

Dr. K. MURUGESH BABU

Department of Textile Technology,
M.Tech., Ph.D. (IITD), EMBA

Bapuji Institute of Engineering and Technology, Davangere-577004,
Karnataka, India

E-mail: kmbbin@gmail.com

Telephone: 91-9844116813 (Mobile)

91-08192-221461 (Office)

FIELDS OF SPECIALIZATION

Pre-treatment processes of textiles; Textile Dyeing, Printing, Textile Finishing; Antimicrobial Finishing, Chemical Processing of Natural Fibres, Silk Technology, Silk Dyeing/Printing/Finishing, Silk based Biomaterials, Environmental Chemistry, Total Quality Management, HR Management, Technical Textiles, Natural Fibre Processing, Natural Fibre based Textile Composites, Apparel Marketing and Merchandising.

EDUCATION

Ph.D.	Indian Institute of Technology, New Delhi, India (March 2002)
Thesis Title	Studies on Structure- Property Correlations in some Varieties of Indian Silk
Course work CGPA	9.0 (on a 10-point Scale) Grade: Excellent
Courses taken	1. Polymer and Fibre Physics 2. Physical Properties of Fibres 3. Advances in Chemical Processing of Synthetic Textiles 4. Communication skills
Master of Technology (M.Tech, Textile Tech.)	A.C.Tech, Anna University, Chennai, India From 1989 to 1991 <i>First class with Distinction</i>
Bachelor of Technology (B.Tech, Textile Tech.)	Bapuji Inst. of Engg. & Technology, Davangere University of Mysore, Karnataka From 1982 to 1986 <i>First class with Distinction</i>
Management Degree	MBA (Executive) from National Institute of Business Management, Chennai (April 2011) (Specialisation: Operations Management)
Language Skills	Written: English, Hindi and Kannada Spoken: English, Hindi, Kannada and Tamil

TEACHING/RESEARCH EXPERIENCE

Years of Research/ Teaching experience: 30 Years (teaching Textile Chemistry/Textile Technology and related subjects)

Presently Working as **Professor, in the Dept of Textile Technology & Research Centre, and Dean (Public Affairs), Bapuji Institute of Engineering & Technology,**(Visvesvaraya Technological University), **Davangere – 577 004, Karnataka, India.**

Total years of Teaching/Research experience: 30

INTERNATIONAL ASSIGNMENTS

I. Oxford Biomaterials Ltd, Newbury, UK (A Unit of Oxford University, Oxford, UK)

Worked as a Senior Research Fellow from India under Global Watch Secondment Programme sponsored by DTI, London to develop new **Natural Silk Based Biomaterials** for biomedical applications.

Period April to October, 2006

Research work At **Oxford Biomaterials Ltd., Newbury**, I was involved in developing new recipes and methods for using natural silk such as mulberry and non-mulberry silks for biomedical applications mainly the tissue engineering. I coordinated the projects in association with **Dr. David Knight** (former Oxford Univ. Prof.) and **Dr. Nick Skaer**, CMD of the company to develop new biomaterials such as resorbable sutures, scaffolds, nerve conduits, bones etc. for potential application in tissue engineering.

The research work was based on regeneration of silk fibroin protein from *Bombyxmori* and other wild silks by dissolving them in suitable solvents and converting the fibroin protein to suitable biomaterials such as scaffolds, films, nerve conduits, bones etc. These materials could be potentially utilized as useful biomaterials to be implanted in human body in *Vitro* or in *Vivo*. In addition, testing of different varieties of silks for their mechanical properties was carried out in the **Department of Zoology, University of Oxford** under the supervision of **Prof. Fritz Vollrath**, Head of the department. The work also involved developing new degumming recipes which were pyrogen free for both mulberry and non-mulberry silks and making technical reports.

II. Institute of Textiles and Clothing, Hong Kong Polytechnic University, Hong Kong

Period	February 2007 to March 2008
Research Work	Worked as Research Associate in the project Development of Advanced Textile Materials under the supervision of <i>Prof. Jinlian Hu</i> .

III. University of Maroua, Cameroon

Selected as COMMONWEALTH FELLOW by the Association of Commonwealth Universities, UK and visited University of Maroua, Cameroon as a Visiting Professor to develop the curriculum, infrastructure of their Textile Technology Dept and to initiate R&D activities at the Higher Institute of Sahel, University of Maroua.

Period	May 2014 to July 2014
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FOREIGN COUNTRIES AND UNIVERSITIES VISITED

Countries: United Kingdom, Belgium, France, Holland, Luxemburg, Germany, Hong Kong, China, Macau, Malaysia, Singapore, Srilanka, South Africa, Cameroon.

Universities: University of London, Heriot Watt University (Edinburgh), Oxford University, University of Ghent, Hong Kong Polytechnic University, University of Hong Kong, University of Pretoria, South Africa, University of Maroua and Douala, Cameroon, Soochow University, Suzhou, China.

