

Soumya K. Srivastava, Ph.D., P.E.

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1. Biography

Soumya Srivastava has been an Assistant Professor of Biomedical Engineering in the Department of Chemical and Biomedical Engineering at West Virginia University since 2021. Before joining WVU, she was an Assistant Professor in the Department of Chemical & Biological Engineering at the University of Idaho between 2013-2021 and Assistant Research Professor in the Gene and Linda Voiland School of Chemical Engineering and Bioengineering at Washington State University between 2010-2013. She obtained her Ph.D. in Chemical Engineering at Mississippi State University in August 2010, her M.S. from Illinois Institute of Technology, Chicago, in 2005, and her B.S. from India in 2001. Her research team leverages on applying microfluidics and electrokinetics to design lab-on-a-chip systems for medical and environmental applications. Her research program is funded by NIH, NSF, NASA-EPSCoR, ACS, and other small seed grants. Her research has been featured in books and journals including *Lab on a Chip*, *Electrophoresis*, *Applied Physics Reviews*, *Scientific Reports*. She has won many awards, including the Travis Stimeling Award for Mentoring Undergraduates in Research in 2024, Outstanding Researcher of the Year in 2024, a featured review article in 2019 in Applied Physics Reviews, the NIH Mentee Award in 2016 and 2019, Alumni Award of Excellence in 2015, Innovative Engineering Educator by National Academy of Engineers in 2015, Inclusive Educator Excellence Award by Women in Engineering ProActive Network (WEPAN) in 2015, most cited article in 2011, and best paper award in 2009.

2. Education

Ph.D. in Chemical Engineering, Mississippi State University; Mississippi State, MS

Research focuses on Biomedical Engineering / Dielectrophoresis; Aug 2010

Dissertation Advisor: Dr. Adrienne R. Minerick

Dissertation Title: Dielectrophoretic characterization of particles and erythrocytes

M.S. in Chemical Engineering, Illinois Institute of Technology, Chicago, IL

Research focuses on Bioengineering / Biotechnology; May 2005

Advisor: Dr. Satish J. Parulekar

Project title: Growth Kinetics of Biofilm in a Mixed Flow Reactor

B.E. in Chemical Engineering, R.V. College of Engineering, Bangalore, India; Sep 2001

3. Research Interests

- Early point-of-care (POC) medical diagnostic platforms and environmental bio-separations using dielectrophoresis, transport phenomena, fluid dynamics, and dielectric spectroscopy
 - Medical Devices (Lab-on-a-chip for POC diagnostics)
 - Microfluidics (design and fabrication of micro- and nano-devices and biosensors)
 - Dielectric Spectroscopy (Single cell characterization and dielectric property measurement)
 - Electrokinetics (manipulation of bioparticles under electric fields in combination with electrophoresis, electroosmosis, and dielectrophoresis)
 - Finite element modeling via COMSOL and MATLAB using fundamental transport phenomenon, fluid dynamics, and heat & mass transfer
 - Bioseparations (particle sorting technology for environmental applications)
 - Cell biophysics & bioelectric signal characterization
- Engineering education (developing microfluidic modules for enhancing undergraduate education)

4. Work Experience

- Assistant Professor, Department of Chemical & Biomedical Engineering, [West Virginia University](#) (WVU), Morgantown, WV (08/21 – Present)
- Assistant Professor, Department of Chemical and Biological Engineering, [University of Idaho](#) (UI), Moscow, ID (08/13 – 05/21)
 - Certificates and Licenses: Professional Engineer, Faculty Restricted, Idaho, License #18146 (2018 – Present)
- Teaching Faculty, Department of Chemical and Materials Engineering, [University of Idaho](#) (UI), Moscow, ID (1/13 – 5/13)
- Assistant Research Professor and Instructor, Voiland School of Chemical Engineering and Bioengineering, [Washington State University](#) (WSU), Pullman, WA (08/2010 – 12/2012)
- Graduate Research Assistant, [Mississippi State University](#), MS (08/2007 – 07/2010)
- Teaching Assistant, [Mississippi State University](#), MS (08/2009-12/2009)
- Research Analyst, [Warren Analytical Laboratory](#), Greeley, CO (04/2006 - 07/2007)
- Co-op Research Chemist, [Air Liquide](#), Chicago, IL (08/2004 - 08/2005)
- Research Engineer Intern, [Bayer](#), Clayton, NC (05/2004 - 08/2004)
- Graduate Research Assistant, Department of Chemical & Biological Engineering, [Illinois Institute of Technology](#), Chicago, IL (05/2003 - 12/2004)
- Technical Lab Assistant, [Bio-gen Extracts Pvt. Ltd](#), Bangalore, India, (03/2002 - 06/2002)
- Project Engineer Intern, Department of Aerospace Engineering, [Indian Institute of Science](#), Bangalore, India (05/2001 - 11/2001)

5. Awards / Honors

- Travis Stimeling Award for Mentoring Undergraduates in Research in the category of Physical Sciences & Technology, **2024** (04/24)
- 2023-24 Statler Outstanding Researcher Award (Junior Category), Statler College of Engineering and Mineral Resources, West Virginia University, **2024** (04/24)
- 2023-24 Statler Educator of the Year award Nominee, Statler College of Engineering and Mineral Resources, West Virginia University, **2024** (02/24)
- Thriving Women Program Award, Statler College of Engineering and Mineral Resources, West Virginia University, **2023** (06/23)
- Selected as the 'Hot Paper on Wearable Biosensors research' in *Biosensors*, MDPI Publishing for "Wearable Skin Sensors and Their Challenges: A Review of Transdermal, Optical, and Mechanical Sensors," **2022** (11/22)
- Selected as the 'Featured Article' in *Biophysics Reviews* for "Dielectrophoresis as a tool for electrophysiological characterization of stem cells," **2020** (11/20)
- Nominee for Presidential Awards for Excellence in Science, Mathematics, and Engineering Mentoring (PAESMEM) (12/19)
- Nominee for the University of Idaho Excellence in Advising Award (12/19)
- Selected as the 'Featured Article' in *Applied Physics Reviews* for "Dielectric characterization of bioparticles via electrokinetics: The past, present, and the future," *Applied Physics Reviews*, **2019**, 6(4), 041313 *IF = 17.054 (10/19)
- NIH Mentee Award- GUMSHOE (01/19, 04/16)
- Faculty Award of Excellence, Alumni Association, University of Idaho, Moscow, ID (11/15)

- Innovative Engineering Educator- Frontiers of Engineering Education, National Academy of Engineering (10/15)
- Grant award Finalist, The Foundation for Women's Wellness (07/15)
- WEPAN (Women in Engineering Proactive Network) EIT Inclusive Educator Excellence Award (<http://www.wskc.org/eitawards>) (05/15)
- Selected to attend the National Effective Teaching Institute workshop (06/15)
- No. 5 most cited article in 2011, "DC insulator dielectrophoretic applications in microdevice technology: a review; *Analytical and Bioanalytical Chemistry* **2011**, 399 (1), 301-321 (41 citations in 2012)" (10/12).
- Nominee for Best Graduate Research Assistant Award, Graduate Student Association, MSU, (04/10).
- Travel Assistance Grant for Graduate Students Award (TAGGS), Office of Graduate School, MSU, (09/09).
- Graduate Ambassador of Department of Chemical Engineering, MSU, (02/09).
- First prize, Outstanding Graduate Student Paper, Swalm School of Chemical Engineering, MSU, (01/09).
- Featured research cover photo, Dimensions- Annual Research Report 2007-2008, MSU, (01/09 and 06/08).
- Travel Grant Award by GE- American Electrophoresis Society (11/08).
- Graduate Student Travel Award, Graduate Student Association, MSU (06/08).
- Associate Member of Honor Society, Sigma-Xi (03/08)
- Certificate of Excellence, Bayer Healthcare, Clayton, NC (05/04).
- National Collegiate Engineering Award (NCEA), United States Achievement Academy (04/04).
- Best Project Award, Indian Institute of Chemical Engineers, Bangalore, India (07/00).
- Best Undergraduate Project Award, R.V. College of Engineering, Bangalore, India (08/00).
- National Talent Search Exam Scholarship for Academic Excellence, Bangalore, India (04/97).

