

Ramkumar Bala is a postdoctoral researcher in the Physics and Astronomy department at Rice. Hailing from south India, he came to the states after his undergraduate degree in physics from the University of Madras. He then received his Master's degree from UT, Dallas and PhD from Rice in 2010 working with Prof. Patricia Reiff specializing in space plasma physics. His thesis, "Forecasting Geomagnetic Activity Indices using the Boyle Index through artificial neural networks," focussed on developing scientific algorithms to predict short-term space weather events.

His current research focusses on creating tools and techniques for both short- and long-term space physics applications using machine learning, giving, for example, satellite operators and electrical transmission line companies time to take action to protect their equipment. His research efforts have culminated in the form of realtime tools been deployed at the RSI's space weather prediction page, providing "free" email alerts that warn their over 1300 subscribers of ongoing or imminent severe geomagnetic activity, benefitting both immediate community and the society at large. Some of his forecast models are currently being operated in realtime at the NOAA's Space Weather Prediction Center in Boulder, CO.

He has received American Geophysical Union's (AGU) outstanding paper award at their fall 2009 meeting. Additionally, the editors selected his *Space Weather* paper, co-authored with Patricia Reiff, entitled "Improvements in short-term forecasting of geomagnetic activity (2012)" as an AGU "Research Spotlight" for its significant import to geosciences.

In his spare time, he also actively participates in education and public outreach activities, and has presented several popular science talks to high school students, science and astronomy clubs both here and abroad.