

Endorsement from the Supervisor

Ms. Sumi Haldar has researched extensively on the topic **“AN EXPERIMENTAL STUDY ON EXTRACTION OF FIBERS AND USES OF LOTUS PETIOLE: A HYGROWASTE** vide registration No: FOF/212, (Dated : January 16, 2021). She conducted extensive work which has been substantiated its originality. She has presented her progress of work in seminars well attended by teachers and students of department. She has successfully completed her course work.

She has presented thirteen papers at International level : **1).** *“Development of Union fabrics from Lotus petiole waste”* at International Virtual conference on Sustainability in Fashion Design and Manufacturing conducted by Department of Fashion Technology, PSG College of Technology, Coimbatore, India from 11 and 12 June, 2021. **2).** *“Lotus – a gen next Fiber”* at International Conference on sustainable growth in Textiles conducted by Uttar Pradesh Textile Technology Institute, Kanpur from 19-21 August, 2021. **3).** *“Horticulture waste towards Sustainable textiles and fashion”* at International Conference on Fashion, Apparel and Textile organized by Amity School of Fashion technology, Uttar Pradesh on 16 and 17th November, 2021. **4).** *“Innovative Biofibers and Bio fuels from Aquatic waste”* at 3rd International Conference on Global Initiatives in Agricultural, Forestry and Applied Sciences GIAFAS, 2021 Organized by Shri Guru Ram Rai University, Dehradun. Uttarakhand, India. The paper was awarded as a **“Best paper presentation”**. **5).** *“ Job Opportunities at the different stages of fabric manufacturing from the extraction of Lotus petiole”* at 2nd International Conference on Social work and Law, Building Social Entrepreneurial Ecosystem for a More Sustainable and Resilient Society organized by Gujarat National Law University, Gandhinagar, Gujarat. The paper was awarded as a **“Best paper presentation”**. **6).** *“Design and Fabrication of Apparatus for Lotus fiber extraction – a way to quality and Productivity* at 4th International Conference on Global efforts on Agriculture, Forestry , Environment and Food Security (Theme – Climate Change and its Impact) GAFEF -2022 at Institute of forestry , Tribhuvan University , Pokhara Campus, Pokhara Nepal . Dated on 17-19,2022. The paper was awarded 1st rank for best oral paper presentation. **7).** *“Nonwoven fabric from bio aquatic waste novel material for medical textiles”* at International E- Conference on Textiles for Advanced Technologies Textile Tech – 2022 dated on 11-13 November, 2022. **8).** *“ Fabrication of apparatus for Extracting Lotus Fiber and Study its Mechanical properties”* at 3rd International conference on Functional Textiles & Clothing at Department of Fiber Engineering and Technology, Indian Institute of Technology, Delhi. Dated on 10th -12th February, 2023. **9).** *“Novel Fiber from Lotus Petiole – A Golden Revolution in Sustainable Textiles and Fashion”* World “in 1st Indo- Japanese Textile Research Conference (IJTRC) 2023 at Department of fiber

engineering and technology, Indian Institute of Technology, Delhi. Dated on 27 -28, November, 2023. **10).** “*Lotus Petiole – Novel Biobased Fiber for Fashion Industry*” in 2nd International conference on Sustainability in Fashion Design and Manufacturing conducted by Department of Fashion Technology, PSG College of Technology, Coimbatore, India. Dated on 8-9 December, 2023. **11).** “*Padma Vastra – Innovative Knitted structure*” in International conference on Innovative advances in indigenous Knowledge in Family and Community Sciences (Home Science) , Faculty of Family and Community Sciences, The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat. **12).** “*Jalsutra – The innovative knitted fabric*” in 6th International Conference “Cutting-Edge Solutions in Science- Agriculture, Technology, Engineering and Humanities”(CSATEH-2024) Theme 6 : Social science and Humanities , UGC-HRDC, Kumaun University, Nainital, Uttarakhand, India. Dated on August 24-26, 2024. **The paper was awarded first rank for best oral presentation.** **13).** “*Synthesized skin in textiles*” in International conference on Innovative advances in indigenous Knowledge in Family and Community Sciences (Home Science) , Faculty of Family and Community Sciences, The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat. **12).** “*Jalsutra – The innovative knitted fabric*” in 6th International Conference “Cutting-Edge Solutions in Science- Agriculture, Technology, Engineering and Humanities”(CSATEH-2024) Theme 6 : Social science and Humanities , UGC-HRDC, Kumaun University, Nainital, Uttarakhand, India. Dated on August 24-26, 2024.