In News & Media

- [WVU Statler College's Research Expenditures Rocket, Boosting Impact and Growth in Research](#) (Aug 26, 2024)
- [8 WVU students receive Gilman Scholarships to study abroad](#) (Jul 29, 2024)
- [WVU undergraduate students awarded Goldwater Scholarships to continue research](#) (Jun 3, 2024)
- [Seven recognized for commitment to mentoring undergraduate students in research](#) (May 1, 2024)
- [2024 Spring Undergraduate Research Symposium: Winners and Runners-Up](#) (Apr 30, 2024)
- [Teaching, advising, research, and staff awards announced at WVU's Statler College](#) (April 9, 2024)
- [Lab to Limelight: Graduate Researcher Raphael Oladokun snags prestigious National Award](#) (April 8, 2024)
- [WVU Student Researchers Present at the National Conference on Undergraduate Research \(NCUR\)](#) (Apr 5, 2024)
- [Researcher Spotlight](#) (Apr 4, 2024)
- [WVU student finds future path through undergraduate research](#) (Feb 16, 2024)
- WVU student finds future path through undergraduate research, [WV Daily News](#) (Feb 16, 2024)
- [WVU Student Researchers Present at 2024 URDC](#) (Jan 30, 2024)
- [Lyme Disease in West Virginia](#) (Jan 8, 2024)
- [Research Featured in AAAS](#)
- [2023 Summer Undergraduate Research Symposium - Winners and Runners-Up](#) (Aug 2, 2023)
- [Statler College Announces 2023 Thriving Women Program Recipients](#) (Jun 14, 2023)

- [Statler College ranked in the top 100 engineering programs nationwide](#) (Jan 31, 2023)
- [Ticked Off](#) (Nov 15, 2022)
- [WVU engineer earns \\$1.2M to revolutionize detection, and diagnosis of tick-borne diseases](#) (Oct 7, 2022)

Student Success

Awards & honors won by my students/mentees

Raphael Oladokun (Graduate Student):

- AES Blue Fingers Student Award: Outstanding Student Paper, 2024 American Electrophoresis Society Annual Meeting held in conjunction with FACCS SciX, Raleigh, NC, Oct 2024
- 2024 NOBCCChE Advancing Science Conference Tier 2 Grant (ASCG), Jul 2024
- 2024 ACS BIOL Travel Award, Division of Biological Chemistry, American Chemical Society Annual Meeting, May 2024
- 2024 Outstanding Graduate Award for Excellence in Community Engagement, Apr 24, 2024
- Statler Outstanding Graduate Student Award (PhD. Category) 2023-2024, Apr 9, 2024
- 1st place Poster Award: 98th Annual West Virginia Academy of Science meeting, Glenville, WV, Apr 6, 2024
- Graduate Student of the year 2023-2024: 27th Annual Golden Torch Awards, National Society of Black Engineers, Mar 20, 2024
- 2024 Awards for Distinction in Mentoring of Undergraduates in Research - Finalist nominee, Mar 2024
- Ambassador, West Virginia Science Public Outreach Team, Aug 31, 2023
- Ambassador, Benjamin M. Statler College of Engineering and Mineral Resources, West Virginia University, Aug 15, 2023
- 1st place: 13th Annual Pharmaceutical Sciences Research Symposium of American Association of Pharmaceutical Scientists (AAPS), Morgantown, WV, Nov 2022
- ASCG Grant: 49th Annual National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCCChE), Sep 2022
- WVU Statler Doctoral Research Fellowship, Morgantown, WV, Aug 2022
- Bridges digital health NSF-NRT Traineeship and Fellowship, WV, Jul 2022

Negar Farhang-Doost (Graduate Student):

- Awarded Deppe Fellowship for the 2024-25 academic year, Jul 2024
- AES Blue Fingers Student Award: Outstanding Student Paper, 2023 American Electrophoresis Society Annual Meeting held in conjunction with FACCS SciX, Sparks, NV, Oct 2023
- Best Podium Presentation: 11th Annual BioE Day at University of Pittsburgh, Apr 2023

Christopher Smith (Undergraduate Student):

- Gilman Scholarship to travel to Panama in 2025 as part of the WVU Global Medical and Dental Brigades, Jul 29, 2024
- Winner for Best Presentation: 2024 Spring Undergraduate Research Symposium at West Virginia University, Apr 2024
- Awarded prestigious Barry Goldwater Fellowship, Apr 2024
- Selected to present research at the National Conference on Undergraduate Research, Apr 2024
- Runner-up: Best Poster, 2023 Summer Undergraduate Research Symposium at West Virginia University, Aug 2023
- Best Runner-up: 10th Annual BioE Day at University of Pittsburgh, Apr 2023

- Selected for the 2023 Summer Undergraduate Research Experiences (SURE) program funded by Office of Undergraduate Research and NSF-LSAMP, Mar 2023

Alexa Bostic (Undergraduate Student):

- NISBRE2024 Merit Award for the best paper at the NISBRE conference in Washington, D.C, Jun 16-19, 2024
- Selected for the 2024 Summer Undergraduate Research Experiences (SURE) program funded by Office of Undergraduate Research, Mar 2024

Kaelyn McClain (Undergraduate Student):

- Awarded Ruby Fellowship to pursue Ph.D. at West Virginia University, Feb 29, 2024

Kayla Wagner (Undergraduate Student):

- Accepted into Honors EXCEL! (Experiential and Community-Engaged Learning) Program, Apr 2023

Ezekiel Adekanmbi (Graduate Student @ UI):

- 1st place: 3MT, Statewide Competition, Boise, ID Feb 2019
- GPSA Outstanding Graduate Student Award April 2019
- 1st Prize, University of Idaho Innovation Showcase, Apr 2018
- Prof. Aicha Elshabini Achievement Award, Mar 2017
- Advancing Science Grant, NOBCChE, Nov 2016
- 1st Prize, Technical Research Exhibition, NSBE Regional Conference, Denver, CO, Nov 2016
- 3rd Prize, Fast Pitch Science Award, INBRE Idaho Research Conference, Moscow, ID, Aug 2016
- 1st Prize, University of Idaho Innovation Showcase, Apr 2016
- Outstanding Master Student Research and Creativity Award, University of Idaho, Apr 2016
- University of Idaho Alumni Excellence Award, Dec 2015
- Honorable mention (Presenter), AIChE-AES Annual Meeting, Salt Lake City, UT, Nov 2015
- 2nd Prize, University of Idaho Innovation Showcase, Aug 2015

John Sanchez (Undergraduate Student @ UI): ID-INBRE Academic Fellow, Moscow, ID, Aug 2020

Courtney Molvig (Undergraduate Student @ UI): 1st place AIChE-PNW Regional Conference, Moscow, ID, Apr 2019

Jeremiah Dustin (Undergraduate Student @ UI): 3rd place Annual Innovation Showcase, University of Idaho, Apr 2015

6. Teaching Experience

Year	Semester	Course #	Course Name	Credits	# Students
2024 – 2025 @WVU	Fall 2024	CBE 786	Graduate Seminar	1	68
		BMEG 602	Interfacial Phenomena of Living & Nonliving systems	3	1
		BMEG 497	Independent Study	1-3	2
		BMEG 455	Biomedical Senior Design I	2	4 (1 team)
	Summer 2024	ChE 695	Independent Study	3	1
		BMEG 497	Independent Study	3	1

2023 – 2024 @WVU	Spring 2024	BMEG 456	Biomedical Senior Design I	2	8 (2 teams)
		BMEG 315	Transport Phenomenon in Biological Systems	4	34
	Fall 2023	BMEG 455	Biomedical Senior Design I	2	8 (2 teams)
		BMEG 602	Interfacial Phenomena of Living & Nonliving systems	3	6
2022 – 2023 @WVU	Summer 2023	ChE 695	Independent Study	3	1
	Spring 2023	BMEG 315	Transport Phenomenon in Biological Systems	4	44
		BMEG 456	Biomedical Senior Design II	2	4
	Fall 2022	BMEG 602	Interfacial Phenomena of Living & Nonliving systems	3	4
		BMEG 350	Biomedical Engineering Laboratory	2	46
		BMEG 455	Biomedical Senior Design I	2	4
2021 – 2022 @WVU	Spring 2022	BMEG 602	Interfacial Phenomena of Living & Nonliving systems	3	8
		BMEG 456	Biomedical Senior Design II	2	4
	Fall 2021	BMEG 350	Biomedical Engineering Laboratory	2	44
		BMEG 455	Biomedical Senior Design I	2	4
2020 – 2021	Spring 2021	ChE 330	Separation Processes	3	13
		ChE 434	Chemical Engineering Lab II <i>(*responsible for teaching two labs; coordinating lab schedule and grading for four labs)</i>	3	18
	Fall 2020	ChE 501	Graduate Seminar	1	5
		ChE 433	Chemical Engineering Lab I <i>(*responsible for teaching, coordinating lab schedule, and grading for four labs)</i>	3	19
		ENGR 320	Engineering Thermodynamics and Heat Transfer <i>(*required course for ChE junior certification taken during Fall of Sophomore year by chemical, civil, biological, and electrical engineering students)</i>	3	27
2019 – 2020	Spring 2020	ChE 330	Separation Processes	3	16
		ChE 502	Dielectric Characterization <i>(*research-related course developed for graduate students working in my lab)</i>	1	1
		ChE 434	Chemical Engineering Lab II	3	29

			(*responsible for teaching, coordinating lab schedule, and grading for four labs)		
	Fall 2019	ChE 491	Senior Seminar	1	30
		ENGR 320	Engineering Thermodynamics and Heat Transfer <i>(*required course for ChE junior certification taken during Fall of Sophomore year by chemical, civil, biological, and electrical engineering students)</i>	3	28
		ChE 501	Graduate Seminar	1	6
2018 – 2019	Spring 2019	ChE 330	Separation Processes	3	29
		ChE 434	Chemical Engineering Lab II <i>(*responsible for teaching, coordinating lab schedule, and grading for four labs)</i>	3	21
	Fall 2018	ENGR 320	Engineering Thermodynamics and Heat Transfer <i>(*required course for ChE junior certification taken during Fall of Sophomore year by chemical, civil, biological, and electrical engineering students)</i>	3	37
		ChE 404/504	Microtech Medical Diagnostics <i>(*new course that I developed)</i>	3	4
2017 – 2018	Spring 2018	ChE 330	Separation Processes <i>(*developed lectures based on bioseparations for the 1st time in the department)</i>	3	21
		ENGR 320	Engineering Thermodynamics and Heat Transfer <i>(*required course for ChE junior certification taken during Spring of Sophomore year by chemical, civil, biological, and electrical engineering students)</i>	3	34
	Fall 2017	ENGR 320	Engineering Thermodynamics and Heat Transfer <i>(*required course for ChE junior certification taken during Fall of Sophomore year by chemical, civil, biological, and electrical engineering students)</i>	3	30
2016 – 2017	Spring 2017	ENGR 320	Engineering Thermodynamics and Heat Transfer <i>(*required course for ChE junior certification taken during Spring of Sophomore year by chemical, civil, biological, and electrical engineering students)</i>	3	35
		ChE 434	Chemical Engineering Lab II <i>(*responsible for teaching and grading Acetone Stripping Unit Ops Lab)</i>	1	32
	Fall 2016	ENGR 320	Engineering Thermodynamics and Heat Transfer	3	15

