

INDIVIDUAL FACULTY PROFILE- TEMPLATE TO BE UPLOADED IN COLLEGE WEBSITE

	<p>Name in Caps: DR. K. N. RAJANIKANTH Designation: Associate Professor Qualification: Ph. D Email-id: (official): rajanikanthnkashi.ece@bmsce.ac.in Experience: 29 Years Teaching experience: 2.5 Years Date of Joining this Institution (BMSCE): 16.1.2020 Research Interests: Embedded Systems, Avionics, Software Architecture/Design, Verification/Validation of Autonomous/Adaptive Systems, Unmanned Aircraft Systems, Systems Engineering, Air Traffic Management</p>
<p>About Your self</p>	<p>Dr. Rajanikanth Kashi Nagaraj: I am currently an Associate Professor in the Department of Electronics and Communication Engineering with an overall work experience of 29 years of which industry experience spans around 27 years and teaching experience spans 2.5 years. The industry experience encompasses Engineering, Research, and Training. Prior to joining BMS College of Engineering, I was with Dayananda Sagar University. I have worked as a Principal Systems Engineer and Senior Technology Specialist at Honeywell Technology Solutions, Bangalore, in the Communications, Navigation, and Surveillance COE. At Honeywell the work encompassed both software development and systems engineering. I started my career with Bharat Electronics in the Military Communication Group where I worked as an R&D Engineer on V/UHF Transceiver systems and GPS. After a brief stint with Wipro Systems working on the Asynchronous Transfer Mode (AT&T GTE Communication Systems project), I moved to Aeronautical Development Agency (ADA), Bangalore, where I worked as a Scientist/Design Team Leader for the LCA Mission software. My current research interests are in the areas of Multi-agent Systems, Formal Verification, Software Architecture & Design, Embedded Software, Avionics Systems, Unmanned Aircraft Systems, Systems Engineering, AI in Avionics, Verification/Validation of Autonomous/Adaptive Systems, Air Traffic Management. I am an INCOSE Certified Systems Engineering Professional and member of the Aeronautical Society of India and Computer Society of India. I hold four granted US patents.</p>

	<p><u>Education:</u> Ph. D: (IIT-Bangalore) Masters: MSc (Engg, CSA, IISc) Bachelors: B E (Electronics, BMSCE)</p>
	<p><u>Personal web site/page if any then mention the Webpage link: Nil</u></p>
	<p>Selected Publications:</p> <p><u>Conferences:</u></p> <ol style="list-style-type: none"> 1. K N Rajanikanth, Y Narahari, N N S S R K Prasad, R S Rao, <i>A Robust and Scalable Architecture for Airborne Radar Simulation</i>, IEEE Region 10 Technical Conference on Convergent Technologies For The Asia-Pacific, Bangalore, India, October 2003. 2. K N Rajanikanth, Y Narahari, N N S S R K Prasad, R S Rao, <i>A Robust Design of Airborne Radar Simulation Software using design patterns</i>, National Conference on Object Oriented Technology 2003, {NCOOT 2003}, Lonere, Maharastra, India, August 2003. 3. K N Rajanikanth, Y Narahari, N N S S R K Prasad, R S Rao, <i>Airborne Radar Data Processor Simulation Using Software In The-Loop Model</i>, International Radar Symposium India – December 2003, Bangalore, India. 4. K N Rajanikanth, Charles Law, Gary Spence, Greg Lacefield, Nainatara Kumble, <i>Specifying and Constructing Safety-Critical Real-time Systems using TAU</i>, Telelogic User Group Conference, October 2004, Miami, Florida, USA. 5. Rajanikanth N Kashi, Mohandas Amarnathan, <i>Perspectives on the use of Model Based Development Approach For Safety Critical Avionics Software Development</i>, International Conference on Aerospace Science and Technology (INCAST) 2008, National Science Seminar Complex IISc, Bangalore, India. 6. Rajanikanth N Kashi, <i>Velocity Systems Engineering: Perspectives on Using SysML for enhanced and accelerated Systems Engineering Activities</i>, Honeywell Systems Engineering Workshop, Bangalore, India, December 2009. 7. Rajanikanth N Kashi, Perumal Kumar, Vanathi Ravindran, <i>Improving the Kinetics and Effectiveness of Systems Engineering - Perspectives on Integrated use of SysML, AADL, and UML for Aircraft Navigation Product Lines</i>, Fourth Asia-Pacific Conference

on Systems Engineering (APCOSE 2010), National Taiwan Ocean University, Keelung, Taiwan, October 2010.