Currently at	Department of Textile Technology, Bapuji Institute of Engineering and Technology, Davangere – 577 004, Karnataka, India.
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RESEARCH WORK

- 1. Developing biomaterials from natural silk fibroin and sericin for possible applications in tissue engineering (Textile Chemistry Division)**
- 2. Development of natural antimicrobial agents based finishes on cotton and synthetic fabrics (Textile Chemistry Division)**
- 3. Characterization of Organic cotton and studies on environmental aspects in the production of garments from organic cotton (Textile Chemistry Division)**

4. Production, properties and wet processing of Bamboo and its blended fabrics (**Textile Chemistry Division**)
5. Development of Fire Retardant Finishes using PBI and its Blends (**Textile Chemistry Division of DRDO, Bangalore**)
6. Working on Green composites based on natural fibres for various industrial applications.
7. Design and Development of Solar Smart fabrics.
8. Publishing research papers and book chapters in international journals and text books on textile related subjects.

SUBJECTS TAUGHT

Textile Related: Textile Chemistry (Preparatory processes, Dyeing Technology, Printing and Finishing, Advanced Textile Chemistry), Silk Technology, Chemical Processing of Textiles, Textile Testing, Textile Fibre Physics, Advanced Wet Processing, Advanced Textile Manufacture, Textile Polymer Science, Textile weaving Technology, Advanced Weaving Methods, Non-Woven Technology, Technical Textiles (including Medical Textiles).

Apparel/Fashion/Garment Related: Textile Fibres, Colour Science, Apparel Marketing and Merchandising, Total Quality Management, Human Resource Management, Environmental Management in Garment Industry.

STUDENTS' PROJECT GUIDANCE

Number of Students' Projects Guided

UG Level : 30

PG Level : 15

Ph.D. : SIX students under Visvesvaraya Technological University, Belgaum, Karnataka, India

Sl.No	Name of Student	Thesis Title	Status
1	Selvadass	Studies on Influence of Process Sequences in the Development of Organic Cotton Knitted Garments using Environmental Management Concepts. (Degree Awarded) (2014)	Degree Awarded
2	Y.N.Dinesh	Studies on production and properties of biocomposites produced from some natural fibres.	Degree Awarded

3	K.B.Ravindra	Studies on development of antimicrobial textile products using Natural Antimicrobial Agents	Degree Awarded
4	S.M.Chandrashekar	Studies on production, properties and techno-economics of 100% pure bamboo and bamboo/cotton blended fabrics	Degree Awarded
5	Raghu T S	Flammability and thermal protection characteristics of PBI fabrics and their assemblies in defense applications	Degree Awarded
6.	Sandeep N	Development and Evaluation of Three Dimensional Angle-Interlock Woven Preforms for Use in Composites (Thesis Title).	In Progress
	International Students	From University of Douala, Cameroon, Africa	
1.	Nkemaja Dydimus Efeze	Worked on a new fibre called Sida Rhombifolia for possible applications in textile and apparel fields.	Degree Awarded
2.	ANAFACK Solange Melanie	Studies on characterization of banana nad hemp fibres cultivated in Cameroon	Ongoing
3.	CHAMGA DJAGUEU Sandrine	Charactrisation of a yarn obtained from hibiscus sabdiriffa fiber for its uses in textile and clothing industries	Ongoing

AWARDS AND RECOGNITION

- 1997-2001: **Research Fellowship** from IIT Delhi.
- 1989: **“Best Guide”** award from Karnataka state council for science and technology, Bangalore, India.
- Won ‘Best Teacher’ Award from BIET Management for getting 100% results in the subjects taught for more than **TEN** times.
- 2003: **“Best Guide”** award from Karnataka State Council for Science and Technology, Bangalore, India.
- **(Project Title: Innovative Transfer Printing on Silk)**
- 2008: **“Best Guide”** award from Karnataka State Council for Science and Technology, Bangalore, India

- **(Project Title: Extraction of Silk Sericin from Degumming Waste Water and its Reutilization in Biomedical field)**
- 2009: **“Best Guide”** award from Karnataka State Council for Science and Technology, Bangalore, India
- **(Project Title: Silk Fibroin Protein Based Biomaterials)**
- 2011: **“Best Guide”** award from Karnataka State Council for Science and Technology, Bangalore, India
(Project Title: Design & Development of Continuous Transfer Printing Machine for Natural Fibre Fabrics using Eco-friendly Natural Dyes)
- 2017: **Best Guide”** award from Karnataka State Council for Science and Technology, Bangalore, India
(Project Title: Design & Development of Natural Fibre Extracting Machine)
- **Recognized as ‘Technical Referee’ for the following International Journals:** Textile Research Journal (USA), Journal of Applied Polymer Science (USA), Research Journal of Textiles and Apparel (Hong Kong), (Acted as a Special Editor for May 2008 issue of this journal), Smart Materials and Structures (USA), Journal of Industrial Ecology, Journal of Industrial Textiles, Journal of Natural Fibres.
- 2016 – Recognised as **‘Expert Reviewer’** for “ Biotechnology Ignition Grant (BIG) KIIT- Technology Business Incubator– Bhubaneswar, India
- 2015 - **‘Subject Expert/Advisor’** Union Public Service Commission, New Delhi
- 2017 - **“Best Guide”** award from Karnataka State Council for Science and Technology, Bangalore, India
(Project Title: Design & Development of Natural Fibre Extracting Machine)
- **“Member of Scientific Partners”** for the Master’s Programme in Textiles of University of Douala, Douala, Cameroon, Central Africa.

SPECIAL RECOGNITION

Biography published in **Marquis Who's Who** 2010, 27th Edition

WORKING EXPERIENCE ON:

1. Wide angle X-ray Diffraction
2. FTIR-Spectroscopy
3. Scanning Electron Microscopy
4. High Performance Liquid Chromatography
6. Instron Tensile Testing Instrument
7. Laboratory Jigger, Padding Mangle, Ager, HTHP dyeing

8. UV/Visible Spectrophotometers

9. DSC, TGA, DTA Instruments

FUNDED PROJECTS UNDERTAKEN

Sl.No.	Title of Project	Area of Research	Funding Agency	Year	Role	Amount Sanctioned (Rs. In Millions)	Status
1.	Market Survey on the Potential of Silk Yarn Degumming and Dyeing Machine Evaluation System Silk Hank Dyeing Machine	Textile Chemistry	Swiss Development Cooperation, Bangalore	1997	Coordinator/Team Member	0.118	Completed
2.	Design and Development and Field Testing of Silk Yarn Degumming and Dyeing Machine - Phase-I		Swiss Development Cooperation, Bangalore	1999-2000	Coordinator/Team Member	1.715	Completed
3.	Design and Development and Field Testing of Silk Yarn Degumming and Dyeing Machine - Phase-II	Textile Chemistry	Swiss Development Cooperation, Bangalore	2000-2002	Coordinator/Team Member	2.599	Completed
4.	Dissemination of Technology of Silk Yarn Degumming and Dyeing Machine-Phase-III	Textile Chemistry	Swiss Development Cooperation, Bangalore	2003-2004	Coordinator/Team Member	0.7	Completed
5.	Development of Silk Reeling machine and Pre-loom Accessories	Silk Technology	DST, New Delhi	1994-97	Coordinator/Team Member	0.876	Completed
6.	Pre-Loom Accessories		KSCST, Bangalore	1996	Coordinator/Team Member	0.046	Completed
7.	Market Survey of potentials of silk yarn	Textile Chemistry	Swiss Development Cooperation,	1997	Coordinator/Team Member	0.118	Completed

	degumming and dyeing machine evaluation system		Bangalore				
8.	Fabrofeel-A computerized Instrument to measure hand of fabric	Textile Testing	AICTE, New Delhi	2004-05	Coordinator/Team Member	0.7	Completed
9.	Eco-friendly Crease Resistant Finishes for Silk	Textile Chemistry	AICTE, New Delhi	2003-05	Principal Investigator	0.46	Completed
10.	Development of Bio-composites from Natural Fibres	Textile Technology/	(Under RPS Scheme, Funding agency: All India Council for Science and Technology, New Delhi,	2009-11	Principal Investigator	0.8	Completed
11.	Textile Skill Upgradation Centre	Textile/ Garment Technology/	(Under New Textile Policy 2013-2018 Scheme, Funding agency: Dept. of Handloom and Textiles, Govt. of Karnataka, Bangalore, India	2013-2018	Principal Investigator	7.928	Ongoing

ADMINISTRATIVE RESPONSIBILITIES

- Presently working as **Professor and Head** of Department of Textile Technology, BIET, Davangere. As a senior faculty and the Head of the department, I am responsible for all the day to day academic activities (**curriculum development, student affairs, research activities, career guidance, testing and consultancy, industry-institution interaction, AICTE and university affiliation related issues**) of the department and student related issues.
- Working as **Chairman** for Board of Studies (**BOS**) of Textile Technology/Silk Technology Board of Visvesvaraya Technological University, Belgaum.
- Working as **Chairman** for Board of Studies (**BOS**) and Board of Examinations (**BOE**) of Bachelor of Textile Design and Technology Board of Davangere University, Davangere.

- Worked as **Chairman** (Board of Examinations (BOE) of Textile Technology/Silk Technology Board of Visvesvaraya Technological University, Belgaum
- Worked as **Member and Chairman** for Board of Examinations of Kuvempu University, Shimoga.
- Worked as **Member** for Board of Examinations (**BOE**) of Textile Technology/Silk Technology Board of Visvesvaraya Technological University, Belgaum for **TWO** terms.
- Worked as **Chief Custodian** for PG-CET exams conducted by Govt. of Karnataka for the year 2009 & 2010.
- Working as **Research Coordinator** of the Department of Textile Technology, BIET, Davangere. As a Research Coordinator and in charge of Accreditation Process by NBA, New Delhi, I was responsible for getting our department recognized by the NBA for 5 years term securing 'A' Grade w.e.f. 2008.
- Worked as **BIET Students' Council Convener** to look after the student related activities for **TWO** terms.
- Worked as **Chairman**, Vocational Course Revamping Committee, 2009, Directorate of Vocational Education, Govt. of Karnataka, India.
- Worked as **Deputy Chief** of examinations of VTU 2011 examinations
- Worked as **Member LIC (Local Inspection Committee) Committees** of VTU, Belgaum
- Worked as **Chief Editor** for the college News Letter "**BIETech VOICE**".
- **Working as IQAC (Internal Quality Assurance Cell) Chief Coordinator** to monitor the quality aspects of academic activities of the institute.

