



## BIOSKETCH

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**Dr. Kanchana Jeganathan** is the Director – Global Engagement and Professor of Mechanical Engineering, with 35 years of teaching and research experience at PSG Institutions, Coimbatore, India, and King’s College London, UK. Currently, Dr. Kanchana serves as Director – Global Engagement at PSG Institute of Advanced Studies, where she administrates the research activities of the Nanotechnology Research, Innovation and Incubation Centre (NRIIC) and plays a key role in fostering interdisciplinary collaborations, advancing innovation-driven research initiatives, and facilitating the translation of laboratory research into industrial and societal applications. She also carries a leadership role in managing international credit transfer programmes offered at PSG Institute of Advanced Studies, in collaboration with universities in Germany, UK, USA, and Australia. She is also involved in research collaborations with institutions in South Korea, Singapore, and South Africa. She holds additional responsibilities as Academic Leader and Student Mentor for IUCEE (Indo-US Consortium for Engineering Education). She has been successful in securing government-funded research projects and has served as Principal Investigator and Co-Investigator for projects funded by the Indian Space Research Organisation (ISRO), Aeronautical Development Agency (ADA), Department of Science and Technology (DST), and Defence Research and Development Laboratory (DRDL). Dr. Kanchana successfully led the development of clinical database software for NHS patients with severe and complex disabilities, focusing on system study, design, and application development in a client-server environment, along with database administration (DBA).

### Educational Profile

- **Ph.D. (Mechanical Engineering)** – PSG College of Technology, Coimbatore, India  
Year of Passing: 2008  
*Supervisor: Dr P Radhakrishnan*
- **PGDHE (Educational Management)** – King’s College London  
Year of Passing: 2005
- **M.E (Computer Integrated Manufacture)** - PSG College of Technology, Coimbatore, India  
Year of Passing: 1997
- **B.E (Mechanical)** - Coimbatore Institute of Technology, India  
Year of Passing: 1994

### Positions Held

Sl. No.	Organisation	Role	Duration
1.	PSG Institute of Advanced Studies, Coimbatore, India	Director- Global Engagement, PSG Institute of Advanced Studies	2025- Present

2.	PSG Institute of Advanced Studies, Coimbatore, India	Dy. Director – International Education and Programmes, PSG Institute of Advanced Studies	2020-2025
3.	PSG College of Technology Coimbatore, India	Professor – Mechanical Engineering International Engineering Academic Head	2016- Present
4.	PSG College of Technology Coimbatore, India	Associate Professor – Mechanical Engineering International Programme Coordinator	2012-2016
5.	Kings College London Strand Campus, London United Kingdom	Sr. Lecturer – Mechanical Engineering (PG) MSc Mechanical Engineering – Programme Co-ordinator	2010-2012
6.	University of Essex, Essex United Kingdom	Curriculum Lead – HE Manufacturing Engineering (Equivalent to Assoc. Prof) Lecturer – Mechanical / Manufacturing Engineering (PG)	2007-2010 2003-2006
7.	PSG College of Technology Coimbatore, India	Lecturer - Mechanical Engineering (UG) Faculty-in-charge – CAD/CAM Centre	1997-2002
8.	PSG College of Technology Coimbatore, India-641004	Instructor – Mechanical Engineering (PG) Authorized Autodesk Instructor/Trainer - AutoCAD	1994-1997
9.	PSG College of Technology Coimbatore, India-641004	Technician / Programmer – CAD/CAM Centre	1988-1994

### Additional Responsibilities

#### In India

- International Engineering Education Certification Program Head - IUCEE
- International Academic head - Interaction with universities in USA, Australia, Germany, UK
- Member – Academic Council – PSG Tech
- TEQIP - Mechanical Department Coordinator
- International Team Lead – Vision 2040 – PSG College of Arts and Science.
- Controller of examinations – PSG IAS
- Faculty Trainer / Mentor – PSG CARE
- Faculty Advisor – AMBIGIEZ, Technical Association
- Academic planning and Course mapping in collaboration with International team across the globe

### In UK

- Subject Learning Coach – Engineering, Learning Skills Council, South East region, UK
- External Quality Nominee for Engineering Education, QIP, South East Region, UK
- Assessment Associate, Manufacturing Engineering, Edexcel, London, UK
- Responsible for Staff mentoring, training and support to the development to ensure high-quality education at all times.
- Liaise with employers and external agencies to develop work-based learning placements.
- Contributing to the quality assurance processes as required, including carrying out peer observations, supporting peer mentoring and assisting in implementing development plans for all engineering programs and team members.
- Interviewing and selecting perspective staffs/learners to the college.
- Responsible for planning and delivery in the team including curriculum innovation and design to meet the demand of industry needs in CAD/CAM, Design and manufacturing