8. Rajanikanth N Kashi, Perumal Kumar, ***A systematic and effective method of mechanizing Allocation in system modeling of Aircraft Navigation Products using SysML***, National Conference on Emerging Technologies in Computer Science 2010 (NCETCS-2010), Bangalore, India, August 2010.
9. Rajanikanth N Kashi, Fernandes Cercuncesao, and Prabhu Kota, ***The Modeling and Analysis of Aircraft In-Trail Procedures Using SysML***, 5th Asia-Pacific Conference on Systems Engineering (APCOSE 2011), South Korea, October 19-21, 2011.
10. Rajanikanth N Kashi, Nainatara Kumble, and Muralikrishna, Sampath, ***Perspectives on Lean Systems Engineering in Avionics Product Development***, 5th Asia-Pacific Conference on Systems Engineering (APCOSE 2011), South Korea, October 19-21, 2011.
11. Rajanikanth N. Kashi, Meenakshi Dsouza, S Kumar Baghel and Nitin Arun Kulkarni. ***Formal verification of avionics self-adaptive software***, ACM ISEC 2016, 9th India software engineering conference, BITS Pilani - GOA, 18-20 February 2016.
12. Rajanikanth N Kashi, Meenakshi Dsouza, S Kumar Baghel and Nitin Arun Kulkarni, ***Incorporating Adaptivity using Learning in Avionics Self Adaptive Software: A Case Study***, 5th International Conference on Computing, Communications and Informatics (ICACCI 2016), Jaipur, India, 21-24 September 2016.
13. Rajanikanth N Kashi, Meenakshi Dsouza, Koyalkar Raman Kishore, ***Incorporating Formal Methods and Measures obtained through Analysis, Simulation Testing for Dependable Self-Adaptive Software in Avionics Systems***, Proceedings 10th Annual ACM India Conference, Compute 2017, Bhopal, India, 16-18 November 2017.
14. Kashi, Rajanikanth N, D'Souza Meenakshi, ***Avionics self-adaptive software: Towards formal verification and validation***, Proceedings of International Conference on Distributed Computing and Internet Technology, Bhubaneswar, Odisha, India, India, 10th – 13th January 2019.
15. Kashi, Rajanikanth N, D'Souza, Meenakshi, ***Mitigating Non-Byzantine and Byzantine Failures in Multi-agent based Dependable and Adaptable Avionics Software***, Third IEEE International Conference on Electrical, Computer and Communication Technologies (IEEE ICECCT 2019), Coimbatore India, February 20th

to 22nd, 2019

Journals:

1. K N Rajanikanth, R S Rao, Ajai Vohra, P S Subramanyam, **Guidance Systems for Fighter Aircraft**, Defence Science Journal, July 2005

Patents:

1. Rajanikanth Nagaraj Kashi, Roger Rathbun, Scott Gremmert, Dilip Mathews, Nainatara Kumble, **SYSTEMS AND METHODS FOR GRAPHICALLY INDICATING AIRCRAFT ASCENT CAPABILITIES**, USPTO Patent number: 8818579 , August 26, 2014.
2. Rajanikanth Nagaraj Kashi, Roger Rathbun, Scott Gremmert, Dilip Mathews, Nainatara Kumble, **SYSTEMS AND METHODS FOR IN-TRAIL OPPORTUNITY WINDOW ESTIMATOR**, USPTO Patent number: 9297895 March 29, 2016. Also available as '**Method for in-trail opportunity window estimator**' European Patent Office, Patent number: EP2704125B1, July 29, 2015
3. Rajanikanth Nagaraj Kashi, Divakara Rao Vadada, Cercuncesao Fernandes, **AIRCRAFT DISPLAY SYSTEMS AND METHODS FOR PROVIDING AN AIRCRAFT DISPLAY FOR USE WITH AIRPORT DEPARTURE AND ARRIVAL PROCEDURES**, USPTO Patent number: 9704405, July 11, 2017
4. Rajanikanth Nagaraj Kashi, Vinayak Manohar Chitragar, Sathish Pakki, **SYSTEM AND METHOD FOR PROVIDING VISUALIZATION AIDS FOR EFFECTIVE INTERVAL MANAGEMENT PROCEDURE EXECUTION**, USPTO Patent number: 10037702, July 31, 2018

Courses Handled/List:

Undergraduate

- Embedded Systems
- Digital Circuits and Logic Design
- Microprocessors and Applications
- Software Engineering
- Internet and Web Architecture

Postgraduate

	<ul style="list-style-type: none">• Formal Methods in Software Engineering
	Additional Responsibilities: Graduate Mentor Industry-Academia Interactions
	Other Information: