

Dr.Sujit Sharma

Current Position: Assistant Manager (June 2023 to till date)
Aliaxis Research and Technology Centre Asia, Bengaluru, India



Roles and responsibility:

1. Physical and mechanical characterization of compounded polymer
2. Simulation : Structural analysis, Polyflow, CFD using Ansys, Moldflow

✉ sharma.sujitt92@gmail.com

☎ +91 8145593634

📍 HP Suhas Park, 3rd Cross Rd, Electronics City Phase 1, Electronic City, Bengaluru, Karnataka 560100

🌐 www.sujitsharma.com/

🌐 linkedin.com/in/sujit-sharma-334230a4

🐦 twitter.com/Sujit225

🗣 quora.com/profile/Sujit-Sharma-18

📘 facebook.com/sujit.sharma.79274

EDUCATION

Ph.D in Rubber Technology

Indian Institute of Technology, Kharagpur, India

07/2018-08/2022,

M.Tech in Rubber Technology

Indian Institute of Technology, Kharagpur, India

07/2016 - 06/2018,

B.Tech in Chemical Engineering

National Institute of Technology, Durgapur, India

06/2011 - 06/2015,

Higher Secondary

Burdwan CMS High School, Burdwan, W.B, India

05/2009 - 05/2011,

WBCHSE

Secondary

Burdwan CMS High School, Burdwan, W.B, India

05/2009,

WBBSE

TRAINING

Trainee

Anton Paar

12/2018 - 12/2018,

Basics of rheology

Contact : Mr. Dharmesh Gala

New Delhi, India

Trainee

AIP Nishikawa

06/2017 - 09/2017,

Contact : Mr. Stany Dcunha

Lalru, Panjab, India

Trainee

Indian oil Corporation Ltd.

05/2014 - 06/2014,

Haldia, W.B, India

SKILLS

ANSYS

MS-Office

OriginPro

Spaceclaim

Solidworks

PERSONAL PROJECTS

Membrane module modeling and simulation with the help of Aspen plus (06/2014 - 05/2015)

- National Institute of Tehnology, Durgapur

Simulation of Extrusion Dies Using Ansys Polyflow (05/2017 - 04/2018)

- Indian Institute of Technology, Kharagpur and ALP Nishikawa

EXTRA-CURRICULAR

Participated in various activities in college technical fest (AAROHAN)

Took part in school athletic activities (400m, 800m,1500m, 3000m), long jump and high jump.

Amateur Chess player

LANGUAGES

Hindi

Full Professional Proficiency

Bengali

Native or Bilingual Proficiency

English

Professional Working Proficiency

INTERESTS

Travelling

Playing Cricket

Badminton

Listening Music

PUBLICATIONS

List of publications (Related to the Thesis)

1. **S. Sharma**, D. Goswami, M. Goswami, A. Deb, B. Padhan, S. Chattopadhyay, Computational fluid dynamics modeling of multicomponent elastomeric complex profile while flowing through extrusion die, *Chemical Engineering Journal*. (2022) 138756. <https://doi.org/10.1016/j.cej.2022.138756>. **(I.F - 16.744)**
2. **S. Sharma**, M. Goswami, A. Deb, B. Padhan, and S. Chattopadhyay. Structural deformation/ instability of the co-extruder rubber profiles due to die swell: Experimental and CFD studies with 3D models. *Chemical Engineering Journal*. 2021, 130504. <https://doi.org/10.1016/j.cej.2021.130504>. **(I.F - 16.744)**
3. **S. Sharma**, K. Sarkar, M. Goswami, A. Deb, S. Dcunha, and S. Chattopadhyay. An approach to design extrusion dies for complex shaped rubber profiles using finite element analysis. *Journal of Manufacturing Processes*. 2020; 57: 700-711. <https://doi.org/10.1016/j.jmapro.2020.07.033>. **(I.F- 5.684)**