As dean (Public Affairs)

- Ensuring all important activities that take place in the institute get wide publicity in the media.
- Planning publicity strategies and campaigns
- Writing and producing presentations and press releases
- Dealing with enquiries from the public, the press, and related organisations
- Organising promotional events such as press conferences, open days, exhibitions, tours and visits
- Speaking publicly at interviews, press conferences and presentations
- Analysing media coverage

- Commissioning or undertaking relevant market research
- Designing, writing and/or producing presentations, press releases, articles, leaflets, 'in-house' journals, reports, publicity brochures, information for web sites and promotional videos.
- Preparation of prospectus, maintaining institute web site.
- Interaction with Alumni of Institute
- Display of information in the campus.

MEMBER OF PROFESSIONAL BODIES

* **Life Member**, Indian Society for Technical Education

* **Associated Member**, Institution of Engineers (India)

* **Member**, Textile Chemistry Test Formulation Committee (Bureau of Indian Standards, New Delhi)

PERSONAL DETAILS

Date of Birth	01-07-1964
Marital Status	Married
Nationality	Indian
Qualities	Excellent communication and presentation skills, Enthusiastic, independent, self-motivated, highly responsible, attentive and hard working.
Languages	English, Hindi, Kannada and Tamil
Sport activities	Chess, Carom, and Table tennis
Extracurricular	Hindustani Classical Vocalist, Graded Artist of AIR in Light Music, Organized number of State level Fashion events and cultural festivals.

MAJOR ACHIEVEMENTS

Academic

1. Establishment of chemical processing laboratory with the state of the art laboratory machines such as padding mangle, hot air curing chamber, laboratory Jigger, Winch, HTHP Dyeing machine etc.

2. Establishment of state of the art Garment Manufacturing laboratory with latest JUKI, Japan make garment making machines.
3. Establishment of state of the art CAD/Cam Laboratory with the latest weaving/garment/printing software and garment testing equipment.
4. Played key role as a Research Coordinator to establish Research Centre in the department with the Visvesvaraya Technological University Affiliation and industry recognition.
5. Undertaken responsibility as an Academic Coordinator and incharge of NBA Accreditation process to obtain Accreditation for the department from 2008 to 2013 (5 years, with A grade)

Industry-Institution Interaction

1. Undertaken consultancy in the department in the areas of spinning, testing and chemical processing. Under this scheme, consultancy and technical guidance will be imparted to nearby spinning/weaving and processing units in terms of undertaking job works, testing facilities and manpower training programmes.
2. Establishment of career guidance cell to encourage career guidance to students through interaction with industry experts and to enhance the soft skills and personality development traits amongst the students. Regular personality development programmes such as mock interviews, group discussions, and technical/reasoning tests are arranged to upgrade special skills amongst the students to face interviews and real life industry environment.
3. Arranged Industry implant training programmes in Textile Chemistry subjects to numerous students in coordination with local and major industries in the country to encourage students to get trained in the industry environment.

KEY SKILLS AND COMPETENCIES

- High Motivation
- Conducive Inter-personal Relationship
- Excellent Communication Skills (verbal and written)
- Very good Organizational Skills
- Excellent Leadership Qualities
- Very Good Flexibility (adaptability)
- High Professionalism

- Excellent Team Building
- High Goal Orientation
- Excellent Work Ethics

INSTITUTION BUILDING

Description	Details of activity	Level of involvement
a) Infrastructure & Farm Development	Campus Development	In a consulting role
	Administrative Building	In a consulting role
	Association Building	In a consulting role
	New office premises: Helped the administrative authorities to establish new dept. premises with necessary infrastructure such as layout, planning the labs, equipment etc.	Medium
	Landscape & Garden around Dept: Actively involved in establishing a lush green garden and landscape around the dept. The dept. of textiles is now surrounded by picturesque garden and lush greenery	High
	Student Hostel: Actively involved in the setting up of hostel blocks and facilities for students	In a consulting role
b) Laboratory development	Research Facility / Lab: This has been my priority area as I was very much actively involved in setting up research facilities in terms of establishing new labs, dept. library and testing equipment. Initiatives were taken to establish textile research center in the dept. to cater to the needs of PG and Ph.D. students. Research and consultancy projects were undertaken and established for the benefit of nearby industries.	High
	Weaving Lab Build & Improvement: Various weaving related machineries such as winding, warping, pirn winding machines and looms were procured and installed. Very recently, a new Flexible Rapiet loom was installed in the weaving lab for the benefit of UG, PG and research students.	High
	Testing Lab Improvement: Every year new equipment and testing instruments are being added to this lab. All the required testing facilities for undertaking UG, PG, Ph.D. projects and industry consultancy projects have been installed. Latest Fibre, Yarn and fabric testing instruments have been procured for the benefit of students and researchers.	High
	Textile Wet Processing Lab Improvement:	High

