

## **Dr. K. SATHISH KUMAR**

# 53/54, Charles Nagar,  
3<sup>rd</sup> Street, Kozhumaniwakam,  
Chennai – 600 122, Tamil Nadu, India.

**Mobile:** 9677171415.

**E-mail:** satz\_aero@yahoo.com



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### **OBJECTIVE**

To work with a reputed institution, that will provide me a good platform to utilize my teaching, research & administration skills and will help me to grow in my teaching and research career.

### **CAREER SUMMARY**

- ✓ Hands-on experience at the graduation and post-graduation level education.
- ✓ Outstanding ability to handle syllabus at the undergraduate and post graduate curriculum.
- ✓ Remarkable ability to teach, inspire and develop young people.
- ✓ Monitored and provided specific information and documentation of student's reading needs and their respective progress.
- ✓ Provided instructional assistance and monitored student progress.
- ✓ Meet with parents to discuss progress and address behavior or mastery issues.
- ✓ Developed and conducted reading, writing, study skills and related workshops.
- ✓ Served on academic and administrative committees as assigned.
- ✓ Contributed to the efficient management and administration of the department and the college.
- ✓ Identified and organized field trips to enhance curriculum.

## **QUALIFICATION**

- ✓ **Ph.D. – Aerospace Engineering ( Under the Faculty of Mechanical Engg )**  
2019, in the area related to Propulsion & Aerodynamics from Madras  
Institute of Technology - Campus, Anna University-Chennai.
- ✓ **M.E., CAD/CAM, ( Under the Faculty of Mechanical Engineering )**  
**First Class ( CGPA of 7.54 )**, 2009 - 2011, R.V.S. College of Engineering  
& Technology, Anna University – Thiruchirapalli.
- ✓ **B.E., Aeronautical Engineering, ( Under the Faculty of Mechanical Engg )**  
**First Class with Distinction ( 75 % )**, 2005 - 2008, Mohamed Sathak  
Engineering College, Anna University- Chennai.
- ✓ **Diploma in Mechanical Engineering,**  
**First Class with Honours ( 81.5 % )**, 2003 - 2005, Thai Moogambigai  
Polytechnic College, Chennai.
- ✓ **+2 : Higher Secondary,**  
**First Class ( 60.75% )**, 2001 - 2002, Kalaimagal Matriculation Higher  
Secondary School, Chennai.
- ✓ **10<sup>th</sup> : Matriculation,**  
**First Class ( 61.72 % )**, 1999 - 2000, Kalaimagal Matriculation School,  
Chennai.

## **COMPUTER SKILLS**

MS Office, Auto CAD, PRO-E, CATIA, ICEMCFD, ANSYS - Fluent & CFX.

## **TEACHING EXPERIENCE: 10 years & 3 Months**

- ✓ As **Head of the Department**, Aeronautical Engineering at P.B. College of  
Engineering, Chennai, from June 2016 to till date.
- ✓ As a **Assistant Professor**, in the Department of Aeronautical Engineering at P.B.  
College of Engineering, Chennai, from June 2011 to 2016.
- ✓ As a **Lecturer**, in the Department of Aeronautical Engineering at Mohamed  
Sathak Engineering College, Kilakarai, from June 2008 to August 2009.