Other Publications

1. M. Goswami, **S. Sharma**, G. Subbarayan, S. P.A. Bordas and S. Chattopadhyay. Historical purview and recent advances in fracture mechanics of elastomeric matrix composites. *Advances in Applied Mechanics*. 2022; <https://doi.org/10.1016/bs.aams.2022.09.002> **(IF- 9.0)**
2. M. Goswami, B.S. Mandloi, A. Kumar, **S. Sharma**, S.K. Ghorai, K. Sarkar, and S. Chattopadhyay. Optimization of graphene in carbon black-filled nitrile butadiene rubber: Constitutive modeling and verification using finite element analysis. *Polymer Composites*. 2020; 41: 1853– 1866. <https://doi.org/10.1002/pc.25503>. **(I.F- 3.531)**
3. M. Goswami, M.M. Ghosh, M.S. Dalmiya, **S. Sharma**, S.K. Ghorai, and S. Chattopadhyay. A finite element method based comparative fracture assessment of carbon black and silica filled elastomers: Reinforcing efficacy of carbonaceous fillers in flexible composites. *Polymer Testing*. 2020; 91: 106856. <https://doi.org/10.1016/j.polymeresting.2020.106856>. **(I.F- 4.931)**
4. M. Goswami, S.K. Ghorai, **S. Sharma**, G. Chakraborty, and S. Chattopadhyay. Nonlinear fracture assessment and nanomechanical deformation of elastomeric composites: Development of finite element model and experimental validation. *Polymer Composites*. 2021; 1– 21. <https://doi.org/10.1002/pc.26080>. **(I.F- 3.531)**
5. Mohit Goswami, **Sujit Sharma**, Soumya Roychowdhury, Stéphane PA Bordas, Santanu Chattopadhyay, Fracture of V-notched natural rubber composites used in heavy-duty tire tread, *Engineering Failure Analysis*, 2023; 107358, <https://doi.org/10.1016/j.engfailanal.2023.107358> **(I.F- 4)**
6. Mohit Goswami, **Sujit Sharma**, Moni Mahesh Ghosh, Nils Hendrik Kröger, Filippo Berto, Goutam Chakraborty, Santanu Chattopadhyay, Finite element method based damage model to characterize effect of geometric configuration on fracture properties of elastomeric composites, *Mechanics of*

7. T.Gupta, **S. Sharma**, T. Rajvanshi, H. Shukla; Fabrication of cu nano wires at different ph: effect, structure, and morphological studies; *Nanoscience and Technology: An International Journal*. Volume 12 pg. 23-30, Volume 57 pg. 700- 711, 10.1615/NanoSciTechnolIntJ.2021035733.
8. K. Sarkar, S. Khanra, **S. Sharma**, S. K. Ghorai, S. Chattopadhyay. Self-assembled 3D-microstructured dual carbon blackfilled polymer nanocomposite-coated fabric for tunable electromagnetic interference shielding. *The Journal of the TextileInstitute*. 2022; pg. 1-10, <https://doi.org/10.1080/00405000.2022.2026577> (I.F- 1.880)
9. M. Goswami, S. Sharma, M.M. Ghosh, N.H. Kroger, F. Berto, G. Chakraborty, S. Chattopadhyay. Finite element method based damage model to characterize effect of geometric configuration on fracture properties of elastomeric composites. *Mechanics of advanced materials and structures*.1-15, <https://doi.org/10.1080/15376494.2022.2051102> (I.F-4.030)