	Many new equipment have been added in this lab such as tumble dryer, Microprocessor controlled Winch, Latest beaker dyeing machines, curing chambers, hot air oven for conditioning, and related equipment for carrying out wet processing of fibre/yarns/fabrics.	
	Garment Lab Build & Improvement: This lab has been developed with latest Zuki machines for garment related activities. Latest machines such as high speed sewing, button holing, over-lock & under-lock, lock stitch, cuff making, button stitching machines have been added.	High
	Silk Lab Build & Improvement: Silk lab has been developed to help silk testing facilities such as reeling, testing of silk yarn, weaving of jaquard fabrics and their testing etc.	High
	CAD/CAM Design Lab Build & improvement: This lab has been equipped with latest design software for dobby, jacquard and garment design. UV Visible and Reflectance spectrophotometers undertaking dye uptake studies are the latest addition to this lab.	High
	Spinning Lab Build &Improvement: All the machines in this lab such NSE Truzler spinning line, Reiter card, roving frame, doubling, draw frame, ring frames are in working conditions. Regular job orders are being under take from nearby cotton industries for processing their cotton. This lab also serves as an industry consultancy unit for many small scale spinning units around.	High
c) Structural changes in research & management	Industry orientation of student projects: The projects undertaken by the UG and PG students are mainly industry oriented. Industries are requested to allot projects for students and monitored in the dept. Students are motivated to visit industries for taking up industry problems and work towards solving them.	High
	Joint ventures and Industry sponsored research initiatives: Research projects in coordination with industries and research organizations have been undertaken. Projects on silk reeling, silk knitting, silk dyeing are the important ones to mention.	High
	Govt. sponsored research initiatives: (Textile Committee, KVIC, Handloom Corporation, Dept. of Industries and Commerce, Textile Park etc.) A good number of activities related to	High

	Govt. sponsored research projects have been undertaken such as training for entrepreneurs, research inputs for testing of samples, technical guidance, workshops on emerging technologies etc.	
d) Administration & financial reforms	Budget and Forecasting: Budgeting and forecasting is done every year for the development of infrastructure facilities in the dept. in consultation with the main administrative office. Priorities are set for those financial requirements which are crucial for the immediate growth of the dept.	High
	Project Financing and Execution: Funded research projects are undertaken to strengthen the research activities of the department. Fund allocation for recurring and non-recurring expenditures is done as per the requirements and the finances executed as per the set plans	High
	Staff Administration: Administering the staff such as recruitment, planning their work, maintenance of staff records, performance evaluation, monitoring their progress, Staff Compensation & Benefits etc. are the main responsibilities.	High
e) Others Capacity Building outside the host institute (The Higher Institute of Sahel, University of Maroua, Cameroon, Central Africa):	Under the auspices of Commonwealth Fellowship Programme, UK, I have been invited by the University of Maroua from 1st May 2014 for a period of 3 months to build capacity concerning the Dept. of Textile Technology. During this official visit I am rendering my services as below: 1. Sharing of textile related knowledge with the faculty of the dept. Series of lecture programs on various topics such as introduction to textile industry, spinning, weaving, textile testing, dyeing, printing and finishing were presented. 2. Undertaken classes for UG and PG students on various subjects related to textile technology regular basis. 3. Held practical classes and demonstrations for the students and faculty. 4. Rendered a conference lecture on “Indian Higher Education System” to the students, faculty and administrative staff of the institute and provided information on possible collaboration with Indian universities for admission to PG and Ph.D. programmes.	High

	<p>5. Instrumental in providing curricula, modification the present syllabus content, notes, information brochures for the benefit of students and faculty.</p> <p>6. Provided with a large number of E-Text Books on various topics of textile technology as reference material to the textile dept.</p> <p>7. Shared ideas on preparing research project proposals on novel topics with the faculty so that they can write proposals to funding agencies to seek funds.</p> <p>8. Visited nearby textile industries and helped the students and faculty to update their knowledge on practical skills.</p> <p>9. Provided with the list of testing, spinning and weaving equipment with their approximate cost and the supplier details from India to procure them in future for establishing laboratories.</p> <p>10. Helped in developing suitable laboratories in the department.</p>	
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**SYMPOSIA/CONFERENCE/WORKSHOPS
etc.ORGANISED/ATTENDED**

Name of the programme organized/ attended	Function(s) performed	Title	Year	Duration
Conference	Coordinator	Problems and prospects of Indian Textiles and Garment industries in the emerging global scenario	8 th & 9 th March 1997	2 Days
Conference	Coordinator	High technological knitting for Indian textile industry to meet the challenges of 21 st century	27 th & 28 th Nov. 1998	2 Days
Conference	Coordinator	Modern wet processing and finishing techniques for 21 st century	Jan. 2000	2 Days
Workshop	Coordinator	NCUTE extension programme on spinning, drawing, combing & roving	August 2000	4 Days
Workshop	Coordinator	NCUTE extension programme on Weaving- I shuttle loom	Nov. 2000	4 Days
Workshop	Coordinator	Workshop on dyeing of textiles by natural dyes	13 th & 15 th Dec. 2001	2 Days
Conference	Coordinator	WTO Regulations and its impact on Indian Textile trade	19 th & 20 th Oct. 2001	2 Days
Conference	Coordinator	A National Seminar on "Recent developments in wet processing" at Bangalore	31 July 2002	One Day
Workshop	Coordinator	A one day workshop on Application of IT in Garment industries	30 th Nov. 2002	One Day
Symposia	Coordinator	Texcreative'03 Students level National Seminar	on 5 th & 6 th May 2003	2 Days
Conference	Coordinator	World Class Management Tools - One day workshop	on 29 th May 2003	One Day
Workshop	Coordinator	Garment designing and manufacturing, (Sponsored by Industries and Commerce, Davangere, Karnataka	16-1-03 to 18-2-03	5 Weeks
Workshop	Coordinator	STTP AICTE Programme on "Dyeing Practices for Small & Medium Scale	29 th March to 10 th	2 Weeks