			(*required course for ChE junior certification taken during Fall of Sophomore year by chemical, civil, biological, and electrical engineering students)		
		ChE 433	Chemical Engineering Lab I (*responsible for teaching and grading Acetone Stripping Unit Ops Lab)	1	31
2015 – 2016	Spring 2016	ChE 434	Chemical Engineering Lab II (*responsible for teaching and grading Acetone Stripping Unit Ops Lab)	1	21
		ChE 501	Graduate Seminar	1	4
		ENGR 320	Engineering Thermodynamics and Heat Transfer (*required course for ChE junior certification taken during Spring of Sophomore year by chemical, civil, biological, and electrical engineering students)	3	38
		ChE 499	Microtechnology (*research-related & new course that I developed for graduate students working in my lab)	1	3
	Fall 2015	ChE 499	Microtechnology (*research-related & new course that I developed for graduate students working in my lab)	1	5
		ChE 444	Process analysis & control	3	27
2014 – 2015	Spring 2015	ChE 404/504	Survey of Bioengineering (*new course that I developed)	3	8
		ENGR 320	Engineering Thermodynamics and Heat Transfer (*required course for ChE junior certification taken during Spring of Sophomore year by chemical, civil, biological, and electrical engineering students)	3	51
	Fall 2014	ChE 444	Process analysis & control	3	23
		ChE 433	Chemical Engineering Lab I (*responsible for teaching and grading Acetone Stripping Unit Ops Lab)	1	22
2013 – 2014	Summer 2014	ChE 499	Bioseparations on Microchip (*research-related course developed for graduate students working in my lab)	2	1
	Spring 2014	ENGR 320	Engineering Thermodynamics and Heat Transfer (*required course for ChE junior certification taken during Spring of Sophomore year by chemical, civil, biological, and electrical engineering students)	3	31

		ChE 434	Chemical Engineering Lab II (*responsible for teaching and grading Acetone Stripping Unit Ops Lab)	1	27
	Fall 2013	ChE 444	Process analysis & control	3	25
	Spring 2013	ENGR 320	Engineering Thermodynamics and Heat Transfer (*required course for ChE junior certification taken during Spring of Sophomore year by chemical, civil, biological, and electrical engineering students)	3	45

List of courses taught at WSU:

- CHE 441: Process Control, Fall 2012

List of guest lectures for courses at MSU:

- CHE 3123: Thermodynamics, Fall 2009 (as a Teaching Assistant)

7. Student AdvisingGraduate Students:

1. Sai Deepika Reddy Yaram- Ph.D. Student @WVU (Fall'24 –)
2. Sai Deepika Reddy Yaram- M.S. Student @WVU (Fall'22 – Summer'24)
 - **Thesis:** *Cellular Level Changes Induced in Cancer Cells Due to Microgravity*
3. Negar Farhang Doost- Ph.D. Student @WVU (Summer'22 –)
4. Raphael Oladokun- Ph.D. Student @WVU (Spring'22 –)
5. Ernest Mokaya- M.S. Student @WVU (Spring'22)
6. Anthony Giduthuri- M.S. Student @ UI (Fall'18 – Summer'20) *Currently at WSU/PNNL for Ph.D.
 - **Thesis:** *Electrophysiological Characterization of Mesenchymal Stem Cells Differentiating into Tenocytes via Dielectrophoresis*
7. Ezekiel Adekanmbi- Ph.D. Student @ UI (Summer'16 – Summer'19) *Currently at Intel.
 - **Dissertation:** *Dielectrophoretic characterization of living cells in real-time on a point-and-planar microwell (PPM) platform*
8. Baishali Barua- M.S. Student (Fall'17) @ UI (Discontinued due to student's family commitment)
9. Ezekiel Adekanmbi- M.S. Student @ UI (Fall'14 – Spring'16)
 - **Thesis:** *Applications of electrokinetics for disease diagnostics*
10. Milad Nahavandi- Ph.D. Student @ UI (Summer'15 – Fall'15) (Discontinued due to student's commitment)

Doctoral and M.S. Committees served on:

1. Tatum Peyerl- M.S. Student at CBE WVU (Apr'24 – Present)
2. Candis Dancy- Ph.D. Student at CBE WVU (Oct'23 – Present)
3. Sarah Herbert- Ph.D. Student at CBE WVU (Oct'23 – Present)
4. Kokeb Gebremeskel- Ph.D. Student at CBE WVU (Sep'23 – Present)

5. Toktam Godary- Ph.D. student at Chemistry WVU (Dec'22 – Present)
6. Dhruvi Panchal- Ph.D. student at CBE WVU (Nov'21 – Present)
7. Qingyang Li- Ph.D. student at CBE WVU (Nov'21 – Present)
8. David Knoff- Ph.D. Student at UI Idaho Falls
9. Meng Shi- Ph.D. Student at UI Idaho Falls- Summer'20 Graduate
10. Todd Nichols- Ph.D. Student at UI Idaho Falls- Fall'17 Graduate
11. Bennett Carv- M.S. Student at UI Moscow- Summer'17 Graduate
12. Issac Skavdahl- M.S. Student at UI Moscow- Summer'16 Graduate

Undergraduate student researchers and high-school students advised:

Undergraduate students mentored at WVU:

1. Ashley Smalley (Fall'24 – Present); RAP Student
2. Sydney Smith (Fall'24 – Present); Research Credit
3. Elizabeth Kesterson (Fall'24 – Present); RAP Student in Biochemistry
4. Supriya Rathinam (Fall'24 – Present); RAP student
5. Anushka Pathak (Summer'24 – Present); Volunteer
6. Denzel Duvert (Spring'24 – Present); RAP student
7. Alexa Bostic (Spring'24 – Present); RAP Student, SURE'24 participant
8. Christopher Smith (Fall'22 – Present): RAP Student, SURE'23 participant
9. Kayla Wagner (Spring'23 – Present); Volunteer; HONORS EXCEL! Program
10. Kaelyn McClain (Spring'24); Research Credit
11. Ingrid (Vanessa) Ferro (Fall'23 – Spring'24); Research Credit
12. Sandra Shevtsova (Spring'23 – Spring'24); Research Credit- Fall'23, Volunteer- Spring'24
13. Harshit Garg (Summer'23); Intern from Indian Institute of Technology, Delhi
14. Charles Rhys Campbell (Fall'22 – Spring'23): RAP Student
15. Emma Walker (Fall'22) *First2 Network: RAP Student
16. Leah Ann Ward (Fall'22) *First2 Network: RAP Student
17. Amna Haleem (Fall'21 – Spring'21): RAP Student

High School students mentored at WVU:

1. Dhruv Grandhe, Rising Senior @ Albuquerque Academy, NM (Summer'24)
2. Arjunn Shastri, Rising Senior @ Redmond High School, WA (Summer'24)
3. Alexandra Yuan, Rising Senior @ Westminster Schools of Atlanta, GA (Summer'23) – **currently B.S. in Biomedical Engineering (Stamps Presidential Scholarship) at Georgia Tech*
4. Pooja Karan, Rising Senior @ Ridge High School, NJ (Summer'23) – **currently B.S. in Neuroscience at New York University*
5. Vanessa An, Rising Junior @ Brookings High School, SD (Summer'22) – **currently B.S. at Massachusetts Institute of Technology*
6. Isha Gangavaram, Rising Senior @ Academy for Health and Medical Sciences at Somerset County

Vocational & Technical High School, NJ (Summer'22) – **currently B.S./M.D. in Biomedical Engineering at Drexel University*

Undergraduate students mentored at UI:

18. John Sanchez (Fall'20-Spring'21 as INBRE Fellow)
19. Rebecca Kelley (Spring'20 as ChE 393 (2 Cr.); Fall'20 as ChE 393 (1 Cr.))
20. Sierra Knowles (Fall'19 as ChE 299; Spring'20 as ChE 393; Office of Undergraduate Research Grant Recipient- Spring'20; Fall'20 as ChE 393)
21. Kendall Reeder (Fall'19 as ChE 299; Office of Undergraduate Research Grant Recipient – Spring'20)
22. Natalie Buzolich (Spring'20 as INBRE STEM trainee Award)
23. Sahara Waymire (Spring'19 as ChE 299; Fall'19 as ChE 393; Spring'20 as ChE 393 (2 Cr.); Office of Undergraduate Research Grant Recipient – Spring'20)
24. Courtney Molvig (Fall'18 as ChE 299; Spring'19, Fall'19 as ChE 393; Spring'20 as ChE 393; Office of Undergraduate Research Grant Recipient – Fall'19)
25. Archana Dahal (Spring'18 – Spring'19; Spring'18 and Fall'18 as ChE 393 student; Office of Undergraduate Research Grant Recipient – Fall'18) **Currently at Utah State Univ. for Ph.D.*
26. Alexandria Schlotterbeck (Fall'17 – Summer'18; Spring'18 as ChE 393 student)
27. Abigeal Ilesanmi (Spring'17 – Fall'17; Office of Undergraduate Research Grant Recipient- Fall'17)
28. Austin Porter (Fall'17)
29. Andrea Condie (Spring'17)
30. Mohammed Ataullah (Spring'17)
31. Trang (Amanda) Vu (Spring'15 – Summer'16; INBRE Fellow- Summer'16)
32. Sheila Briggs (Summer'15)
33. Brady Rinaldi (Summer'15- Spring'16; Office of Undergraduate Research Grant Recipient)
34. Felix Nwanne (Fall'15)
35. Jeremiah Seth Dustin (Spring'14 – Spring'15)
36. Adrian Alocer (Summer'14)
37. Mitchell Flynn (Spring'14)
38. Kirk Riedner (ChE 393 student in Spring'14)
39. Kiara Garcia (Summer'16- hosted through HOIST) **High-school student*

Undergraduate students mentored at WSU:

40. Yongjae Lee (Spring'13)
41. Vineet Kumar (Summer'13)

Undergraduate students mentored at MSU:

42. Amanda Mixon (Fall'09 – Spring'10)
43. Alex Beneke (Spring'09)
44. Alyssa Terry (summer'09)

45. Anell Pullen (Spring'09)

Mentored Undergraduate Senior Design Projects at WVU:

1. "Early Detection of Harmful Algal Blooms in Riverine Systems"; CBE Department 2024-2025. **Mentor & Client*
2. "Device for ultrasound guided scleral stiffening as a glaucoma treatment"; CBE Department 2023-2024. **Mentor*
3. "Next Generation Transport Vehicles of Non-coding RNA for Improved Therapeutic Outcomes"; CBE Department 2023-2024. **Mentor*
4. "Assess the long-term use of pulsed electromagnetic field (pEMF) wearable devices to improve neurocognitive motor performance"; CBE Department 2022-2023. **Mentor*
5. "Dielectric characterization of human red blood cells under microgravity"; CBE Department 2021-2022. **Mentor & Client*

Mentored Undergraduate Senior Design Projects at UI:

6. "NASA's Student Payload Opportunity with Citizen Science (SPOCS)" (Advised on BSL-2 bacteria culturing and safety protocol); UI CBE Department, 2020-2021
7. "Design for Accurate Measurement of Intestinal Transport" (Advised on COMSOL Modeling); UI CBE Department, 2019-2020
8. "Process Improvement of Industrial Heat Treatment of Ammunition Cases" (Advised on designing fixed bed reactor); UI CBE Department, 2019-2020
9. "Capacitive-Based Sensing in Microfluidic Devices"; UI CBE Department, 2018-2019
10. "Microfluidic UV-based 3D Printer" (Advised on COMSOL Modeling); UI CBE Department, 2018-2019
11. "Micro-CAP Sensors for Micro-Fluidic Devices (μ CapSense)"; UI ECE Department, 2016-2017

Graduate thesis external examiner:

1. Indian Institute of Technology, Kanpur, India
2. Indian Institute of Technology (BHU), Varanasi, India

8. Research Grants

Total Funding: \$1,633,913

Research supported by NIH – NIAID, NASA-EPSCOR, NIH WV-INBRE, NSF, American Cancer Society (ACS), Office of Undergraduate Research (OUR) at UI, INBRE, start-up, and SEED grants at WVU and UI.

Current Funded Grants: Total: \$1,236,705

- "Open Education Resource Grant Rd 7," **PI: Soumya K. Srivastava**; WV Higher Education Policy Commission; Mar 2024 – Dec 2025; \$2.5K
- "Finding NEMO's Switchable MRI Signal Using Microfluidic Tumor Models," **Co-I: Soumya K. Srivastava**, **PI: Margaret Bennewitz**; NIH NCI; Jul 2023 – Jun 2026; \$444,603 (My share: \$32,207)

- “Thriving Women Program,” **PI: Soumya K. Srivastava**; Statler College of Engineering, WVU; Jun 2023 – Dec 2024; \$1K
- “Open Education Resource Grant Rd 6,” **PI: Soumya K. Srivastava**; WV Higher Education Policy Commission; Mar 2023 – Dec 2024; \$1K
- “SCH: Machine LEarning & Microfluidics for Multimodal Sensing of Tick-borne Diseases (MEDICO),” **PI: Soumya K. Srivastava**, Co-I: Shira Broschat, Suat Ay, Kelly Brayton, Troy Bankhead; NIH NIAID; Sep 2022 – Aug 2026; \$1.2M

Completed Grants: Total: \$389,208

- “Dielectric characterization and early detection of infiltrating ductal adenocarcinoma from peripheral blood,” **PI: Soumya K. Srivastava**, Co-I: Timothy Eubank; WV IDeA Network of Biomedical Research Excellence; Nov 2022 – Jul 2024; Awarded amount: \$91,200
- “Developing a point-of-care diagnostic tool for tick infections caused by *Rickettsia*,” **PI: Soumya K. Srivastava**, Co-I: Timothy Driscoll, Research & Scholarship Grant, WVU; Jul 2022 – Jun 2023; \$18,000
- “Dielectric characterization of human red blood cells under microgravity,” **PI: Soumya K. Srivastava**, WV NASA EPSCoR; May 2022 – May 2023; \$20,008
- “Rapid Screening and Identification of Organisms which Hyper-Accumulate Metals,” **PI: Soumya K. Srivastava**, Co-PI: James Moberly; NSF; September 2015-August 2019; \$200,000
- NSF-REU Supplement, **PI: Soumya K. Srivastava**; NSF; Apr 2016; \$12,000
- “Conference Support for the 2017 American Electrophoresis Society Annual Meeting,” **PI: Soumya K. Srivastava**; NSF; Oct 2017 - Mar 2018; \$6,000
- “Microfluidic detection tool via dielectrophoresis for bovine Babesiosis,” **PI: Soumya K. Srivastava**; SEED Grant- University of Idaho; Jul 2014- Aug 2015; \$12,000
- “An early screening tool for breast cancer via dielectrophoresis from PBMCs,” **PI: Soumya K. Srivastava**; American Cancer Society- Institutional Research Grant; Jan 2011- Dec 2013; \$ 30,000

Pending Grants:

- “Collaborative Research: New to IUSE: EDU DCL: Hands-on Microfluidic Modules (HOM²s) for Enhancing Learning in Chemical, Biomedical, and Mechanical Engineering Courses,” **PI: Soumya K. Srivastava**; Co-PI: Bernard Van Wie, Prashanta Dutta, David Thiessen; National Science Foundation; Jan 2025- Jan 2028; \$ 750K (WVU Share: \$370,006)
- “REU Site: Rural Appalachia REsearch in bioSensing Technology (RAREST),” **PI: Soumya K. Srivastava**; Co-PI: Srinivas Palanki; National Science Foundation; Jan 2025- Dec 2027; \$ 418,633

Mentored (Undergraduate Student-Led) Grants at University of Idaho: Total: \$8000

- Electrophysiological characterization of mesenchymal stem cells via dielectrophoresis; **PI: Sierra Knowles**; Jan – May 2020; \$1,000
- Effect of particles shape and size on dielectrophoretic crossover frequency; **PI: Kendall Reeder**; Jan – May 2020; \$1,000
- Developing a microfluidic diagnostic platform for tick-borne infections by dielectrophoretic trapping; **PI: Sahara Waymire**; Jan – May 2020; \$1,000
- Developing microfluidic platform for electrokinetics characterization: *C. Necator*, *Borrelia burgdorferi*, and

stem cells; PI: Courtney Molvig; Aug 2019 – May 2020; \$1,000

- Frequency response sweep to find dielectric properties; PI: Archana Dahal; Aug 2018 – May 2019; \$1,000
- Frequency response sweep to find dielectric properties; PI: Abigeal Odubiyi; Aug 2017 – May 2018; \$1,000
- Breast cancer cell sorting via dielectrophoresis; PI: Trang Vu; INBRE Fellow; May 2016 – Aug 2016; \$1,000
- Frequency response sweep to find dielectric properties; PI: Brady Rinaldi; Jan – Jun 2016; \$1,000

9. Publications and Presentations

Summary: 2 Book Chapters, 27 journal publications (including 1 under review), 7 peer-reviewed conference proceedings, 100 conference presentations, and 28 invited seminars

Publication Record: Google Scholar Lifetime citation counts – 1277; h-index – 15; i10 – index: 18
<https://scholar.google.com/citations?hl=en&user=aqJC1qcAAAAJ>

9.1 Book Chapters

1. **Srivastava S. K.#**, Giduthuri A. T.; “Chapter: Microfluidic-chip technology for disease diagnostic applications via dielectrophoresis” in “Nanosensors for Futuristic Smart and Intelligent Healthcare System,” CRC Press **2022**, p.318. **Invited*
2. Adekanmbi E. O., **Srivastava S. K.#**; “Chapter: Applications of electrokinetics and dielectrophoresis on designing chip-based disease diagnostic platforms” in “Bio-inspired Technology,” *IntechOpen*, London, UK **2019**; DOI: 10.5772/intechopen.82637. **Invited*

9.2 Journal Publications

(Dotted Underlined – Undergraduate Authors; Underlined – Graduate Authors; italicized – high school Authors; # Corresponding Author)

1. Oladokun R., **Srivastava S.K.#**, Schiele N. R., Pei M., “Modeling and simulation of electrokinetic sorting of tenogenically differentiating mesenchymal stem cells for high throughput,” *Physics of Fluids*, **2024** (Under Review). **IF = 4.1. Quartile 1*
2. Oladokun R., Smith C., Eubank T., **Srivastava S.K.#**, “Dielectric Signatures of Late Carcinoma Immune Cells using MMTV-PyMT Mammary Carcinoma Models,” *ACS Omega*, **2024** (Accepted Aug 2024). **IF = 4.0. Quartile 1*
3. Farhang-Doost N., **Srivastava S. K.#**, “A Comprehensive Review of Organ-on-a-Chip Technology and Its Applications,” *Biosensors*, **2024**, 14(5), 225. **IF = 4.9. Quartile 1*
4. Oladokun R., Adekanmbi E. O., An V., Gangavaram I., **Srivastava S. K.#**, “Dielectrophoretic characterization of erythrocytes using point-and-planar microdevice: Effects of metabolic stress and storage age,” *Scientific Reports*, **2023**, 13 (1), 17281. **IF = 4.996. Quartile 1*
5. Oladokun R., Adekanmbi E., Ueti M., **Srivastava S. K.#**, “Dielectric characterization of *Babesia bovis* using the dielectrophoretic crossover frequency,” *Electrophoresis*, **2023**, 44, p988-1001. ***Invited article for a special issue on Dielectrophoresis 2023. *IF = 3.0.*
6. Hu W., Wu B., **Srivastava S. K.**, and Ay S. U.#, “Comparative Study and Simulation of Capacitive Sensors in Microfluidic Channels for Sensitive Red Blood Cell Detection,” *Micromachines*, **2022**, 13(10), p. 1654. **IF = 3.0. Quartile 2*

7. Giduthuri A. T., Theodossiou S., Schiele N., **Srivastava S. K.#**; "Dielectrophoretic characterization of tenogenically differentiating mesenchymal stem cells," *Biosensors*, **2021**, 11(2), 50. *IF = 4.9. *Quartile 1*
8. Giduthuri A. T., Adekanmbi E. O., **Srivastava S. K.#**, Moberly J. G.; "Dielectrophoretic ultrahigh frequency characterization and *in-silico* sorting on uptake of rare earth elements by *Cupriavidus necator*," *Electrophoresis*, **2021**, 42(5), 656-666. *IF = 3.0
9. Giduthuri A. T., Theodossiou S., Schiele N., **Srivastava S. K.#**; "Dielectrophoresis as a tool for electrophysiological characterization of stem cells," *Biophysics Reviews*, **2020**, 1(1), p011304. *IF = 2.9
10. Adekanmbi E. O., Carv B., Giduthuri A. T., Counts J., Moberly J. G., **Srivastava S. K.#**; "Application of dielectrophoresis towards characterization of rare-earth elements biosorption by *Cupriavidus necator*," *Analytica Chimica Acta*, **2020**, 1129, p150-157. *IF = 5.7 *Quartile 1*
11. Tarar A. A., Mohammad U., **Srivastava S. K.#**; "Wearable Skin Sensors and Their Challenges: A Review of Transdermal, Optical, and Mechanical Sensors," *Biosensors*, **2020**, 10(6), 56. *IF = 4.9. *Quartile 1*
12. Adekanmbi E. O., Giduthuri A. T., **Srivastava S. K.#**; "Dielectric characterization and separation optimization of infiltrating ductal adenocarcinoma via insulator-dielectrophoresis," *Micromachines*, **2020**, 11(4), 340. *IF = 3.0 *Quartile 2*
13. Adekanmbi E. O., **Srivastava S. K.#**; "Dielectric characterization of bioparticles via electrokinetics: The past, present, and the future," *Applied Physics Reviews*, **2019**, 6(4), 041313. *IF = 16.5. *Quartile 1*
14. Adekanmbi E. O., Giduthuri A. T., Waymire S., **Srivastava S. K.#**; "Utilization of dielectrophoresis for the quantification of rare earth elements adsorbed on *Cupriavidus necator*," *Journal of ACS Sustainable Chemistry & Engineering*, **2019**, 8(3), 1353-61. *IF = 7.1. *Quartile 1*
15. Adekanmbi E. O., Dustin J., **Srivastava S. K.#**; "Electro-osmotic surface effects generation in an electrokinetic-based transport device: A comparison of RF and MW plasma generating sources," *Electrophoresis* **2019**, 40(11), 1573-1579; Doi: 10.1002/elps.201800464. *IF=3.0
16. Chiok K. L., Paul N. C., Adekanmbi E. O., **Srivastava S. K.**, Shah D. H.#; "Dimethyl adenosine transferase (KsgA) contributes to cell-envelope fitness in *Salmonella* Enteritidis," *Microbiological Research* **2018**, 216, 108-119. *IF=6.1 *Quartile 1*
17. Adekanmbi E. O., Ueti M., Rinaldi B., Suarez C. E., **Srivastava S. K.#**; "Insulator-based dielectrophoretic diagnostic tool for Babesiosis," *Biomicrofluidics* **2016**, 10(3), 033108. *IF=2.6. *Quartile 2*
18. Adekanmbi E. O., **Srivastava S. K.#**; "Dielectrophoretic applications for disease diagnostics using lab-on-a-chip platform," *Lab Chip* **2016**, 16(12), 2148-2167. *IF=6.1. *Quartile 2*
19. **Srivastava S. K.#**; "Recent trends in dielectrophoretic applications towards medical diagnostics," *Invited Editorial to Biosensors & Bioelectronics* **2015**, 6(2).
20. Jubery T., **Srivastava S. K.**, Dutta P.#; "Dielectrophoretic Separation of Bioparticles in Microdevices: A Review," *Invited review article to Electrophoresis* **2014**, 35, 691-713. *IF=3.0
21. **Srivastava S. K.#**, Srivastava A. K., Adesope O., Minerick A. R., Schulz N. N.; "Analyzing self-reported challenges and preferences for enhancing recruitment of women graduate engineering students," *Journal of Women and Minorities in Science and Engineering* **2013**, 19(3), 185-208. *IF=1.4
22. Ivory C. F., **Srivastava S. K.#**; "Direct current dielectrophoretic simulation of proteins using an array of circular insulating posts," *Invited article for a special issue on Dielectrophoresis to Electrophoresis* **2011**, 32 (17), 2323-2330. *IF=3.0
23. **Srivastava S. K.**, Artemiou A., Minerick A. R.#; "Direct current insulator-based dielectrophoretic characterization of erythrocytes: ABO-Rh human blood typing," *Invited article for a special issue on Dielectrophoresis to Electrophoresis* **2011**, 32, 2530-2540. *IF=3.0

24. **Srivastava S. K.**, Baylon-Cardiel J. L., Lapizco-Encinas B. H., Minerick A. R.[#]; "A continuous DC-insulator dielectrophoretic sorter of microparticles," *Journal of Chromatography A* **2011**, 1218(13), 1780-1789, doi: 10.1016/j.chroma.2011.01.082. *IF=3.8
25. **Srivastava S. K.**, Gencoglu A., Minerick A. R.[#]; "DC Dielectrophoretic Applications in Microdevice Technology: A Review," *Invited review article to Analytical and Bioanalytical Chemistry* **2011**, 399 (1), 301-321. ***listed as no. 5 among the top 10 most-cited articles published in 2011 in *Analytical and Bioanalytical Chemistry*. *IF=3.8
26. **Srivastava S. K.**[#], Srivastava A. K., Minerick A. R., Schulz N. N.; "Recruitment and Retention of International Graduate Students in U.S. Universities," *International Journal of Engineering Education* **2010**, 26 (6), 1561-1574. *IF=0.7
27. **Srivastava S. K.**, Daggolu P. R., Burgess S. C., Minerick A. R.[#]; "Dielectrophoretic characterization of erythrocytes: Positive ABO blood types," *Electrophoresis* **2008**, 29, 5033-5046. *Won outstanding graduate paper award. *IF=3.0

9.3 Conference Proceedings

1. Srivastava A. K., **Srivastava S. K.**[#], Minerick A. R., Schulz N. N.; "Survey-based comparison of perceptions among alumni and current engineering graduate students at US universities," **2011 ASEE National Conference Proceedings**, Vancouver, BC, Jun 26-29.
2. Walters K. B.[#], Minerick A. R., **Srivastava S. K.**, Hall J. I., Parker A., Thomas H., Leonard K. M.; "Instructor and Student Perspectives on a Graduate Professional Development Course: Career Issues for Women in Engineering," **2010 ASEE National Conference Proceedings**, Louisville, KY, Jun 20-23.
3. **Srivastava S. K.**[#], Srivastava A. K., Minerick A. R., Schulz N. N.; "Preferences and challenges for female graduate engineering students: A survey-based study," **2010 ASEE National Conference Proceedings**, Louisville, KY, Jun 20-23.
4. **Srivastava S. K.**[#], Srivastava A. K., Minerick A. R., Schulz N. N.; "International Students' Challenges- A survey-based study," **2009 ASEE Annual Conference Proceedings**, Austin, TX, Jun 14-17.
5. **Srivastava S. K.**[#], Srivastava A. K., Minerick A. R., Schulz N. N.; "Challenges for International Students in a Globally Changing Environment," **2008 ASEE Annual Conference Proceedings**, Pittsburgh, PA, Jun 22-25.
6. **Keshavamurthy S. S.**, Leonard K. M., Burgess S. C., Minerick A. R.[#]; "Direct current dielectrophoretic characterization of erythrocytes: Positive ABO blood types," *NSTI-nanotech* **2008**; 2, 401-404, Jun 1-5.
7. **Srivastava S. K.**, Pullen S. A., Minerick A. R.[#]; "Insulator-based Dielectrophoretic Lab-on-a-Chip System for Erythrocytes," *AICHE Annual Conference Proceedings* **2008**, Philadelphia, PA, Nov 16-21.

9.4 Conference Abstracts/ Presentations

(Dotted Underlined – Undergraduate Authors; Underlined – Graduate Authors; # Presenting author)

1. Oladokun R.[#], Smith C., Eubank T., and **Srivastava, S. K.**; "Dielectrophoretic characterization and COMSOL computational analysis of late carcinoma using peripheral blood mononuclear cells from mammary carcinoma models" Biological Chemistry Division, American Chemical Society (ACS) National Meeting, August 18-22, 2024 (Poster).
2. Oladokun R.[#], Smith C., Eubank T., and **Srivastava, S. K.**; "Dielectrophoretic Analysis of Breast Cancer Immune Cells Using PBMCs from MMTV-PyMT Models," 22nd Annual WV-INBRE Summer Research Symposium, July 30, 2024 (Poster).
3. Bostic A.[#], Yaram S. D. R., **Srivastava, S. K.**; "Dielectric Characterization of Red Blood Cells Exposed to Simulated Microgravity," 17th Annual Summer Undergraduate Research Symposium, West Virginia University, Morgantown WV, July 25, 2024. (Poster).

4. Wagner K.[#], Farhang Doost N., **Srivastava S. K.**; "Separation of Healthy Vero cells from Rickettsia montanensis-Infected Cells Using COMSOL Multiphysics," 17th Annual Summer Undergrad Research Symposium, Morgantown, WV, July 25, 2024 (Poster).
5. Yaram S. D. R.[#], and **Srivastava S. K.**; "Biophysical characterization of HL-60 infected with Anaplasma spp." Dielectrophoresis Biennial Meeting, Dublin, Ireland, UK, July 3, 2024 (Oral).
6. Oladokun R.[#], Smith C., Eubank T., and **Srivastava, S. K.**; "Dielectrophoretic Characterization and COMSOL Analysis of Late Carcinoma Using PBMCs from MMTV-PyMT (PyMT) and MMTV-WT (WT) Mammary Carcinoma Models," Dielectrophoresis Biennial Meeting, Dublin, Ireland, UK, July 3, 2024 (Oral).
7. Bostic A.[#], Yaram S. D. R., **Srivastava, S. K.**; "Dielectric Characterization of HL-60 Cells Under Microgravity," 9th National IDeA Symposium of Biomedical Research Excellence (NISBRE), Washington Hilton, Washington D.C., June 16-19, 2024. (Oral and Poster). *Merit Award
8. Farhang Doost N.[#], Niepa T. H. R., **Srivastava S. K.**; "Investigating the bioelectric signatures of *Candida auris*," 9th National IDeA Symposium of Biomedical Research Excellence (NISBRE), Washington DC, June 16-19, 2024. (Poster).
9. Yaram, S. D. R.[#], **Srivastava, S. K.**; "Biophysical characterization of HL-60 cells infected with Anaplasma spp.," 9th National IDeA Symposium of Biomedical Research Excellence (NISBRE), Washington DC, June 16-19, 2024 (Poster).
10. Oladokun R.[#], Smith C., Eubank T., and **Srivastava, S. K.**; "Dielectrophoretic characterization and COMSOL computational analysis of late carcinoma using peripheral blood mononuclear cells from mammary carcinoma models," Cancer and Disease Risk Session, NISBRE Conference, June 18, 2024 (Flash Talk).
11. Yaram, S. D. R.[#], **Srivastava, S. K.**; "Dielectric characterization of erythrocytes under simulated microgravity," SSPI Mid-Atlantic Chapter Annual Meeting, McLean, VA, April 27, 2024 (Oral).
12. Oladokun R.[#], Pei M., and **Srivastava S. K.**; "COMSOL Multiphysics computational studies of dielectrophoresis-based characterization and separation of tenogenically differentiating mesenchymal stem cells," The 3rd International Electronic Conference on Biomolecules, Biomaterials Design and Characterization, Online, April 23-25, 2024 (Oral).
13. Shevtsova A.[#], Farhang Doost N., **Srivastava S. K.**; "Determining the Bioelectric Characteristics of *Candida auris* Cells," 8th Annual Spring Undergraduate Research Symposium, Morgantown, WV, April 20, 2024 (Poster).
14. Smith C.[#], Oladokun R., and **Srivastava S. K.**; "Development of a Novel Microfluidic Device for the Early Detection of Breast Cancer," 8th Annual Spring Undergraduate Research Symposium at West Virginia University, Morgantown, WV, April 20, 2024 (Oral). *Won First Place
15. Wagner K.[#], Farhang Doost N., **Srivastava S. K.**; "Exploring Bioelectric Features of Vero cells infected with R. montanensis," 8th Annual Spring Undergrad Research Symposium, Morgantown, WV; April 20, 2024 (Poster).
16. Farhang Doost N.[#], Niepa T. H. R., **Srivastava S. K.**; "Exploring *Candida auris* Dielectric Profile," 11th Annual BioE day at University of Pittsburgh Department of Bioengineering, Pittsburgh, PA, April 18, 2024 (Oral).
17. Smith C.[#], Oladokun R., Eubank T., and **Srivastava, S. K.**; " Modeling the detection of stage IV breast cancer using murine PBMC models" 11th annual BioE Day at the University of Pittsburgh Department of Bioengineering, Pittsburgh, PA, Apr 18, 2024 (Poster).
18. Yaram, S. D. R.[#], and **Srivastava, S. K.**; "Dielectric Characterization of various cells under simulated Microgravity," 11th annual BioE Day at University of Pittsburgh Department of Bioengineering, Pittsburgh, PA, April 18, 2024 (Poster).

19. Oladokun, R.[#], Ming Pei, and **Srivastava, S. K.**; "COMSOL Multiphysics computational studies of dielectrophoresis-based characterization and separation of tenogenically differentiating mesenchymal stem cells" 11th Annual BioE Day at University of Pittsburgh Department of Bioengineering, Pittsburgh, PA, Apr 18, 2024 (Poster).
20. Smith C.[#], Oladokun R., and **Srivastava S. K.**; "Modeling a Novel Detection Platform for Stage IV Breast Cancer using Murine PyMT+/- Models," National Conference on Undergraduate Research, Long Beach, CA, Apr 8-10, 2024 (Poster).
21. Oladokun R.[#], Smith C., Eubank T., and **Srivastava S. K.**; "Dielectrophoretic Characterization and Computational Analysis of Peripheral Blood Mononuclear Cells from MMTV-PyMT Mammary Carcinoma Models for Late Carcinoma Detection" The 98th annual West Virginia Academy of Science meeting, Glenville, WV, April 6, 2024 (Oral).
22. Oladokun R.[#], Pei M., and **Srivastava S. K.**; "Computational Studies Using COMSOL Multiphysics on Dielectrophoretic Characterization and Separation of Mesenchymal Stem Cells Undergoing Tenogenic Differentiation" The 98th Annual West Virginia Academy of Science meeting, Glenville, WV, April 6, 2024 (Poster). *Won 1st Prize
23. Oladokun, R.[#], Smith C., Eubank, T., and **Srivastava, S. K.**; "Dielectrophoresis-based breast cancer study: Characterization and COMSOL Analysis of Peripheral Blood Mononuclear cells from PyMT and WT Mouse Model," 2024 Statler College Student Research Symposium, Morgantown, WV, April 5, 2024 (Poster).
24. Farhang Doost N.[#], **Srivastava S. K.**; "Dielectric Characterization of Candida auris," 2024 Statler College Student Research Symposium, Morgantown, WV, April 5, 2024 (Poster).
25. Smith C.[#], Oladokun R., Eubank T., and **Srivastava S. K.**; "Dielectric Characterization of PBMCs from murine PyMT+/- models for breast cancer," 21st Annual Undergraduate Research Day at the Capitol, Charleston, WV, Feb 22, 2024 (Poster).
26. Wagner K.[#], Farhang Doost N., **Srivastava S. K.**; " Dielectric characterization of Vero cells infected with *Rickettsia montanensis*," 21st Annual Undergraduate Research Day at the Capitol, Charleston, WV, Feb 22, 2024 (Poster).
27. Smith C.[#], Oladokun R., and **Srivastava S. K.**; "Modeling a Novel Detection Device for Stage IV Breast Cancer using Mouse PyMT Models," KY-WV LSAMP Research Symposium, Huntington, WV, Feb 9-10, 2024 (Poster).
28. Yaram, S. D. R.[#], **Srivastava, S. K.**; "Analyzing the Dielectric Properties of Yeast Cells in a Microgravity Environment," 14th Annual PSRS Conference at Duquesne University, Pittsburgh, PA, Dec 2, 2023 (Oral).
29. Farhang Doost N.[#], Niepa, T., **Srivastava S. K.**; "*Candida auris* characterization by dielectrophoresis," 14th Annual PSRS Conference at Duquesne University, Pittsburgh, PA, Dec 2, 2023 (Oral).
30. Wagner K.[#], Farhang Doost N., **Srivastava S. K.**; "Effect of Dielectrophoresis on Healthy and Inoculated Vero Cells with *Rickettsia montanensis*"; WVU 6th Annual Fall Undergrad Research Symposium, Morgantown, WV; December 2, 2023 (Oral).
31. Oladokun R.[#], Smith C., Eubank T., and **Srivastava S. K.**; "Dielectrophoresis-Based Detection of Breast Cancer Using Peripheral Blood Mononuclear Cells in a Ductal Adenocarcinoma PyMT+/- Mouse Model on a Microfluidic Device," 2023 AIChE Annual Meeting at Hyatt Regency Orlando, Orlando, FL, Nov 5-10, 2023 (Oral).
32. Oladokun R.[#], Pei M., and **Srivastava S. K.**; "Dielectric Characterization of Differentiated Human Stem Cells Using Dielectrophoresis Technique," 2023 AIChE Annual Meeting at Hyatt Regency Orlando, Orlando, FL, Nov 5-10, 2023 (Oral).

33. Oladokun R.#, **Srivastava S. K.**; “Dielectric Characterization of *Babesia Bovis* Using the Crossover Frequency Technique on a Point and Planar Electrodes Microfluidic Device,” 2023 AIChE Annual Meeting at Hyatt Regency Orlando, Orlando, FL, Nov 5-10, 2023 (Poster).
34. Oladokun R.#, Smith C.#, Eubank T., **Srivastava S. K.**; “Dielectrophoresis-based Breast Cancer Study: Characterization and Separation of Peripheral Blood Mononuclear Cells from PyMT+ and WT Mouse Model,” 2023 AIChE Annual Meeting at Hyatt Regency Orlando, Orlando, FL, Nov 5-10, 2023 (Poster).
35. Farhang Doost N.#, Niepa T., **Srivastava S.K.**; “Candida Auris infection detection by dielectrophoresis,” 50th Annual Meeting of AES FACSS SciX at Nugget Casino Resort, Sparks, NV, USA, Oct 8-13, 2023 (Oral). **Won Best paper award (Blue Fingers Student Award)*
36. Farhang Doost N.#, **Srivastava S. K.**; “Dielectrophoresis as a detection tool for rickettsial diseases,” 50th Annual Meeting of AES FACSS SciX at Nugget Casino Resort, Sparks, NV, USA, Oct 8-13, 2023 (Poster).
37. Yaram S. D. R.#, and **Srivastava S. K.**; “Dielectric Characterization of Various Cells under Microgravity,” 50th Annual Meeting of AES FACSS SciX at Nugget Casino Resort, Sparks, NV, Oct 8-13, 2023 (Oral).
38. Oladokun R., Yaram S. D. R.#, Eubank T., and **Srivastava S. K.**; “Dielectric characterization of ductal adenocarcinoma using murine PyMT+/- model,” 50th Annual Meeting of AES FACSS SciX at Nugget Casino Resort, Sparks, NV, Oct 8-13, 2023 (Poster).
39. Smith C.#, Oladokun R., and **Srivastava S. K.**; “Separating PBMCs from PyMT+ and WT models using COMSOL Multiphysics for breast cancer study,” 16th Annual Summer Undergraduate Research Symposium at West Virginia University, Morgantown, WV, July 27th, 2023 (Poster). **Won Runner-up*
40. Smith C.#, Oladokun R., Eubank T., and **Srivastava S. K.**; “Dielectric Characterization of Breast Cancer Cells using Human PBMC,” 7th Annual Spring Undergraduate Research Symposium at West Virginia University, Morgantown, WV, April 23, 2023 (Poster).
41. Campbell C.#, Yaram S.D.R., and **Srivastava S. K.**; “Electrokinetic characterization of cell behavior under microgravity,” 7th Annual Spring Undergraduate Research Symposium at West Virginia University, Morgantown, WV, April 23, 2023 (Poster).
42. Oladokun R.#, Eubank T., **Srivastava S. K.**; “Analysis of dielectric characteristics of ductal adenocarcinoma in Murine PyMT+/- Breast cancer model using dielectrophoresis with point-and-planar electrodes,” 10th Annual BioE Day at University of Pittsburgh Department of Bioengineering, Pittsburgh, PA, April 6, 2023 (Poster).
43. Smith C.#, Oladokun R., Eubank T., and **Srivastava S. K.**; “Dielectric Characterization of Breast Cancer Cells using Human PBMC,” 10th Annual BioE Day at University of Pittsburgh Department of Bioengineering, Pittsburgh, PA, April 6, 2023 (Poster). **Won Best Runner-up*
44. Farhang Doost, N.#, Niepa, T.H.R., **Srivastava S. K.**; “Dielectrophoresis as a tool to detect *Candida auris* infection,” 10th Annual BioE Day at University of Pittsburgh Department of Bioengineering, Pittsburgh, PA, April 6, 2023 (Oral).
45. Yaram S. D. R., and **Srivastava S. K.**; “Human Red Blood Cells' Dielectric Characterization in Microgravity,” 10th Annual BioE Day at University of Pittsburgh Department of Bioengineering, Pittsburgh, PA, April 6, 2023 (Poster).
46. Oladokun, R.#, Eubank T., **Srivastava S. K.**; “Dielectric Characteristics of Ductal Adenocarcinoma in Murine PyMT+/- Breast Cancer Model using Point and Planar Electrodes,” 2nd Annual Graduate Research Symposium at West Virginia University, Morgantown, WV, March 24, 2023 (Poster).
47. Farhang Doost, N.#, **Srivastava S. K.**; “Dielectrophoresis as a tool to detect rickettsial diseases,” 2nd Annual Graduate Research Symposium at West Virginia University, Morgantown, WV, March 24, 2023 (Poster).

48. Yaram S. D. R., and **Srivastava S. K.**; "Human Red Blood Cells' Dielectric Characterization in Microgravity," 2nd Annual Graduate Research Symposium at West Virginia University, Morgantown, WV, March 24, 2023 (Poster).
49. Oladokun R.#, Eubank T., **Srivastava S. K.**; "Dielectric Characterization of Breast Cancer Cells Using Peripheral Blood Mononuclear Cells in a Ductal Adenocarcinoma PyMT Mouse Model," 13th Annual Pharmaceutical Sciences Research Symposium of American Association of Pharmaceutical Scientists (AAPS), Morgantown, WV, Nov 13, 2022 (Poster). **Won 1st Prize*
50. Oladokun R.#, Eubank T., **Srivastava S. K.**; "Dielectric Characterization of Ductal Adenocarcinoma Using Murine PyMT+/- Model," AES/SciX 2022 Annual Meeting, Covington, KY, Oct. 2-7, 2022 (Oral).
51. Oladokun R.#, **Srivastava S. K.**; "Dielectric characterization of *Babesia bovis* using the crossover frequency technique," AES/SciX 2022 Annual Meeting, Covington, KY, Oct. 2-7, 2022 (Poster).
52. Oladokun R.#, **Srivastava S. K.**, Eubank T.; "Characterization of Ductal Adenocarcinoma Cell Using Dielectrophoretic Crossover Frequency Technique," NOBCCChE 2022 Annual Meeting, Orlando, FL, Sep 26-29, 2022 (Poster).
53. Oladokun R.#, **Srivastava S. K.**, "Dielectric characterization of *Babesia bovis* using the crossover frequency technique," 1st Graduate Research Symposium, West Virginia University, Apr 12, 2022 (Poster)
54. Haleem A.#, Oladokun R., **Srivastava S. K.**; "Characterizing single cells using dielectrophoresis," 6th Annual Undergraduate Research Symposium, West Virginia University, Apr 9, 2022 (Poster)
55. Haleem A.#, **Srivastava S. K.**; "Electrokinetic device for early breast cancer detection from liquid biopsy," NCUR 2022 @Home, Apr 4-8, 2022 (Oral).
56. **Srivastava S. K.**; "Electrokinetic modeling and simulation of bioparticle separation," SIAM Conference on Mathematical Aspects of Materials Science (MS21), May 17-18, 2021, Virtual Symposium (Oral). **Invited Speaker*
57. Giduthuri A.T.#, Theodossiou S. K., Schiele N. R., **Srivastava S. K.**; "Electrophysiological characterization of murine mesenchymal stem cells," Department of Chemical and Materials Engineering, University of Idaho, Feb 2020, Moscow, ID (Oral).
58. Giduthuri A.T.#, Theodossiou S. K., Schiele N. R., **Srivastava S. K.**; "Electrophysiological characterization of mesenchymal stem cells using non-uniform electric field gradient," 3-Minute Thesis (3MT), University of Idaho, Feb 7, 2020, Moscow, ID (Oral).
59. Knowles S.#, Giduthuri A., **Srivastava S. K.**; "Electrophysiological characterization of Mesenchymal stem cells via Dielectrophoresis," Oregon Bioengineering Symposium, Corvallis, OR Nov 22, 2019 (Poster).
60. Reeder K.#, Giduthuri A., **Srivastava S. K.**; "Dielectrophoretic characterization of biosorbent in metal adsorbed state," Oregon Bioengineering Symposium, Corvallis, OR Nov 22, 2019 (Poster).
61. Giduthuri A.#, **Srivastava S. K.**; "Electrophysiology of Biosorbent: Cupriavidus Necator," Annual Meetings of AES Society @ SciX, Palm Springs, CA, Oct 13-18, 2019 (Oral).
62. Molvig C.#, Adekanmbi, E. O., Dahal A., **Srivastava S. K.**; "Characterizing Red Blood Cells: Stress and Aging Tests," AIChE-PNW Student Regional Conference, Moscow, ID, Apr 26-28, 2019 (Poster). **Won 1st prize*
63. Giduthuri A.#, **Srivastava S. K.**; "Dielectric characterization of *Cupriavidus necator* in its natural and metal-adsorbed states," University of Idaho, Annual Innovation Showcase, Moscow, ID, Apr 18, 2019 (Oral).

