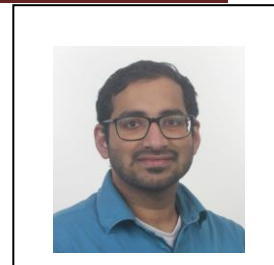


National Institute of Technology, Tiruchirappalli: Proforma for CV of Faculty/ Staff Members

Curriculum Vitae of Dr. Sri Ram Shankar R.



Brief Profile: 1-2 paragraphs (not exceeding 500 words)

I am an academician who works on the design and development of next generation instrumentation systems. With years of research experience both in the academia and in the industry, I look forward to creation and dissemination of methodical knowledge in the fields of Instrumentation, Mechatronics and Control. My research interests lie in Scanning Probe Microscopy, Dynamic modelling, Control systems, Optical motion measurement, Micro-electro mechanical systems (MEMS), Nanometrology and Free-space optical communication.

I look forward to working with under-graduate and post-graduate students on their semester projects and theses. Scholars those who are interested in pursuing their PhD or Research Fellowship (JRF/SRF) in the domains of Precision Mechatronics, Scanning Probe Microscopy and Optical Instrumentation are invited to contact the faculty member.

I am also open for industry collaborations, joint projects or consultancy in the field of Precision Systems Engineering.

LinkedIn Webpage <https://in.linkedin.com/in/sriramshankar-rajadurai-4b0199126>

Google Scholar Profile: <https://scholar.google.com/citations?user=yzIZ8tAAAAAJ&hl=en>

Scopus Author Profile: <https://www.scopus.com/authid/detail.uri?authorId=55923636300>

Web Of Science Researcher ID : [AAD-5955-2021](#)

ORCID : [0000-0001-9467-5516](#)

1. Name SRI RAM SHANKAR R.
2. Designation: ASSISTANT PROFESSOR
3. Office Address:

Chamber No. 205A, Dept. of Instrumentation and Control Engineering, National Institute of Technology, Tiruchirappalli – 620 015. Tamil Nadu.

4. Telephone (Direct) (Optional):

Telephone : +91-431-250 3351

Extn (Optional):

Mobile (Optional):

5. Email (Primary): srir@nitt.edu

Email (Secondary) :

sriramshankar.iisc@gmail.com

6. Field(s) of Specialization: Optical Instrumentation, Precision Mechatronics, Scanning Probe Microscopy, Nanometrology, Dynamic modeling and Control

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7. Employment Profile

Job Title	Employer	From	To
Assistant Professor, Grade-II Dept. of Instrumentation and Control Engg.	National Institute of Technology, Tiruchirappalli	Nov. 2022	Current.
Assistant Professor, Grade-I Dept. of Electrical and Electronics Engg.	Birla Institute of Technology and Science, Pilani K. K. Birla Goa Campus, Goa	Jan. 2022	Nov. 2022
Product Development Engineer (Technical Lead, Hardware Systems Engg.)	KLA Tencor Software India Pvt. Ltd. Chennai, India.	May 2021	Oct. 2021
Junior Scientist Innovator (Research Scientist) Dept.: Optomechatronics	Netherlands Organization for Applied Scientific Research (TNO), Delft, The Netherlands	Oct. 2017	Mar. 2021
Project Assistant	Indian Institute of Science, Bangalore.	Aug. 2017	Oct. 2017
Graduate Engineer Trainee, Phosphatic Fertilizers Division	Coromandel International Ltd., Visakhapatnam	June 2010	June 2011

8. Academic Qualifications (From Highest Degree to High School):

Examination	Board / University	Year	Division/ Grade	Subjects
Doctor of Philosophy (PhD) with Master of Science (Engineering)	Indian Institute of Science, Bangalore	2018	First Class (6.9/8)	Instrumentation and Applied Physics
Bachelor of Technology (BTech)	National Institute of Technology, Tiruchirappalli	2010	First Class with Distinction (9.19/10)	Instrumentation and Control Engineering
Higher Secondary Certificate (HSC)	Tamil Nadu State Board	2006	First Class with Distinction (96.9%)	Maths, Physics, Chemistry
Secondary School Leaving Certificate (SSLC)	Tamil Nadu State Board	2004	First Class with Distinction (97%)	Maths, Science, Social Science

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9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/ Centre/Institution	From	To
Member, Organizing Committee, ISERDM-2023 Conference and Hackathon	CoEERSS, NIT, Tiruchirappalli	Jan. 2023	
Member- Faculty Team, Department NBA Committee	Dept. of ICE, NIT, Tiruchirappalli	Jan. 2023	