		Textile Sectors",	April 2004	
Symposia	Coordinator	Texcreative 05 -National Level Student, Symposium,	28-29, March, 2005	2 Days
Workshop	Coordinator	Silk Mark awareness programme,	11th July 2006	One Day
Symposia	Coordinator	Texcreative 06 -National Level Student symposium,	24 – 25 March, 2006	2 Days
Conference	Coordinator	Textile Park Investors meet	26 th July 2006	One Day
Workshop	Coordinator	Silk Mark Training Programme for sales persons.	17 th April 2007	One Day
Symposia	Coordinator	Texcreative 07-National Level Student Symposium	23 – 24 March, 2007	2 Days
Conference	Coordinator	National Seminar on “Innovations and Quality management in textiles,	17 – 18 March, 2008	2 Days
Workshop	Coordinator	Workshop on GI Registration of Guledgudd khan	24 th Dec., 2008	One Day
Symposium	Coordinator	Texcreative 09-National Level Student Symposium	20-21, March 2009	2 Days
Symposia	Coordinator	Texcreative 10-National Level Student Symposium,	26-27, March, 2010	2 Days
Workshop	Coordinator	Entrepreneurship Development for Handloom and Textile Division	18-23 July 2011	One Week
Special Lectures	Coordinator	Frontier Series of Lectures-Recent Trends in Textiles	14 th Nov 2011	One Day
Workshop	Coordinator	Entrepreneurship Development on recent trends in Textiles	20-25 Feb 2012	One Week
Symposium	Coordinator	Texcreative-2012, National Level Student’s Technical Symposium	20-21 March 2012	2 Days
Symposium	Coordinator	Texcreative-2012, National Level Student’s Technical Symposium	15-16 March 2013	2 Days
Workshop	Coordinator	Entrepreneurship Development for Handloom and Textile Division	22-27 July 2013	One Week
Symposium	Coordinator	Texcreative-2012, National Level Student’s Technical Symposium	21-22 March 2014	2 Days
Conference (Attended)	Paper Presenter	"Knit India 100" International Conference, New Delhi, India	1995	2 Days

Conference (Attended)	Paper Presenter	"Finishing of Garments", DKTE Textile Institute, Ichalkaranji, Maharashtra, India.	27-29, Sept. 2001	3 Days
Conference (Attended)	Paper Presenter	2 nd Indo-Czech International Textile Conference, KCT, Coimbatore, India.	December (2003)	2 Days
Conference (Attended)	Paper Presenter	59 th All India Textile Conference, Komarapalyam, Tamil Nadu, India	31 st Jan -1 st Feb 2004.	2 Days
Conference (Attended)	Delegate	New Emerging Trends in Textiles and Garments, ITC, HK PolyU, Hong Kong.	2007	3 Days
Conference (Attended)	Paper Presenter	HEAT-2010, International Conference on Health care, hygiene textiles and clothing, PSG College of Technology, Coimbatore, India.	30-31 July, 2010	2 Days
Conference (Attended)	Paper Presenter	11 th International Conference on Frontiers of Polymers and Advanced Materials, University of Pretoria, Pretoria, South Africa.	22 nd to 27 th May, 2011	One Week
Conference (Attended)	Paper Presenter	Entrepreneurs Development Programme for Textile Entrepreneurs of Davangere District, Department of Handloom & Textiles, BIET, Davangere.	18 th to 23 rd July 2011	One Week
Conference (Attended)	Paper Presenter	"Textile & Apparel Industry; Contemporary Issues to Address in Coming Years", 24 th National Convention of Textile Engineers, The Institution of Engineers (India), Karnataka State Centre.	19-20, August, Bangalore 2011	2 Days
Conference (Attended)	Paper Presenter	INDUTECH-2012, International Conference on Industrial Textiles – Products, Applications and Prospects, PSG College of Technology, Coimbatore.	3-4 August, 2012	2 Days
Workshop	Delegate	Training on "Electrospinning for Nanofibre Production & Its Applications"	23-25 January, 2018	3 Days

Note: Attended many conferences, symposiums and workshops related to textiles and silk industry before 2000.

PUBLICATIONS

Total: 103

I. International Journals

1. Sustainable Fibres, *Asian Textile Journal*, Volume 28, No.9, 58-63, September (2019)
2. Ecofriendly Specialty Fibres from Bio-Resources, *World Journal of Textile Engineering and Technology*, 5, 1-9 (2019)
3. Studies on Bioscouring of Cotton, *World Journal of Textile Engineering and Technology*, 5, 43-52 (2019)
4. Air-Flow Dyeing – an Eco-friendly water preserving fabric dyeing technology, [https://www.textileschool.com/5234/air-flow-dyeing-an-eco-friendly-water-preserving-fabric-dyeing-technology/May,10\(2019\)](https://www.textileschool.com/5234/air-flow-dyeing-an-eco-friendly-water-preserving-fabric-dyeing-technology/May,10(2019))
5. Studies on anti-bacterial properties of Sida rhombifolia plant, *International Journal of Current Research*, Vol.10, Issue, 10, pp.74412-74415, October, (2018)
6. Eco-friendly Green Fibre-reinforced Composites to Combat Global Warming, [www.textileschool.com/3518/eco-friendly-green-fibre-reinforced-composites-to-combat-global-warming/Sept.15\(2018\)](http://www.textileschool.com/3518/eco-friendly-green-fibre-reinforced-composites-to-combat-global-warming/Sept.15(2018))
7. Characterization and Development of Biocomposites from Jute & Coir Fibres, *International Journal of Management, IT & Engineering*, Vol. 8 Issue 7, July (2018)
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44. Antimicrobial Finishes for Textiles, *Asian Textile Journal*, March (2003)