## **DETAILS OF INTERNATIONAL JOURNAL PUBLICATIONS**

- ✓ **Sathish Kumar K**, Senthilkumar Chidambaram, 2018, “Jet Flow Control Using Semi-Circular Corrugated Tab” in International Journal of Turbo and Jet Engines. ISSN: 0334-0082, IF : 0.863.
- ✓ **Sathish Kumar K**, Senthilkumar Chidambaram, 2019, “Supersonic Jet Flow Control Using Semi-Circular Corrugated Tabs” in Aircraft Engineering and Aerospace Technology. ISSN: 0002-2667, IF : 0.924.
- ✓ **Sathish Kumar K**, Naren Sankar R, Kevin Bennet, Dilip Raja N, 2019, “Jet Noise Reduction in Co-flowing Jets with Finite Lip Thickness” in International Journal of Vehicle Structures and Systems. ISSN : 0975-3540.
- ✓ **Sathish Kumar K**, Naren Sankar R, Kevin Bennet, Dilip Raja N, 2020, “Characteristics of a Co-flowing Jet with Varying Lip Thickness and Constant Velocity Ratio”, in Aircraft Engineering and Aerospace Technology. ISSN: 0002-2667, IF : 0.924.
- ✓ R. Naren Shankar, **K. Sathish Kumar**, N. Dilip Raja, 2020, “Numerical Study on Sonic Underexpanded Co-flowing Jet with Varying Separation Distance”, in Lecture Notes in Mechanical Engineering, (Springer).
- ✓ R. Naren Shankar, **K. Sathish Kumar**, N. Dilip Raja, 2020, “Numerical Study on Supersonic Co-flowing Jet with Varying Lip Thickness ”, in Lecture Notes in Mechanical Engineering, (Springer).
- ✓ Banupriya P & Ajay Pratap, **Sathish Kumar K**, 2015, “Aerodynamic Design of Single Stage Fan and Two Stage Booster Compressor” in International Journal of Modern trends in Engineering and Science, Volume 2, Issue 10, 2015. ISSN: 2348-3121.
- ✓ Pavithra S, Swathi R, Vinitha K, Saravana Kumar N, **Sathish Kumar K**, 2019, “Effect of Swirler in a Micro Gas Turbine Engine”, International Journal of Engineering Research & Technology, ISSN: 2278-0181.

## **Papers Communicated / Under Peer Review Process**

- ✓ **Sathish Kumar K**, Senthilkumar Chidambaram, “Jet Mixing Characteristics of Semi-Circular Corrugated Tabs”, **Under review after first revision**, Communicated to Journal of Applied Fluid Mechanics.
- ✓ Dilip Raja N, Naren Shankar R, **Sathish Kumar K**, “Influence of Lip Thickness and Mach Number on Co-Flowing Jets”, **Under review after first revision**, Communicated to Proceedings of the iMechE, Part G : Journal of Aerospace Engineering.

## **DETAILS OF CONFERENCE PAPERS**

### **International**

- ✓ **Sathish Kumar, K**, NarenShankar, R, Dilip Raja, N 2020, ‘ Numerical Study on Sonic Under Expanded Co-flowing Jet with Varying Separation Distance’, in Proceedings of 4<sup>th</sup> International Conference on Innovative Design, Analysis & Development Practices in Aerospace and Automotive Engineering (I-DAD 2020), conducted by Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai.
- ✓ NarenShankar, R, **Sathish Kumar, K**, Dilip Raja, N 2020, ‘ Numerical Study on Supersonic Co-flowing Jet with Varying Lip Thickness’, in Proceedings of 4<sup>th</sup> International Conference on Innovative Design, Analysis & Development Practices in Aerospace and Automotive Engineering (I-DAD 2020), conducted by Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai.

### **National**

- ✓ **Sathish Kumar, K** 2011, ‘Computational Analysis of Thrust Produced in the C-D Nozzle with Bypass Flow’, in Proceedings of National Conference on Advanced Design and Manufacture (NCADM 2011), conducted by Einstein Engineering College, Tirunelveli district.
- ✓ **Sathish Kumar, K**, Rajamani, P 2011, ‘Computational Analysis of Thrust Produced in the Converging Diverging Nozzle with Bypass Flow’, in Proceedings

of National Conference on Recent Advances in Mechanical Engineering (RAME 2K11), conducted by Noorul Islam University, Kanyakumari district.