CONFERENCES

1. Poster Presentation at National Rubber Conference, Kolkata, 2018 on “Design and Simulation of Extrusion Dies to Obtain Precise Rubber Profiles” organized during 27th -28th November 2018
2. Paper Presentation at IRMRA 23rd Rubber Conference, Mumbai, 2018 on “Simulation of Extrusion Dies for Rubber Profiles” held during 14th -15th December 2018
3. Poster Presentation at National Rubber Conference Kolkata, 2019 on “Predicting the Effect of Rheology in Rubber Extrusion using Finite Element Method” held during 4th & 5th December 2019
4. Paper Presentation at Advancements in Polymeric Materials (APM), Bangalore, 2020 on “Predicting the Deformation Behaviour of the Extrudate during manufacturing of Complex Rubber Profiles using Finite Element Analysis” held during 13th-15th February 2020
5. e-Poster Conference on Current Outlook in Material Science and Engineering (COMSE 2k20) organized by Bodoland University associated with Tripura University, ADP college, Nangaon and MIT Aurangabad on “An Investigation of Overall Deformation due to Die-swell during Manufacturing of Extrudate Rubber Product Using Finite Element Analysis” held during 15th -16th May 2020
6. Paper Presentation at Advancements in Polymeric Materials (APM), Bhubaneswar, 2021 on “Study the effects of die swell on shape and dimension of the co-extrudate elastomeric profile using a computational method” held during 9th -13th March 2021
7. Paper presentation at 7th Edition of International Conference on Polymer Science and Technology, France (virtual) ,2021 on “An investigation of polymeric extrudate rheological behaviour using a computational method” held during 12th -13th April, 2021
8. Paper presentation at Global conference on advances in polymer science & nanotechnology, Canada(virtual),2021 on “An investigation of structural deformation on elastomeric profiles during extrusion process using finite element analysis” held during 27th -28th May, 2021
9. Paper presentation at International elastomer conference, Pittsburgh, Pennsylvania (virtual) 2021 on “Investigation of Structural Instability of Polymeric Extrudate During Processing

Using Computational Method” held during 4th -7th October, 2021

10. Paper presentation at 12th Asia Pacific Conference on Polymer Science and Engineering on “Design and development of polymeric extrusion die” held during 25th -26th October 2021 (online)
11. Poster Presentation at Complex Fluid 2021 organized by IIT Gandhinagar and Indian society of rheology on “An Approach to investigate the effect of rheology during polymer extrusion using computational method” held during 13th to 15th December 2021
12. Paper Presentation at Advancements in Polymeric Materials (APM), Chennai, 2022 on “Investigating the structural deformation of the extrudate during the processing and simulation of an extrusion die for polymeric products” held during 8th -12th March 2022

AWARDS AND HONOURS

1. Received the **best paper** award for “**Simulation of Extrusion Dies for Rubber Profiles**” at the 23rd Rubber Conference, IRMRA. Mumbai, India, December 2018.
2. Received the **best poster** award for “**Design and Simulation of Extrusion Die to Obtain Precise Rubber Profiles**” at the National Rubber Conference, Kolkata 2019 organized by AIRIA.
3. Received the **best oral** presentations award for “**Study the effects of die swell on shape and dimension of the co-extrudate elastomeric profile using a computational method**” in the 12th chapter of International Conference on Advancements in Polymeric Materials, APM 2021, organized by Laboratory for Advanced Research in Polymeric Materials (LARPM), R&D wing of CIPET through the virtual platform, March 2021.
4. **Awarded Diamond Grade** (greater than 90%) in National level online Quiz on Polymer Science and Engineering from 31st August to 07th September 2020.
5. Selected as **Winner** of **11th National Petrochemicals Awards** from **Department of Chemicals and Petrochemicals (DCPC), Ministry of Chemicals and Fertilizers** in the category of Research in the field of Polymer Science & Technology (For Research Students of Academic Institute / Research lab) for the Innovation in “**Design and simulation of co-extrusion die for complex -shaped rubber profiles using a computational method**”

MEMBERSHIP

ACS Rubber Division

REFERENCES

- 1. Dr. Santanu Chattopadhyay**
Professor and Head
Rubber Technology Centre
Indian Institute of Technology Kharagpur
Kharagpur, India
Phone: +91-9434055304
Mail: santanu@rtc.iitkgp.ac.in
- 2. Dr. Arghya Deb**
Professor and Associate Dean
Department of Civil Engineering
Indian Institute of Technology Kharagpur
Kharagpur, India
Phone: +91 8167561111
Mail: arghya@civil.iitkgp.ac.in
- 3. Dr. Titash Mondal**
Assistant Professor
Rubber Technology Centre
Indian Institute of Technology Kharagpur
Kharagpur, India
Phone: +91-9632061414
Mail: titash@rtc.iitkgp.ac.in or titash786@gmail.com

I hereby declare that all the facts that stated above are correct and true to the best of my knowledge and belief.

DATED: 11/01/2024

PLACE: Bengaluru

Sujit Sharma

SIGNATURE

(Sujit Sharma)