II. International Conferences

1. Positive feed mechanism and its economical advantages, Proceedings of "*Knit India 100'' International Conference*", New Delhi, India (1995)
2. Mulberry and Muga silk: Lengthwise variations in dimensional and mechanical properties, K. Sen and K.M. Babu *Proceedings of International Silk Congress*, October 12-16, Cairo, Egypt (1999)

3. Lengthwise variations in some varieties of Indian silk - Structure: Property correlation, *K. Sen and K.M. Babu, Proceedings of Textile Institute Conference*, April 16-19, Manchester, UK (2000)
4. Innovative Transfer Printing on Silk, *Proceedings of 2nd Indo-Czech International Textile Conference*, KCT, Coimbatore, India, December (2003)
5. Silk Fibroin Protein Based Biomaterials, *Proceedings of HEAT-2010, International Conference on Health care, hygiene textiles and clothing, PSG College of Technology*, Coimbatore, India, 30-31st July (2010)
6. Silk – An eco-friendly natural fibre for biocomposites – *11th International Conference on Frontiers of Polymers and Advanced Materials, University of Pretoria, Pretoria, South Africa, 22nd to 27th May* (2011)
7. *Development and characterization of biocomposites from jute and coir fibres-proceedings of INDUTECH-2012, International Conference on Industrial Textiles – Products, Applications and Prospects, 3-4 August, PSG College of Technology, Coimbatore, India, 3-4th August* (2012)
8. Studies on “Sidarhombifolia”- a Natural Medicinal Fibre for the Production of Non-woven Fabrics for Medical Applications (Paper accepted for *International Conference on Technical Textiles and Non-wovens, 6-8th Nov, IIT Delhi* (2014)
9. Studies on Effect of Microwave Radiations on DCH-32 Cotton Fibers, *5th International Conference on “Innovative Trends in Mechanical, Material, Manufacturing, Automobile, Aeronautical Engineering and Applied Physics” (ITMAEAP-2014) Organized by “Krishi Sanskriti”, 23 - 24th August, Jawaharlal Nehru University, New Delhi-110067* (2014)
10. Studies on Structure, Comfort, Hand, Unique Properties and Processing of Bamboo Fibres, *Global Bamboo Summit, 8-10th April, Indore, MP, India* (2016)
11. IOT and AI- Moving towards Smart Textiles, International Conference on “*Skills for Clothing Sector-Transforming the training Functions (ICSCS-2020), Alagappa University, Karaikudi, Tamilnadu, 22-23 January* (2020)

III. National Journals & Conferences

1. Kevlar - A high performance fibre, *Colourage*, **14**, 8, 37-38, 1993
2. Production and Properties of Silk Fabrics using modified Silk yarns, book of papers on All India National Seminar on “Diversification of Textile Products for Better Performance”, 29-30th Oct’, BIET, Davangere.
3. Polypropylene an apparel fibre, *Clothesline*, **8**, 2/3, 99-100, 1995
4. Silicone for better finish of silk fabrics, *Clothesline*, **8**, 2/3, 87-90, 1995

5. Diversification of Textile products for better exports, *Textile Trends*, April, 35-36, 1995
6. Textiles for Medical use, *Indian Textile Journal*, July, 1995
7. Silk - Designers Choice, *Tecoya Technical Update*, Dec, 54-55, 1995
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9. Microprocessors in Textile production, *Tecoya Technical update*, **5**, 4, 27-37, 1996
10. Bio-polishing - A New Way of Garment Finishing, *Clothesline*, December 2002
11. Campus Corner - In pursuit of Technical Excellence, *Apparel*, 186, August, 2003.
12. Antimicrobial finishes for Textiles, Technical paper presented at NCUTE pilot programme programme on "*Finishing of Garments*", *DKTE Textile Institute, Ichalkaranji*, Maharashtra, India, 27-29, September (2001)
13. Information Technology-a Cost effective Tool for Indian Textile Industry, *59th All India Textile Conference*, Komarapalyam, 31st Jan -1st Feb (2004)
14. Technical Aspects of Textile Industries and Process Flow, *Entrepreneurs Development Programme for Textile Entrepreneurs of Davangere District*, Department of Handloom & Textiles, BIET, Davangere, 18th to 23rd July (2011)
15. Characterization of some natural fibers for the production of biocomposites, "*Textile & Apparel Industry; Contemporary Issues to Address in Coming Years*", *24th National Convention of Textile Engineers*, The Institution of Engineers (India), Karnataka State Centre, 19-20, August, Bangalore (2011)
16. Comparison of geometric, physical and comfort properties of pure bamboo and cotton fabrics, "*Textile & Apparel Industry; Contemporary Issues to Address in Coming Years*", *24th National Convention of Textile Engineers*, The Institution of Engineers (India), Karnataka State Centre, Bangalore, 19-20, August (2011)
17. Heat Release and Thermal Protection Characteristics of PBI/Aramid Blends, *6th National Conference on Advances in Polymeric Materials (Energy, Environment and Health)*, *NCAPM*, SJCE, Mysore, 25th to 26th, April (2014).
18. Effect of Microwave Radiations on Properties and Dyeing Behavior of DCH-32 Cotton Fibers, (*Paper accepted for "The 59th DAE Solid State Physics Symposium (DAE-SSPS-2014)*, *VIT University, Vellore, Tamil Nadu, December 16-20*, (2014)