- ✓ **Sathish Kumar, K**, Ineshwaran, P, Naveen Kumar, S, Maaveerapandian, S 2011, 'Computational Investigation of Shape Transitioned Supersonic Nozzle', in Proceedings of National Conference on Recent Trends in Engineering (NCRTE 2016), conducted by P.B. College of Engineering, Chennai.
- ✓ **Sathish Kumar, K**, Chandrasekar, V, Jagan Balaji. B, Lokesh Kumar, S, P, Parthasarathy, S 2011, 'Computational Study to Enhance the Mixing Characteristics of Subsonic Jet by Using Filleted and Chamfered Corners on Square Nozzle', in Proceedings of National Conference on Recent Trends in Engineering (NCRTE 2016), conducted by P.B. College of Engineering, Chennai.
- ✓ Pavithra N.B, **Sathish Kumar, K** 2018, 'Subsonic Jet Flow Control using Corrugated Rectangular Tab', in Proceedings of National Conference on Emerging Trends in Engineering & Technology, conducted by Parisutham Institute of Technology & Science, Thanjavur.
- ✓ Pavithra K, **Sathish Kumar, K** 2018, 'Subsonic Jet Flow Control using Corrugated Triangular Tab', in Proceedings of National Conference on Emerging Trends in Engineering & Technology, conducted by Parisutham Institute of Technology & Science, Thanjavur.
- ✓ **Sathish Kumar, K**, Parvathavarthini, K, Janani, C, Umashree, D, Subashree 2020, 'Computational Investigation of Shape Transitioned Supersonic Nozzle', in Proceedings of National Conference on Recent Developments in Aerospace and Defense Technology, conducted by Aeronautical Society of India, Chennai Branch, in association with Hindustan Institute of Technology & Science, Chennai.
- ✓ **Sathish Kumar, K**, Pavithra. S, Swathi. R, Nethaji. D 2020, 'Numerical Analysis of Supersonic Co-Flowing Jet', in Proceedings of National Conference on Recent Developments in Aerospace and Defense Technology, conducted by Aeronautical Society of India, Chennai Branch, in association with Hindustan Institute of Technology & Science, Chennai.
- ✓ Saravana Kumar, N, Kumaran, V, Aravind, T, Vignesh. E, **Sathish Kumar. K**, Thanigaarasu, S 2020, 'Effect of Perforation Diameters in Tabs to Control Mach 1.5 Supersonic Jet', in Proceedings of National Conference on Recent

Developments in Aerospace and Defense Technology, conducted by Aeronautical Society of India, Chennai Branch, in association with Hindustan Institute of Technology & Science, Chennai.

- ✓ Aarthiprabha, A, Mahalakshmi, A, Dinesh Kumar, R, Saravanakumar, N, **Sathish Kumar, K** 2020, 'Numerical Investigation of Missile Spikes in Supersonic Flow Regime', in Proceedings of National Conference on Recent Developments in Aerospace and Defense Technology, conducted by Aeronautical Society of India, Chennai Branch, in association with Hindustan Institute of Technology & Science, Chennai.
- ✓ Pavithra. S, Swathi. R, Nethaji. D, **Sathish Kumar, K** 2020, 'Numerical Analysis of Swirler for a Micro Gas Turbine Engine', in Proceedings of National Conference on Recent Developments in Aerospace and Defense Technology, conducted by Aeronautical Society of India, Chennai Branch, in association with Hindustan Institute of Technology & Science, Chennai.
- ✓ Subalakshmi, M, Jennifer, C, Thyagarajan, S, Saravanakumar, N, **Sathish Kumar, K** 2020, 'A Study on the Mechanical Behaviour of Aluminium Metal Reinforced with Titanium Carbide and Fly Ash', in Proceedings of National Conference on Recent Developments in Aerospace and Defense Technology, conducted by Aeronautical Society of India, Chennai Branch, in association with Hindustan Institute of Technology & Science, Chennai.
- ✓ Prakashraj, N, Iyyapan, D, Dhanasekar, S, Rajarajan, R, **Sathish Kumar, K** 2020, 'Experimental Study of Drag Characteristics of Circular Cylinder with Different Roughness at Various Reynolds Numbers ', in Proceedings of National Conference on Recent Developments in Aerospace and Defense Technology, conducted by Aeronautical Society of India, Chennai Branch, in association with Hindustan Institute of Technology & Science, Chennai.
- ✓ Harsha, S, Alsaroth Jahan, S, Roja, P, Magesh, V, **Sathish Kumar, K** 2020, 'Numerical Investigation of Upstream VG's on LBSI', in Proceedings of National Conference on Recent Developments in Aerospace and Defense Technology, conducted by Aeronautical Society of India, Chennai Branch, in association with Hindustan Institute of Technology & Science, Chennai.
- ✓ Vignesh Ragul, C, Selva Kumar, V, Mullaivendhan, S, **Sathish Kumar, K**, Vijayaraja, K 2020, 'Numerical Analysis of Airborne Wind Turbine', in

