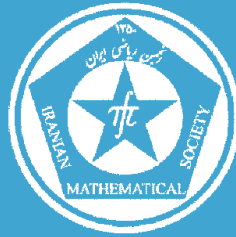


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in Honor of Professor Freydoon Shahidi's 70th birthday

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**Title:**

**A Special Issue in Honor of Professor Freydoon  
Shahidi on the Occasion of His Seventieth Birthday**

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Takloo-Bighash**

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**A SPECIAL ISSUE IN HONOR OF PROFESSOR FREYDOON  
SHAHIDI ON THE OCCASION OF HIS SEVENTIETH  
BIRTHDAY**

A. AKBARY, J. ARTHUR, M. ASGARI, J. COGDELL, D. RAMAKRISHNAN AND R.  
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This special issue of the *Bulletin of the Iranian Mathematical Society* celebrates the 70<sup>th</sup> birthday of Freydoon Shahidi. Shahidi was born in Tehran on June 19, 1947. He received a B.Sc. in Mechanical Engineering from the University of Tehran in 1969. After serving in the Iranian Army Corps of Engineers, he enrolled as a graduate student at the Johns Hopkins University in Baltimore, US, after his interests switched from engineering to mathematics. He received his Ph.D. in Mathematics from Johns Hopkins in 1975, writing a thesis “On Gauss sums attached to the pairs and exterior powers of the representation of general linear groups over finite and local fields” under the direction of Joe Shalika. Shalika was a pioneer in the theory of automorphic forms and their  $L$ -functions and Shahidi followed in his footsteps. After a year at the Institute in Princeton, where Shahidi was greatly influenced by Robert Langlands, and a year at Indiana University, Shahidi settled in at Purdue University, where he has stayed throughout his career. He is now a Distinguished Professor of Mathematics there. Among the honors he has earned along the way include being elected as an Honorary Member of the Iranian Mathematical Society, a Fellow of the American Mathematical Society, and a Fellow of the American Academy of Arts and Science.

Shahidi’s first paper was “Functional equation satisfied by certain  $L$ -functions”, which appeared in *Compositio Mathematica* in 1978. These “certain  $L$ -functions” that he studied and the method that he used now goes by the name of “Langlands-Shahidi  $L$ -functions” and the “Langlands-Shahidi method”. The beginning idea was expressed by Langlands in a letter to Godement in 1967: one should be able to obtain the functional equation of the  $L$ -functions that arise in the study of Eisenstein series by looking at the non-constant Fourier coefficients of Eisenstein series. Shahidi took this idea and indeed established the functional equation for these  $L$ -functions. Shahidi single-mindedly pursued these

$L$ -functions throughout his career, and through his work this led to a new approach to the study of these particular automorphic  $L$ -functions that now goes by the name of the Langlands-Shahidi method. The Langlands-Shahidi method is one of the two general ways we have of defining and analyzing the properties of automorphic  $L$ -functions. This pursuit has led to general reducibility results for induced representations over local fields and, when combined with the converse theorem for  $GL_n$ , gave the first broad examples of Langlands Functoriality conjecture, namely the functoriality for globally generic automorphic representations from groups of classical type to  $GL_n$ , as well as the best known general bounds towards the Ramanujan conjecture for  $GL_2$ .

In addition to his original research, another of Shahidi's contributions to the mathematical community has been the training and mentoring of a multitude of Ph.D. students and postdoctoral fellows, to whom he has always been generous with his time and ideas. Many of his students and postdocs have gone on to do research in which Shahidi's influence continues to be front and center. Shahidi is well-known internationally, having visited institutions and collaborators worldwide, from China, India, Japan and Korea to Europe and elsewhere. In particular, he has visited and lectured at several institutions in Iran throughout his professional career. Shahidi has served on the editorial boards of numerous journals during his career, including the *Journal of the American Mathematical Society* and the *American Journal of Mathematics* as well as both the *Bulletin* and *Journal of the Iranian Mathematical Society*.

For this issue of the *Bulletin of the Iranian Mathematical Society* celebrating Freydoon Shahidi's 70<sup>th</sup> birthday we have asked a number of his contemporaries, his postdocs, his students, and those that have been inspired by his work for contributions to this volume. We hope these contributions show the wide influence Shahidi's work has had and in turn inspire a new generation of mathematicians in the field. We would like to thank all those that contributed to this effort, the authors as well as those that performed the duty of being anonymous referees for the papers.

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