IV. Books/Course Material Written:

Under Continuing Education Programme, AICTE, New Delhi, India

1. Screen printing (1997)
2. Recent Developments in Eco-friendly Finishing of Natural and Synthetic Textiles (2002)

V. Text Book Chapters Contributed:

1. *Animal Fibres – Silk*, Handbook of Fibrous Materials, Ed. by Jinlian Hu, Bipin Kumar and Jing Lu, Wiley-VCH Verlag GMBH & Co. KGaA, Chapter-3, p.-75-94 (2020)
2. *Silk Fibres – Structure, Properties and applications*, Chapter-11 p 385-415 in **Hand Book of Natural Fibres, (Second edition) : Types, Properties and Factors affecting Breeding and Cultivation (Volume-I),**, Ed. by, Ryszard Kozlowski and Maria Mackiewicz-Talarczyk, Elsevier Ltd. (Woodhead Publishing Ltd, UK), (2020)
3. *Silk-Production and Future Trends*, Chapter-3 p 121-144 in **Hand Book of Natural Fibres, (Second edition) : Processing and Applications, Volume-II,**, Ed. by, Ryszard Kozlowski and Maria Mackiewicz-Talarczyk, Elsevier Ltd. (Woodhead Publishing Ltd, UK), (2020)
4. *Silk from Silkworms and Spiders as High-performance Fibers*, in **Structure and properties of high-performance fibers**, Chapter-13, p 325-363, Ed. by, Prof. Gajanan Bhat, Elsevier Limited, Oxford, United Kingdom, (2016)
5. *Natural Textile Fibres: Animal and Silk Fibres*, in **Textiles and Fashion: Materials, Design and Technology**, Chapter-3, 57-78 Ed. by, Prof. Rose Sinclair, Woodhead Publishing Ltd, UK (2014)
6. *Silk Production and Future of Natural Silk Manufacture*, (Chapter-1) in **Hand Book of Natural Fibres, Processing and Applications, Volume-II,**, Ed. by, Prof. Ryszard Kozlowski, Woodhead Publishing Ltd, UK (2012)
7. *Silk Fibres*, in **Handbook of natural fibres: Types, properties and factors affecting breeding and cultivation (Volume-I)**, Ed. by, Prof. Ryszard Kozlowski, Woodhead Publishing Ltd, UK (2012)
8. *The Use of Smart Materials in Cold Weather Apparel*, in **Textiles for Cold Weather Apparel**, p 84-109, Ed. by Dr John T Williams, Woodhead Publishing Ltd, UK (2009)
9. *Testing Intelligent Textiles* in **Fabric Testing**, p 275-308, Ed. by, Prof. Jinlian Hu, Woodhead Publishing Ltd, UK (2008)
10. *Key Issues in Testing of Damaged Textiles* in **Fabric Testing**, p 309-338, Ed. by, Prof. Jinlian Hu, Woodhead Publishing Ltd, UK (2008)

VI. Text Books

1. **I Edition** - A text book on *Silk – Processing, Properties and Applications* published in July 2013. Publisher: **Woodhead Publishing Ltd, Cambridge, UK**
2. **II Edition** - A text book on *Silk – Processing, Properties and Applications* published in December 2018. Publisher: **Elsevier, USA**

VII. Invited Lectures:

1. *Use of Smart Materials in Cold Weather Clothing*, Continuation Education Programme (CEP) on 'Protective Clothing', Defense Bioengineering & Electro medical Laboratory (a unit of DRDO), Bangalore, 20-24th September (2010)
2. *Technical Textiles*, Higher Institute of Sahel, University of Maroua, Cameroon, May 25th (2014)
3. *Physical Properties of Textile Fibres*, Higher Institute of Sahel, University of Maroua, Cameroon, June 3rd (2014)
4. *Chemistry of Dyes*, Higher Institute of Sahel, University of Maroua, Cameroon, June 10th (2014)
5. *Structure and Characterisation of Fibres and Polymers*, ENSET, University of Douala, July 24th, Douala, Cameroon (2014).
6. *Natural Fibres-Structure, Properties and Applications*, ENSET, University of Douala, July 27th, Douala, Cameroon (2014).
7. *Silk Fibroin Based Biomaterials for Tissue Engineering Applications*, Natinal Conference on Recent Advances in Textiles, Physical and Biological Sciences, Nanda College of Arts and Science, 5-6th February, Erode, Tamil Nadu (2015)
11. *Silk Yarn Technology*, Dept of Textile Technology, RVS College of Engineering and Technology, 28th March, Dindigul, Tamil Nadu (2015)
12. *Development of Textile Products from Bamboo Fibres*, Refresher Training Course for IFS Officers about Bamboo Resource Development for Addressing Livelihood Concerns of Communities, 11th-15th IPIRTI, Bangalore (2016).