Proceedings of National Conference on Recent Developments in Aerospace and Defense Technology, conducted by Aeronautical Society of India, Chennai Branch, in association with Hindustan Institute of Technology & Science, Chennai.

- ✓ Vinitha, K, Sujeethkumar, D, Prasanth, V,M, Kamalesh, R, Saravanakumar, N, **Sathish Kumar, K** 2020, 'Design and Analysis of Delta Wing with Different Wing Configuration', Proceedings of National Conference on Recent Developments in Aerospace and Defense Technology, conducted by Aeronautical Society of India, Chennai Branch, in association with Hindustan Institute of Technology & Science, Chennai.
- ✓ Priyadharshini, J, Lavanya, R, Reshma, M, Kamali, M, Suganya Rose, R, **Sathish Kumar, K** 2020, 'Numerical Study of Shape Transitioned Isolator', Proceedings of National Conference on Recent Developments in Aerospace and Defense Technology, conducted by Aeronautical Society of India, Chennai Branch, in association with Hindustan Institute of Technology & Science, Chennai.

### **FACULTY DEVELOPMENT & TRAINING PROGRAMME ATTENDED**

- ✓ One week FDTP on Engineering Thermodynamics conducted by Panimalar Engineering College, Chennai.
- ✓ Two days FDTP on Aircraft Propulsion conducted by KCG college of Technology, Chennai.

### **WORKSHOP ATTENDED**

- ✓ One day workshop on CAD/CAM/CAE in plastic product development conducted by CIPET, Chennai.
- ✓ One day workshop on Experimental and Computational Methods in Wind Engineering conducted by VIT University, Chennai.

### **PROFESSIONAL MEMBERSHIP**

- ✓ Associate Member of Aeronautical Society of India.

### **AWARD RECEIVED**

- ✓ Teaching Awards in Engineering – 2019, Sponsored by Staffordshire University, UK and Education Matters, Chennai.

### **RESPONSIBILITIES HELD AT UNIVERSITY LEVEL**

- ✓ Coordinated the Inspection team from AICTE and Anna University, during the annual inspection for the affiliation of P.B. College of Engineering since 2016.
- ✓ Vice-Chairman for the Anna University Central Valuation Board.
- ✓ Research Assessment Committee Member for VelTech University.
- ✓ Question Paper Setter for the Anna University, Karpagam University, Sathyabama University, Noorul Islam University and VelTech University Examinations.

### **OTHER RESPONSIBILITIES HELD**

- ✓ Established and Setting up of a fully functional Aircraft Propulsion, Aerodynamics, Airframe and Aircraft systems laboratory at P.B. College of Engineering, Chennai.
- ✓ Organizing National Conference on Recent Trends in Engineering (NCRTE) at P.B. College of Engineering, Chennai, since 2016.
- ✓ Organizing National level Symposium “ASTHRA” at P.B. College of Engineering, Chennai, since 2016.
- ✓ Organised a Workshop on “CFD and its Applications” in the year 2016 at P.B. College of Engineering, Chennai.
- ✓ Co-ordinated a National level Symposium “ASTHRA” from 2012 - 2016, at P.B. College of Engineering, Chennai.