10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To
WILP Course – Thesis Evaluation, ME (Embedded Systems)	BITS Pilani Goa Campus	Sep. 2022	Nov. 2022
BITSAT Supervisor Duty	BITS Pilani Goa Campus	Aug. 2022	Aug. 2022
Practice School (PS-1) Mentor, Jio Platforms India Pvt. Ltd.	BITS Pilani Goa Campus	June 2022	July 2022
Member, Workforce for Diversity and Inclusion	Netherlands Organization for Applied Scientific Research (TNO)	Jan. 2020	Feb. 2021
Guest Reseacher in Optomechatronics	Nearfield Instruments, Rotterdam, The Netherlands	Jul. 2019	Jul. 2020

11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2016	INSA-CSIR-DAE-BRNS-CICS Travel Fellowship	Centre for International Cooperation in Science (CICS), Chennai
2011	Institute GATE Scholarship	Indian Institute of Science, Bangalore
2008	AMM Murugappa Chettiar Centenary Scholarship	AMM Foundation, Chennai
2008	Summer Fellowship for Undergraduate students	Dept. of Electrical Engg., IIT-Madras, Chennai
2006	National Merit Scholarship	Government of India/ Govt. of TamilNadu

12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)

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13. Details of Academic Work

(i) Curriculum Development

- Curriculum Revision for A8-B.E (Electronics and Instrumentation) programme, BITS Pilani.
- Proposed a new undergraduate course on Instrumentation Technology

(ii) Courses taught at Postgraduate and Undergraduate levels

At BITS Pilani Goa Campus

- INSTR F311 – Electronic Instruments and Instrumentation Technology (Theory and Lab, as Instructor in-charge)
- EEE/ECE/INSTR F242 – Control Systems
- EEE/ECE/INSTR F341 – Analog Electronics (Lab)

(iii) Projects guided at Postgraduate level

(iv) Other contribution(s)

Mentored Undergraduate Students' Semester projects in the area of Instrumentation, Control and Mechatronics

14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
Development of a Multi-axis Actuation System for the probe in Sub-surface scanning probe microscopy	DST-SERB (Startup Research Grant)			Approved. Awaiting fund release

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award

16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)

Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)	Event Organized by	Venue
Aug. 2015	LabVIEW Core-1 Core-2 Workshop	Local	Participant	National Instruments	Bangalore

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Aug. 2015	LabVIEW FPGA Workshop	National	Participant	National Instruments	Bangalore
Feb. 2019	Optics Course	Local	Participant	TU-Delft and TNO	Delft, The Netherlands
Mar. 2018	Laser Safety Training	National	Participant	Mikrocentrum	Eindhoven, The Netherlands
Jan. 2019	Customer Focus	National	Participant	Boertien Vergouwen Overduin	Hilversum. The Netherlands
Sep. 2018	Personal Effectiveness	National	Participant	TNO	The Netherlands

17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convenor / Co-Convenor)

Title of Activity	Level of Event (International/ National/ Local)	Date (s)	Role	Venue

18. Invited Talks delivered

Topic	Date	Inviting Organization
“The Blind Microscope” – Talk to High School students On Atomic Force Microscopy	May 2021	STEM Students’ Club, Chennai
“Modelling and Control system design for improving the performance of AFM” – Talk on System Engineering aspects of Atomic Force Microscope	Jan. 2020	Applied Materials, Bangalore.
“Was it all worth it?”, Cross-fire, an alumni panel discussion	Feb. 2015	Pragyan, NIT Trichy