### Awards and Achievements

Year	Award	Presented By	Location
2012	Faculty of the Year Award	King's College London	UK
2016	Best Woman Alumni Award	PSG Polytechnic College	India
2018	GCMM Excellency Award for Manufacturing and Engineering Education	GCMM	Australia
2019	Best Women Engineer Award	Institute of Engineers, Tamil Nadu State Centre	India
2019	Ms. Sheela Baya National Award for Best Mechanical Engineer	Institute of Engineers, Udaipur	India
2023	Outstanding Marketing Leadership Award	Higher Education Summit, IIT Madras	India

### Further Work Experience

#### **Kings College London, UK (2002 –2003)**

Research Assistant – Academic dept. of Rehabilitation

(For Kings Healthcare NHS Trust, London, Regional Rehabilitation Unit, Northwick Park Hospital, Middlesex, London)

Design and development of a clinical database (written in File Maker Pro) for patients with severe complex disabilities

Design and Development of depression, shoulder pain, and music therapy modules. Entering and validating the information of all patients during their stay, onto the database. Updating and Maintaining the database of patients on their admission /discharge for further assessment

Collecting the data, assessment scores from therapists and Consultants

Preparation of assessment score charts by linking with Ozium charts

Summary of therapy sessions attended and the feedback on them

Filing and retrieval of documentation relating to the maintenance of the database. Preparing the research documents related to Head trauma rehabilitation and Brain Injury

### Funded Projects

Project	Sponsoring Organisation	Period	Grant (in Lakhs)	Principal Investigator
Investigations on High Speed Machining	Department of Science and Technology	1999-2001	13	Principal Investigator
Investigations on tool condition monitoring in high speed machining	Department of Science and Technology	1997-2000	9	Co-investigator
Investigations of High-speed machining on Light alloy structures	Aeronautical Research and Development Board (ARDB), Bangalore	2000-2003	15	Principal Investigator
High speed machining of Custom 465 steel using new generation PVD coated inserts	Defence Research and Development Laboratory (DRDL)	2015-2017	9.8	Principal Investigator
Development of Cutting tool inserts super imposed with WS <sub>2</sub> based nanocomposite solid lubricant coatings for the dry machining of Ti-6Al-4V Alloys	Department of Science and Technology (DST – SERB)	2017-2020	46	Co-Investigator
Surface integrity in Machining of Custom 465 steel	Defence Research and Development Laboratory (DRDL)	2018-2020	9.8	Principal Investigator
Process–Structure–Property–Performance Mapping and AI-Based Optimization of Sputtered Nanolaminate Coatings for Cutting Tool Applications	ANRF–ARG	2025-Present	88.6	Co-Investigator

### Editorial Board Member / Reviewer

- International Journal of Machine Manufacturing (UK)
- Journal of Modern Manufacturing Technology
- **Reviewer:** Journal B: Composites
- **Editor** - Proceedings of International Conference on " Logistics and Supply Chain Management", PSG College of Technology in Collaboration with Central Michigan University, USA, August 6-8, 2001
- **Associate Editor** - **TECHNOLOGY** Journal, PSG College of Technology. (2000-2001)

### Abroad Universities/industries Visited

- International Summer School, Leeds, UK
- International Summer School, Glasgow Caledonian University, UK
- Manufacturing Centre – Loughborough University, UK
- Rolls Royce – Manufacturing Unit, Leeds, UK
- Global Welding Institute, Cambridge, UK
- Cambridge Nano Tech Centre, Cambridge University, UK
- Engineering Education Summit, New York, USA
- Indo-German consortium for Higher Education, IGCHE, Germany
- University of Hof, Germany
- Visit Rehau AG, Germany
- International Conference on Women in Engineering Education, Switzerland
- Engineering Education Summit, Singapore
- International Summer School, University of Malaysia, Malaysia
- International Education Fair, UAE – Dubai, Sharjah, Abudhabi
- Glasgow Caledonian University, Glasgow, UK
- University of Glasgow, UK
- University of Berkeley, US
- University of Stanford, US
- University of Washington, US
- University of Boston, USA
- University of Hartford, USA
- State University of New York (SUNY, B, FSC)
- University of Queensland, Brisbane, Australia
- RMIT, Australia
- University of South Australia, Adelaide, Australia
- Deakin University, Australia