### **PERSONAL DATA**

Date of Birth	:	14 <sup>th</sup> June 1984
Sex	:	Male
Father's name	:	Mr. P. Kumar
Nationality	:	Indian
Marital Status	:	Married
Languages Known	:	English, Tamil (S, R & W)



Nationality : Indian

Certified that all the facts mentioned above are true to my knowledge and belief.

Yours truly,

  
**K.SATHISH KUMAR.**

## **REFERENCES**

1. **Dr. K. Vijayaraja,**  
Professor & Head,  
Department of Aeronautical Engineering,  
K.C.G. College of Technology, Chennai.  
Mobile : +91- 9443454172.
2. **Dr. C. Senthil Kumar,**  
Professor,  
Department of Aerospace Engineering,  
Anna University – MIT Campus, Chennai.  
Mobile : +91- 9884710304.
3. **Dr. P.N. Kadhiresh,**  
Professor,  
Department of Aeronautical Engineering,  
B. S. Abdur Rahman University, Chennai.  
Mobile: +91 – 9444226195.
4. **Dr. R. Naren Shankar,**  
Associate Professor,  
Department of Aeronautical Engineering,  
Vel Tech University, Chennai.  
Mobile: +91 – 9940175934.



Reg.No.1213239778/RG



*The Syndicate of the Anna University hereby makes known that*  
**SATHISH KUMAR K** *has been admitted to the* **DEGREE OF DOCTOR OF PHILOSOPHY** *under the* **Faculty of Mechanical Engineering**, *having been certified by the duly appointed examiners to be qualified to receive the same in the year* **2019**. *The degree has been awarded in compliance with the* **“University Grants Commission, Regulations 2009”**.

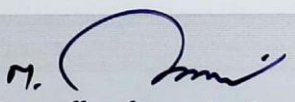
*Title of the Thesis:*

**JET FLOW CONTROL USING SEMI-CIRCULAR CORRUGATED TABS**

*Given under the seal of the University*



Chennai 600025  
India  
December 2019  
QA0013278

  
Controller of Examinations  
SATHISH KUMAR K

  
Registrar

  
Vice-Chancellor  
KVALLAHMATHYKORODURMCC0007



Reg No.: 91309542009



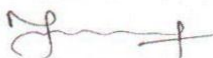
*The Syndicate of the Anna University Tiruchirappalli hereby makes known that SATHISH KUMAR K has been admitted to the DEGREE OF MASTER OF ENGINEERING in CAD/CAM under the Faculty of Mechanical Engineering having completed the prescribed programme of study and having been certified by the duly appointed examiners to be qualified to receive the same and has been placed in FIRST CLASS at the Examination held in MAY 2011.*



Given Under the seal of the University

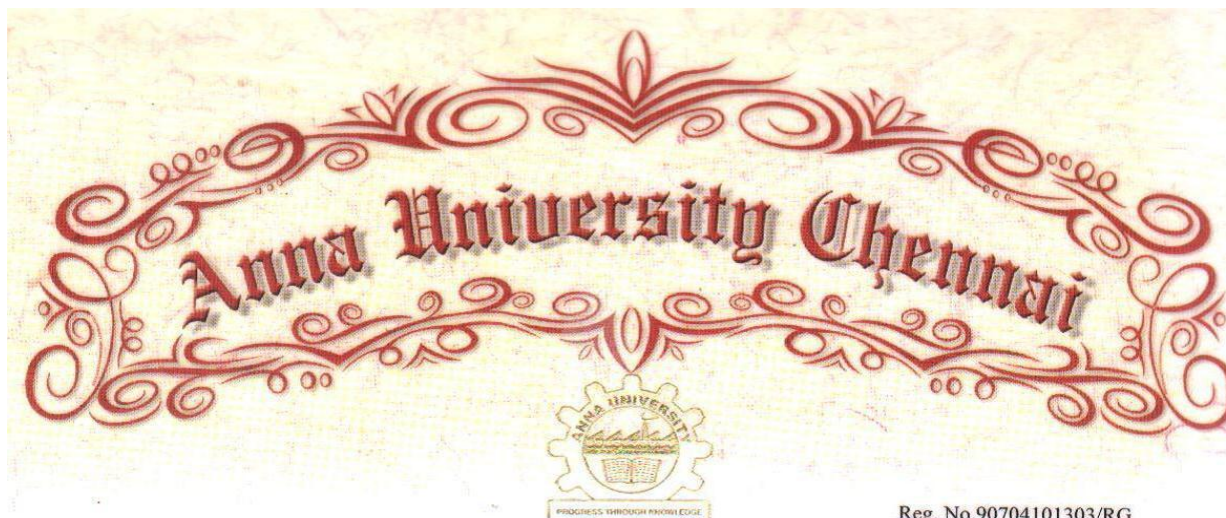
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திருச்சிராப்பள்ளி  
Tiruchirappalli-620 024  
India  
JUNE 2012  
542SME091224118

