

Dr. S. Christopher Ph.D. (IIT Madras, Chennai)
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Research Areas

Computational Fluid Dynamics on Pumps, Design of Pumps, Cavitation, and Solar Pumping, Slurry flow through hydraulic hoses

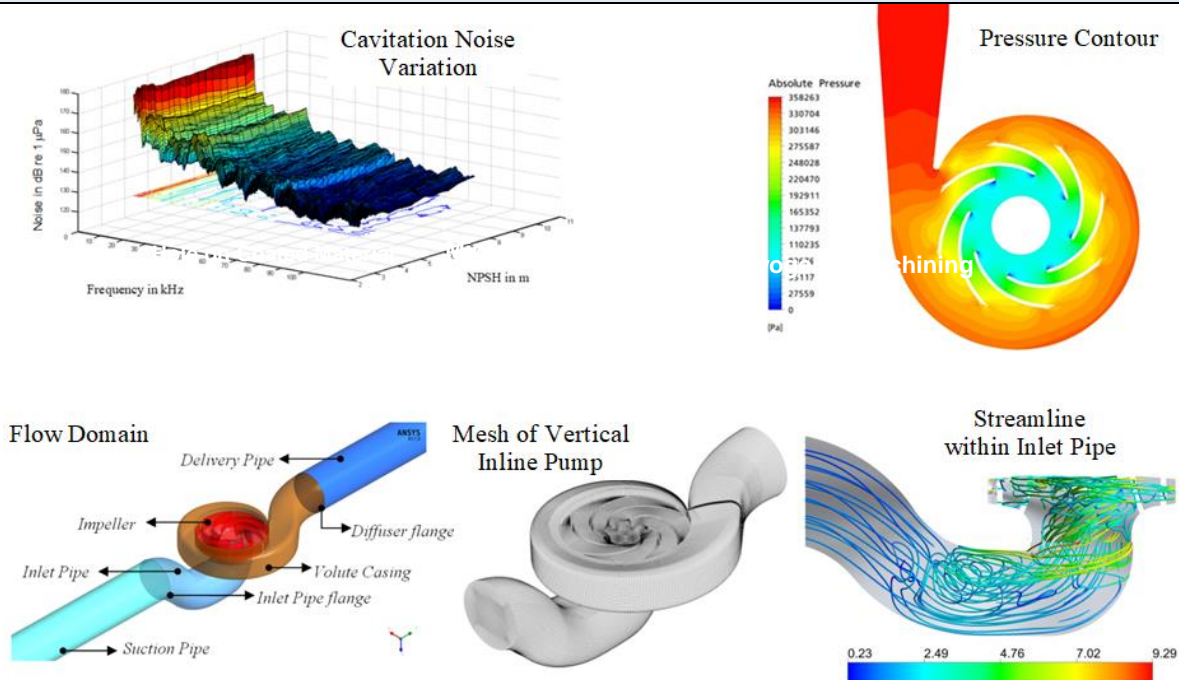
Projects & Publications Summary

Project		Publication Count		Citation Count			Impact Factor	
Completed	01	SCI	006	Citations	Google	SCOPUS	15	
Ongoing	01	SCOPUS	009		82	57		
Submitted	00	Books	000		h-index	04		04
		Books chapters	000		i10index	02		19

National/International Collaboration (max. 5 bullet points)

- National Institute of Solar Energy, Haryana – Solar Pumping
- Jiangsu University, China – Vertical Inline Pump Optimization
- University of Padova, Italy – Pump Working as Turbine
- Free University of Bozen, Italy - Pump Working as Turbine
- Aquasub Engineering, Tamil Nadu, India – Pump Working as Turbine

Research snippets (only pictorial format---key results/graphical abstract/product developed/images)



Research facilities (bullet points and/or images of lab facilities)

- Yet to procure

Outline of Research Works (max. 5 bullet points)

- Design optimization of inlet pipe of vertical inline pump

- Design of axial flow pump for bio-medical applications
- Pumping system design for solar PV
- Numerical simulation of PV Thermal cooling

Details of Funded Projects

S.No	Project Title	Funding agency	Amount (Rs.)	Duration	Collaboration
1.	Optimization Of Solar Photovoltaic Based Water Pumping Performance With Dc Motor	SERB-TARE	18,30,000/-	2021-24 (Ongoing)	NISE
2.	Flow and Acoustic Studies In Vertical Inline Pump for Various Flow Conditions	National Natural Science Funds of China (Grant No. 51239005)	19 Lakhs INR (approx.) or 200,000 CNY	March 2016 – Dec 2017 (Completed)	Jiangsu University

Recent Best 5 SCI Publications (max. 5, follow below cited format)

- **Christopher Stephen**, Dhanasekaran Arumugam, Kumaraswamy Sivasailam, Assessment of Noise Signature for a Cavitating Centrifugal Pump. *J. Energy Resour. Technol.* September 30, 2021, 25 pages). <https://doi.org/10.1115/1.4052618>
- **Christopher, S.**, Yuan, S., Xing cheng, G. and Ji, P. Computational Study of Fluid-Borne Noise in Vertical Inline Pump. *Journal of Drainage and Irrigation Machinery Engineering*, Vol. 37, No. 2, pp. 94-100, Feb 2019. DOI: 10.3969/j.issn.1674-8530.18.1183
- **Christopher, S.** and Kumaraswamy, S. Experimental Determination of Cavitation Characteristics of Low Specific Speed Pump Using Noise and Vibration. *Journal of the Institution of Engineers (India): Series C*, Vol. 100, No. 1, pp. 65-74, January 2018. <https://doi.org/10.1007/s40032-017-0431-5>
- **Christopher, S.**, Yuan, S., Ji, P., and Xing Cheng, G. Numerical Flow Prediction in Inlet Pipe of Vertical Inline Pump. *ASME Journal of Fluids Engineering*, Vol. 140, Issue 5, May 2018, pp. 051201-1 - 051201-10, available on online from 26th December 2017. <https://doi.org/10.1115/1.4038533>
- **Christopher, S.** and Kumaraswamy, S. Identification of critical NPSH from noise and vibration in a radial flow pump for different leading edge profiles of the vane. *ASME Journal of Fluids Engineering*, Vol. 135, Issue 12, Dec 2013, pp. 121301-1 to 121301-15. <https://doi.org/10.1115/1.4025072>

Books (max. 5, follow below cited format)

NIL

Patents (max. 5, follow below cited format)

NIL

Fellowships/Awards/Recognitions (max. 5, follow below cited format)

- Secured 20th Madras University rank in Mechanical Engineering graduates in the year 2000.
- Qualified in GATE 2001 with 79.05 percentile

PhD Thesis Guidance (Only PhD)

NIL

Editorial/Review Activities (max. 10, follow below cited format)

- Journal of Applied Fluid Mechanics
- Journal of Hydrodynamics
- International Journal of Aeroacoustics
- Scientific reports – Science Nature
- River Publisher