### Professional Qualifications & Membership of Professional Bodies

Onward	Professional Bodies	Qualification
2010	Institution of Mechanical Engineers, UK	Member
2005	Women in Engineering Society, UK	Member
2006	Learning skills council, UK	SLC
2000	Institution of Engineers, India	Fellow
2006	Edexcel, London	Moderator/Verifier
1999	Autodesk, USA – (Authorised AutoCAD	Instructor

### Other Information

- **Engineering Lead** – Foundation degree programs
- **Research Advisory Board** – Nanotech Research Innovation & Incubation Centre, PSG Institute of Advanced Studies
- **Organizing/Finance committee member** of many National and international Conferences conducted at PSG College of Technology, Coimbatore

- **External Examiner** for **Anna University**, Bharathiar University and Karunya University, GCT, Coimbatore, India
- **Doctoral Committee Member** – Anna University / VIT, India
- **Academic Council Member** – PSG College of Technology, Coimbatore
- **Anna University Nominee**–Dhirajlal Gandhi College of Technology, Salem
- **Anna University Nominee**–Bharathiyar Institute of Engineering for Women, Salem

### Doctoral Guidance / Supervision: Completed

S.No	Name of the Candidate	Title of the Thesis	Date of Completion
1	Prem Kumar T	Numerical and Experimental Investigation and Statistical Studies of Independent and Combined Effects of Operating Parameters, Catalyst to Ionomer Ratio and Hot Press Load on PEMFC Performance	11-12-2023
2	Nagarjun	Development and Characterization of Polylactic Acid based Bio composites for 3D Printing Applications	21-08-2023
3.	B.Vaishnavi	Investigation of semi-biodegradable cutting fluids in machining of AISI 4340 steel under Minimum Quantity Lubrication technique	30-06-2025

### Doctoral Guidance / Supervision: In Progress

S.No	Name of the Candidate	Area of Research
1	Gopalakrishnan C	Water and Thermal Management in Air Breathing PEM Fuel Cells

### International Journal Publications

Sl.no.	Journal	Paper Title	Year	Volume
1	Materials and Manufacturing Processes	Sustainable machining of AISI 4340 steel using semi-vegetable oil blends	2024	39
2	Polymer Composites	Enhanced mechanical characteristics of polylactic acid/tamarind kernel filler green composite filament for 3D printing	2023	44
3	Journal of Natural Fibers	Enhancement of Mechanical Behavior of PLA Matrix Using Tamarind and Date seed Fillers	2022	19
4	Journal of Natural Fibers	Improvement of Mechanical properties of Coir/Epoxy Composites through Hybridization with Sisal and Palmyra Palm Fibers	2022	19
5	Journal of Manufacturing Processes	Influence of varying nitrogen content on the structural, tribomechanical properties and	2022	80

		machining performance of CrN <sub>x</sub> -WS <sub>2</sub> nanocomposite coatings		
6	Fuel Cells	Combination studies of operating cell, inlet-line, and humidification temperatures on performance of proton exchange membrane fuel cell	2022	-
7	Thermal Science	Effect of combinations of different operating parameters on performance of proton exchange membrane fuel cell	2021	25
8	Proceedings of the Institution of Mechanical Engineers Part L: Journal of Materials - Design and Applications	Multi-objective optimization of Pulsed direct current magnetron sputtered titanium nitride thin film using Grey relational analysis	2021	1
9	Journal of Critical Reviews	Development of a self-balancing E-bike with Machine Learning	2020	7
10	Procedia Computer Science	Evaluating the effectiveness of collaborative learning in fashion studies	2020	172
11	Procedia Manufacturing	Multi response optimization of process parameters using grey relational analysis for milling of hardened Custom 465 steel	2019	30
12	Indian Journal of Engineering and Materials Sciences	Optimization of material removal rate in wire electric discharge grinding for micro machining of tungsten electrodes	2018	25
13	Materials Today	Performance evaluation on high speed machining of Custom 465 steel	2017	4
14	Ciencia e Tecnica Vitivinicola: A Science and Technology Journal	Manufacturing of Micro Electrodes and Micro Hole Drilling on Titanium Plate	2016	31

### Contributions

S.No	Title	Author	Nature	Date
1	Tool Wear Behavior in Milling of Hardened Custom 465 Steel	Prasath V, Dr. Krishnaraj V, Dr. Kanchana J, Dr B Geetha Priyadharshini	Chapter	01-01-2020