  
தேர்வு நெறியாளர் (பொ)  
CONTROLLER OF EXAMINATIONS (Pc)

  
பதிவாளர்  
REGISTRAR

  
துணைவேந்தர்  
VICE CHANCELLOR



Reg. No.90704101303/RG

*The Syndicate of the Anna University Chennai hereby makes known that*  
**SATHISH KUMAR K** *has been admitted to the* **DEGREE OF**  
**BACHELOR OF ENGINEERING** *in* **AERONAUTICAL**  
**ENGINEERING** *under the* **Faculty of Mechanical Engineering**, *having*  
*completed the prescribed programme of study and having been certified by the duly*  
*appointed examiners to be qualified to receive the same, and has been placed in*  
**FIRST CLASS WITH DISTINCTION** *at the Examination held in*  
**APRIL 2008.**

*Given under the Seal of the University*



Chennai 600 025  
India

December 2008  
EUM210105346

*V. Jeyaraj*  
Controller of Examinations

*S. Jeyaraj*  
Registrar

*S. Jeyaraj*  
Vice-Chancellor



# MOHAMED SATHAK ENGINEERING COLLEGE

## KILAKARAI - 623 806.



Approved by AICTE, New Delhi / DGS Mumbai, Affiliated to Anna University Of Technology Madurai.  
ISO 9001 - 2008 Certified & NBA Accredited.

CHAIRMAN : 044 - 28334989  
CORRESPONDENT : 04657 - 241493  
PRINCIPAL : 04567 - 242327

OFFICE/A.O. : 04567 - 241327  
FAX. : 04567 - 245344  
Web : www.msec.in  
Email : enquiries@msec.in



MSEC/CER/11

DATE : 26.09.2011.

### SERVICE CERTIFICATE

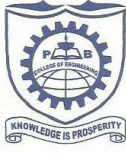
This is to certify that **Mr. SATHISH KUMAR .K** was working as a **LECTURER** in the department of **AERONAUTICAL ENGINEERING**, at **MOHAMED SATHAK ENGINEERING COLLEGE, KILAKARAI** from 24.06.2008 to 27.08.2009.

His conduct and character were good.



*S. Sahabani*  
PRINCIPAL  
Mohamed Sathak Engineering  
College  
Kilakarai-623 806.

*26/9/11*



# P.B. COLLEGE OF ENGINEERING

(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)

AN ISO 9001 - 2008 CERTIFIED INSTITUTION

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Date: 16.07.2012

## SERVICE CERTIFICATE

This is to certify that **Mr. K. Sathish Kumar** is working as a **Asst. Professor** in the Department of **Aeronautical Engineering** in our institution from 29.06.2011 to till date.



**Principal**

PRINCIPAL

P.B. COLLEGE OF ENGINEERING  
IRUNGATTUKOTTAI, SRIPERUMBUDUR,  
CHENNAI-602 117.