She has also presented four papers at national level : **1).** “*Women empowerment through skill development*”: *Post co-vid challenges* at Green Fashion India 2021 conducted by Soft School of Fashion technology , Pune. **2).** “*Preparation of yarns from aquatic waste and testing the properties for its use in textiles*” at 34th Biennial Conference of Home Science Association of India at St.Terasa’s (Autonomous) college Kochi, Kerala. Dated on 15-17th December, 2022 **3).** *Envisaging a path towards Viksit Bharat 2047: Utilization of Lotus petiole waste for developing Sustainable Textiles* at National Conference On Fashion, Textiles and Crafts : A Global Perspective at IIS university, Jaipur, Rajasthan, Dated on 26-27 September, 2024. **4).** “*Technological intervention in Lotus fiber for developing luxurious fashion fabric*” at “UGC Sponsored” National seminar on “Localization of Sustainable Development Goals (LSDGs) organized by The Gandhigram Rural Institute (Deemed to be the university) Department of Home Science, Gandhigram, Tamilnadu

She has published three papers

- 1) Lotus (*Nelumbo Nucifera Gaertn.*) – An Exploration of Hygrowaste for textile applications. *Acta Scientific Agriculture Journal*, Vol. (5) 119-126. ISSN – 2581-365X.
- 2). Horticulture waste towards sustainable textiles and fashion – published in proceedings of International conference on Fashion, Apparel and Textile (2021) organized by Amity School of Fashion Technology.
- 3). Young scientist award paper – “Experimental study on Lotus petioles for its use in Textiles leading to Social Entrepreneurship” published in *Journal of Home Association of India* 2024, Vol. 36 (2). 430-448.

She has published one book chapter

- 1). Development of Union fabrics from Lotus Petiole waste book chapter in *Sustainable Approaches in Textiles and Fashion, Fibres, Raw Materials and product development*. Edited by Subramanian Senthilkumar Muthu, Springer Publication. ISBN – 978-981-19-0877-4. pp- 101-121.

Awards

- 1). “*Best Research Scholar*” award by Agriculture & Environmental Technology Development Society (AEDTS) on the occasion of 3rd Conference on “Global Initiative in Agricultural, Forestry and Applied sciences for food security, Environmental safety and sustainable development (GIAFAS-2021) at Shri Guru Ram Rai University, Dehradun, Uttarakhand, India. Date – 17-18, 2021.
- 2). “*Young Scientist award*” (Appreciation) in 35th Biennial conference of Home Science association (HSAI) at College of Post graduate studies in Agricultural Sciences Central Agricultural University. ICAR Tura , Meghalaya. Title of the paper for the award - “Experimental study on Lotus petioles for its use in textiles leading to social entrepreneurship”.

3). “*Best Women Maker award*” in Maker Fest Innovation contest 2021 organized by Yuvalay Electronics Lab and , Yuvalay Charitable Trust in collaboration with Vadodara Innovation Council. Title of the innovation - Utilization of Aquatic Plant Waste for developing organic fabric. Dated on 6-7th March, 2021. Certificate of achievement with 5000 Rs. cash prize.

4). “*Special Recognition award*” in “Environment Category” in Maker Fest Innovation contest 2022 organized by Yuvalay Electronics Lab and , Yuvalay Charitable Trust in collaboration with Vadodara Innovation Council. Title of the innovation – Economy from Hygrowaste – A way towards women empowerment, Dated on 26-27th February, 2022. Certificate of achievement with 5000 Rs. cash prize.

Projects

1. Project Sulbha – funded by Happy faces, NGO Vadodara Gujarat. Duration :-June- August, 2021.
2. Women empowerment through spinning of Lotus petiole waste – Textile hidden in the water done under Gargi – Center for Holistic development for women research project scholarship by BAOU – Dr. Babasaheb Ambedkar Open University, Chandkheda, Ahmedabad. Duration:- November 2021- May 2022.
3. Project – “Lotus Petiole – Exploration of Hygrowaste for textile applications” granted from Student Start up and innovation Policy (SSIP) -2.0 Gujarat. The duration of the project is 6 months : December 2023 – May 2024.

Patents

An Apparatus for Fiber Extraction from Lotus Petioles (IN201921032058). The patent got grant on 04/08/2022.

Copy Right

Lotus Knitted structure (32493/2023-CO/L) is filled for copy-right process



Synopsis is approved by

Prof. (Dr) Madhu Sharan, Guide
Department of Clothing and Textiles
Faculty of Family and Community Sciences
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