Curriculum Vitae

Satyanad Kichenassamy

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Satyanad Kichenassamy was born in Paris in 1963, graduated from the Ecole Normale Supérieure in Paris and obtained his doctorate under the direction of Haïm Brezis. He is currently Full Professor of Mathematics at the Université de Reims Champagne-Ardenne, in the CNRS Mathematics Research division there, of which he was the director from 2004 to 2007. He has previously been on the faculty of New York University, and of the University of Minnesota. He has also spent a year at the Max Planck Institute in Leipzig. He has given lecture series at EPHE (Paris) in 2021-22 and 2023-24 and will deliver another one in 2024-25. He works in Mathematics, History and Indology, and has solved several long-standing problems in each of these fields. He wrote *Nonlinear Wave Equations,* (Dekker, 1995) and *Fuchsian Reduction* (Birkhäuser, 2007) and over eighty articles. He introduced the method of Fuchsian Reduction in Nonlinear Analysis, the method of Conformal Snakes in Computer Vision, and the notion of apodictic discourse in History of Science. He has shown that major Indian mathematicians have encoded derivations and even definitions through the discursive structure of their works, so that unless one performs the appropriate textual analysis, they appear to contain unsupported statements.

Born 1963, in Paris, France.
French citizen.

Current position: Full Professor of Mathematics, Université de Reims Champagne-Ardenne.
Areas of expertise: Analysis and Geometry; Computer Vision; History of Science; Indology.
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Bibliometrics (as of Jan. 25, 2023)**:** 4636 citations ; h-index: 23 ; g-index: 66 (source : Harzing). S.K. is on the list of the ***World's Top 2% Scientists*** (in all fields), established by Stanford University. See the first Excel file on
 https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/6

Education and main academic titles:

- Baccalauréat, série C (Lycée Louis-le-Grand, Paris, 1980)
- Ancien élève de l'École Normale Supérieure (rue d'Ulm, Paris, 1982–1986). (Also admitted at the École Polytechnique in 1982.)
- Agrégation de Mathématiques (1984).
- Doctorate, Université Paris VI (Mathematics) (Jan. 26, 1987; *advisor* : Haïm Brezis).
- Habilitation à diriger des recherches en Sciences, Université Paris VII
              (defended Feb. 5, 1998; *sponsored by* Haïm Brezis and Claude Bardos).

Previous and current positions (current positions and affiliations in boldface) :

- Élève-fonctionnaire at the École Normale Supérieure (rue d'Ulm, Paris, 1982–1986) ; Ancien normalien doctorant (*ibid.*, 1986-7).
- Courant Instructor, New York University (USA), 1987–1990.
- Assistant Professor of Mathematics, University of Minnesota (USA), 1990–1997.
- Guest Professor, Max-Planck-Institut für Mathematik in den Naturwissenschaften, Leipzig (Germany), 1997-98.
- **Professeur des Universités**, Université de Reims Champagne-Ardenne (France), **1998-present.**
- **Member of LMR (CNRS ; UMR9008, Reims)** since its creation.
- Directeur du Laboratoire de Mathématiques (CNRS, UMR 6056), Université de Reims Champagne-Ardenne, 2004–2007.
- Chargé de conférences at EPHE (Univ. PSL, Paris, 2021-2022).
- **Chargé de conférences at EPHE** (Univ. PSL, Paris, 2023-2025).
- **Membre associé of GREI (EPHE and Univ. Paris 3 Sorbonne, Paris)** since sept. 2023.

Publications and main contributions: Two research monographs, seven book chapters and over eighty articles. Solution of several long-standing problems in Mathematics, History of Mathematics and Indology (see e.g. papers 5, 11, 23, 26, 29, 36, 38, 40, 49, 53, 59, 61, 62, 66, 68, 70, 73, 74, 75, 77, 78, 79 on the author's web page).

Selected achievements: Introduction of the *method of Fuchsian Reduction* in Nonlinear Analysis, and of the *method of conformal snakes* in Computer Vision. Solution of *quasilinear elliptic problems* with Dirac data. Solution of the *Perona-Malik paradox*. Proof of *Fefferman's conjecture* on the 'ambient metric.' Proof of the divergence of series for *breathers*. Solution of the *soliton star problem* in the breather limit. Solution of the *weak detonation problem*. Introduction of the *notion of apodictic discourse*. Application to several open problems in History of Mathematics in various cultures, and in *classical Tamil and Sanskrit philosophy*. Introduction of the concept of *heterometry*. New axiomatics for the *observer manifold*, applications to General Relativity.