s Sieve”, *Acta Arith.*, **51** (1988), 201-219.
10. (with Basil Gordon), “Generalizations of Schur’s partition theorem”, *Manuscripta Mathematica*, **79** (1993), 113-126.
11. “On the modified convergence of continued fractions of Rogers-Ramanujan type”, *J. Combinatorial Theory, Ser. A*, **66** (1994), 214-245.
12. (with George E. Andrews and Basil Gordon), “Generalizations and refinements of a partition theorem of Göllnitz”, *J. Reine Angew. Math.*, **460** (1995), 165-188.
13. “Some new observations on the Göllnitz-Gordon and Rogers-Ramanujan identities”, *Transactions Amer. Math. Soc.*, **347** (1995), 897-914.
14. (with Basil Gordon), “Schur’s partition theorem, companions, refinements and generalizations”, *Transactions Amer. Math. Soc.*, **347** (1995), 1591-1608.
15. (with George E. Andrews and Basil Gordon), “Refinements and generalizations of Capparelli’s conjecture on partitions”, *J. Algebra*, **174** (1995), 636-658.
16. “A combinatorial correspondence related to Göllnitz’ (Big) partition theorem and applications”, *Transactions Amer. Math. Soc.*, **349** (1997), 2721-2735.
17. (with George E. Andrews), “A new key identity for Göllnitz’ (Big) partition theorem”, Proc. 10th Anniv. Conf. of the Ramanujan Math. Soc., *Contemp. Math.*, **210** (1997), 229-241.
18. “Refinements of Rogers-Ramanujan type identities”, in Proceedings of the Fields Institute Conference on special functions,  $q$ -series and related topics, *Fields Institute Communications*, **147** (1997), 1-35.
19. (with A. Berkovich), “New weighted Rogers-Ramanujan partition theorems and their implications”, *Transactions Amer. Math. Soc.*, **354** (2002), 2557-2577.
20. (with G.E. Andrews and A. Berkovich), “A new four parameter  $q$ -series identity and its partition implications”, *Inventiones Math.* **153** (2003), 231-260.
21. “Partitions with non-repeating odd parts and combinatorial identities”, *Annals of Combinatorics*, **20** (2016), 1-20.
22. “Ramanujan’s Legacy - the work of the SASTRA Prize Winners”, *Philosophical Transactions of The Royal Society A*, London (Special Issue to Commemorate the Centenary of Ramanujan’s Election as FRS) **378** (2020), 1-19.

#### **BOOKS/VOLUMES EDITED**

Since the 1980s, I have edited about 25 special volumes for Springer Verlag, either as the sole editor, or as a co-editor. These are either refereed proceedings of international conferences, or volumes in honor or memory of an eminent mathematician. NEW FOR 2023: I am one of 8 editors of the volume (of 240 articles) *Srinivasa Ramanujan - his life, legacy and mathematical influence* (Springer, to appear).

#### **OTHER WRITINGS:**

I have contributed several articles to “The Hindu”, India’s National Newspaper, on Ramanujan and other mathematical luminaries whose work is connected to that

of Ramanujan. I have also written articles on the work of the SASTRA Ramanujan Prize Winners. These have appeared in the Notices of the AMS, The MAA Focus, the Newsletter of the EMS, The Asia Pacific Math Newsletter, and The Philosophical Transactions of The Royal Society.

**Special publications for Ramanujan's 125-th birth anniversary (2012):**

(i) BOOK: All my articles about Ramanujan appeared as a book: "Ramanujan's place in the world of mathematics - Essays providing a comparative study", Springer (2012), 177 pp. A second expanded edition (270 pp) will appear in 2021.

(ii) FEATURE ARTICLE: At the invitation of the AMS, I have edited a feature article entitled "Srinivasa Ramanujan - going strong at 125". This appeared in two parts in the Notices of the AMS (Dec 2012 and Jan 2013).

**2018 Royal Society Conf for Centenary of Ramanujan's election as FRS**

Invited to give a talk: "Ramanujan's Legacy: The work of the SASTRA Prize Winners". Paper based on the talk appeared in *Phil. Trans. Royal Soc.* (2020).

**Contribution to the profession**

**THE RAMANUJAN JOURNAL**

I am the Founder and Editor-in-Chief of *The Ramanujan Journal* (launched in 1997), an international journal devoted to all areas of mathematics influenced by Ramanujan. The journal was first published by *Kluwer*, but since 2004, it is published by *Springer*. This journal which started with four issues per year of about 100 pages each, now publishes 12 issues per year of about 300 pages per issue. This growth is a measure of its significant impact.

**DEVELOPMENTS IN MATHEMATICS**

Based on the success of The Ramanujan Journal, *Kluwer* decided to launch a book series in 1998 called *Developments in Mathematics* (DEVM) . This too is now published by Springer. I have been Series Editor for DEVM since its inception. DEVM publishes refereed conference proceedings, research monographs, and contributed volumes, in all areas of mathematics. Pham Tiep and Loring Tu have recently joined me as Series Editors. DEVM has so far published 75 volumes.

**SASTRA RAMANUJAN PRIZE**

At my suggestion, SASTRA University in Ramanujan's hometown Kumbakonam, India, has instituted a Ramanujan Prize of \$10,000 to be awarded annually to a mathematician not exceeding the age of 32 for outstanding contributions in an area influenced by Ramanujan. The age limit has been set at 32 because Ramanujan achieved so much in his brief life of 32 years, and also to encourage doctoral and post-doctoral research. I have been Chair of the Prize Committee since the inception of the prize in 2005. This prize has won international acclaim as can be seen from prominent reports especially in the Notices of the AMS. As Chair of the Prize Committee I serve the profession by recognizing outstanding research by very young mathematicians. Several SASTRA laureates have gone on to win prizes with a hallowed tradition which have either a higher age limit, or no age limit, such as the Fields Medal or the AMS Cole Prize.