19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date

20. Academic Foreign Visits

Country	Duration of Visit	Programme

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21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal
P. Gupta, P. Piyush, R. Sriramshankar , and G. R. Jayanth	A high speed X-Y nanopositioner with integrated optical motion sensing	Review of Scientific Instruments	90	035002	2019	1.48
R. Sriramshankar and G. R. Jayanth	An integrated magnetic actuation system for high speed atomic force microscopy	IEEE/ASME Transactions on Mechatronics	23	2285 - 2294	2018	5.67
R. Sriramshankar* , R. S. M. Mrinalini* and G. R. Jayanth (*joint first authors)	Design and Fabrication of a Flexural Harmonic AFM probe with an Exchangeable tip	J. Micro Bio-robotics	13	39	2017	2.68
R. Sriramshankar and G. R. Jayanth	Design and evaluation of torsional probes for multifrequency atomic force microscopy	IEEE/ASME Transactions on Mechatronics	20	1843 - 1853	2015	5.67
R. S. M. Mrinalini, R. Sriramshankar and G. R. Jayanth	Direct measurement of three-dimensional forces in atomic force microscopy	IEEE/ASME Transactions on Mechatronics	20	2184 - 2193	2015	5.67
T. Rashmi, G. Dharsana, R. Sriramshankar , R. S. M. Mrinalini, and G. R. Jayanth	Note: Design and development of an integrated three-dimensional scanner for atomic force microscopy	Review of Scientific Instruments	84	116102	2013	1.48
R. Sriramshankar , R. S. M. Mrinalini, and G. R. Jayanth	A two-axis in-plane motion measurement system based on optical beam deflection	Review of Scientific Instruments	84	105001	2013	1.48

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(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Pa ge nu mb ers	Conferen ce Theme	Venue	Year
K. Murudkar, R. Gupta, and S. R. S. Rajadurai	Use of Fast Steering Mirrors in improving LOS pointing accuracy in observation based CubeSats	AIAA Student Conference 2022	1-9	Astronomy	Melbourne, Australia (Online)	2022
J. J. Benjamin Biemond, R. W. Herfst and S. R. S. Rajadurai	High aspect ratio topography reconstruction in sub-resonant atomic force microscopy exploiting stick-slip dynamics	Int. Conf. on Manipulation, Automation, Robotics at Small Scales (MARSS)	1-6	Precision Mechatronics and Robotics	Toronto, Canada (Online)	2020
R. Sriramshankar , and G. R. Jayanth	Design and evaluation of flexural harmonic probes for multifrequency atomic force microscopy	Int. Conf. on Manipulation, Automation, Robotics at Small Scales (MARSS)	1-6	Precision Mechatronics and Robotics	Paris, France	2016
S. R. S. Rajadurai , D. Piras, K. Hatakeyama, P. L. M. J. van Neer, M. H. van Es, and M. J. van der Lans	Advanced excitation waveforms in ultrasound sub-surface AFM	TNO, Semicon Innovation Day, Delft, Netherlands		Mechatronics for Semiconductor Industry	Delft, The Netherlands	2019
D. Piras, L. Fillinger, S. R. S. Rajadurai , M. H. van Es, and M. J. van der Lans	Towards Quantitative Stiffness based Subsurface AFM	TNO, Semicon Innovation Day, Delft, Netherlands		Mechatronics for Semiconductor Industry	Delft, The Netherlands	2019
S. R. S. Rajadurai , M. S. Tamer, P. Paul, K. Maturova, J. Wildschut, S. Weber, S. Bonanni, and M. Koppen	Thermal Nanolithography: A technology compatibility study	TNO, Semicon Innovation Day, Delft, Netherlands		Mechatronics for Semiconductor Industry	Delft, The Netherlands	2019
M. van der Heiden,	Monitoring the	TNO, Semicon		Mechatronics	Delft,	2019

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H. Tejada, S. R. S. Rajadurai , and T. Donkers	bio nanomechanical properties of cell structures	Innovation Day, Delft, Netherlands		tics for Semiconductor Industry	The Netherlands	
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(C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number

(D) Patents

Patent Title	Name of Applicant(s)	Patent No.	Award Date	Agency/Country	Status
Heterodyne scanning probe microscopy method and scanning probe microscopy system	S. R. S. Rajadurai , D. Piras, K. Hatakeyama, P. van Neer, M. van Es, H. Sadeghian Marnani and M. van der Lans	PCT/NL2020/050329, WO 2020/236002 A1	First filed May 2019. Published Nov. 2020	EU/International Patent	Published.
Method and system for imaging structures below the surface of a sample	D. Piras, B. Quesson, P. van Neer, M. van Es, L. Fillinger, K. Hatakeyama, and S. R. S. Rajadurai	PCT/NL2020/050325, WO 2020/235998 A1	First filed May 2019. Published Nov. 2020	EU/International Patent	Published
Probe for high speed atomic force microscopy	G. R. Jayanth and R. Sriramshankar	201841019216	First filed Aug. 2018. Published July 2020.	India	Published
Multiple motion measurement	G. R. Jayanth, Piyush Pandey, R. Sriramshankar , and R. Sri Muthu Mrinalini	2017/CHE/2015	First filed April 2015. Published Nov. 2020	India	Published