64. Waymire S. #, Adekanmbi E. O., **Srivastava S. K.**; "Quantification of rare earth elements (REEs) using crossover frequency measurement," University of Idaho, Annual Innovation Showcase, Moscow, ID, Apr 2019 (Oral).
65. Giduthuri A. #, **Srivastava S. K.**; "Utilization of Second Crossover frequency as a correlation factor for uptake of light rare earth elements (REEs) by *Cupriavidus necator*," 35th International Symposium on Microscale Separations and Bioanalysis, Corvallis, OR Mar 25-28, 2019 (Oral).
66. Dahal A. #, Adekanmbi E. O., **Srivastava S. K.**; "Developing a lab-on-a-chip platform for detecting Lyme disease and Babesiosis via dielectrophoresis," 35th International Symposium on Microscale Separations and Bioanalysis, Corvallis, OR Mar 2019 (Poster).
67. Adekanmbi E. O. #, **Srivastava S. K.**; "Dielectrophoresis: a potent technique for the isolation of *Borrelia* and *Babesia* cells," State-wide 3MT competition, Boise, ID, Feb 2019 (Oral). **Won 1st prize*
68. Adekanmbi E. O. #, **Srivastava S. K.**; "Lyme disease and piroplasmiasis: The pernicious diseases that can be detected early and masked via electro biophysical phenomena," University of Idaho Innovation Showcase, Moscow, ID, Apr 2018 (Oral). **Won 1st prize*
69. Adekanmbi E. O. #, **Srivastava S. K.**; "Characterizing microwave plasma generator using suspended polystyrene microbeads," The National Society of Black Engineers 44th Annual Convention, Pittsburgh, PA, Mar 21-25, 2018 (Oral).
70. Adekanmbi E. O. #, **Srivastava S. K.**; "Microscale Extraction of Rare Earth Elements Using Biosorption and Dielectrophoresis," AIChE-AES Annual Meeting, Minneapolis, MN, Oct 29-Nov 3, 2017 (Oral).
71. Adekanmbi E. O. #, **Srivastava S. K.**; "Toward the design of a multi-module fluidic device for the simultaneous detection of Lyme disease and Babesiosis," AIChE-AES Annual Meeting, Minneapolis, MN, Oct 2017 (Poster).
72. Adekanmbi E. O. #, **Srivastava S. K.**; "Extension of biology to the electronic dimension of diseased cells for micro manipulation," 43rd Annual Conference of NOBCCChE, Raleigh, NC, Nov 8-11, 2016 (Oral).
73. Adekanmbi E. O. #, **Srivastava S. K.**; "Characterization of breast cancer infected peripheral blood mononuclear cells using AC dielectrophoresis," Region VI Conference of NSBE, Denver, CO, Nov 4-6, 2016 (Oral). **Won 1st prize*
74. Adekanmbi E. O. #, **Srivastava S. K.**; "Utilization of Direct Current Insulator-Based Dielectrophoresis in the Separation of Breast Cancer Infected Peripheral Blood Mononuclear Cells from their Mixture with Healthy Cells," AIChE-AES Annual Meeting, San Francisco, CA, Nov 14-16, 2016 (Oral).
75. Adekanmbi E. O. #, **Srivastava S. K.**; "Cellular manipulation for point-of-care diagnostics," 15th Annual Idaho INBRE Statewide Research Conference, Moscow, ID, Aug 2016 (Oral).
76. Adekanmbi E. O. #, **Srivastava S. K.**; "Determination of the electrophysiological properties of infected erythrocytes using pin-type electrode microwell," Dielectrophoresis 2016, MIT, MA July 2016 (Oral).
77. Adekanmbi E. O. #, **Srivastava S. K.**; "Erythrocytic clarification for early disease detection," Annual Innovation Showcase, University of Idaho, Apr 2016 (Oral). **Won first place*
78. Rinaldi B. #, **Srivastava S. K.**; "Frequency response sweep to obtain dielectric properties of infected cells," Undergraduate Symposium, University of Idaho, April 2016 (Poster).
79. Adekanmbi E. O. #, **Srivastava S. K.**; "A new strategy for preventing blood-bank contaminations," NSBE National Convention, Boston, MA, Mar 2016 (Oral).
80. Adekanmbi E. O. #, **Srivastava S. K.**; "Dielectrophoretic separation of Babesia-infected erythrocytes," AIChE-AES Annual Conference, Salt Lake City, UT, Nov 2015 (Oral).
81. Adekanmbi E. O. #, **Srivastava S. K.**; "Novel Solution to Transfusion-Transmitted Diseases: Case study-Babesiosis," NSBE-Regional Conference, Riverside, CA, Nov 2015 (Oral).

82. Nahavandi M., Adekanmbi E. O., Srivastava S. K.; "Dielectrophoretic Separation of Healthy and Infected Red Blood Cells through Electric Driven Flow: An Electrokinetic Modeling" AIChE-AES Annual Conference, Salt Lake City, UT, Nov 2015 (Poster). **Won honorable mention*
83. Dustin J., Srivastava S. K.; "Low-cost microwave plasma generation for the irreversible sealing of PDMS microfluidic devices," Annual Innovation Showcase, University of Idaho, Apr 2015 (Poster). **Won third place*
84. Adekanmbi E. O., Srivastava S. K.; "Saving the blood bank: A quick detection technique for Babesiosis," Annual Innovation Showcase, University of Idaho, Apr 2015 (Oral). **Won second place.*
85. Dustin J., Srivastava S. K.; "Low-cost microwave plasma generation for the irreversible sealing of PDMS microfluidic devices," AIChE Annual Conference, Atlanta, GA, Nov 2014 (Poster).
86. Flynn M., Kumar V., Srivastava S. K.; "Dielectrophoretic modeling to detect breast cancer from peripheral blood," Annual Innovation Showcase, University of Idaho, Moscow, ID, Apr 2014 (Oral).
87. Srivastava A. K., Srivastava S. K., Minerick A. R., Schulz N. N.; "Survey based comparison of perceptions among current international engineering graduate students and alumni at US universities," ASEE Annual Conference, Vancouver, BC, Jun 2011 (Oral).
88. Srivastava S. K., Minerick A. R., Lapizco-Encinas B.H.; "Insulator based dielectrophoresis: dependence of erythrocyte ABO antigens," AIChE Annual Conference, Salt Lake City, UT, Nov 2010 (Oral).
89. Srivastava S. K., Srivastava A. K., Minerick A. R., Schulz N. N.; "Preferences and Challenges for Female Graduate Engineering Students: A Survey based Study," ASEE Annual Conference, Louisville, KY, Jun 2010 (Oral).
90. Srivastava S. K., Baylon-Cardiel J. L., Lapizco-Encinas B. H., Minerick A. R.; "Insulator-based dielectrophoretic characterization of polystyrene particles," AIChE Annual Conference, Nashville, TN, Nov 2009 (Oral). * *Won Travel Grant for Graduate Students award (TAGGS)*
91. Mixon A. L., Srivastava S. K., Minerick A. R.; "Quantifying Erythrocytes by Solution Resistance Measurement," AIChE Annual Conference, Nashville, TN, Nov 2009 (Poster).
92. Srivastava S. K., Srivastava A. K., Minerick A. R., Schulz N. N.; "International Graduate Students' Challenges: A Survey-based Study," ASEE Annual Conference, Austin, TX, Jun 2009 (Oral).
93. Srivastava S. K., Minerick A. R.; "DC dielectrophoretic characterization of polystyrene particles," Society of Plastic Engineers, Mississippi State University, MS, March 2009 (Poster).
94. Invited Presenter and Panelist- Srivastava S. K., Srivastava A. K., Minerick A. R., Schulz N. N.; "International students' challenges in U.S. graduate schools," MAIE Annual Conference, Mississippi State University, MS, Feb 2009 (Oral).
95. Srivastava S. K., Pullen S. A., Minerick A. R.; "Insulator-based Dielectrophoretic Lab-on-a-Chip System for Erythrocytes," AIChE Annual Conference, Philadelphia, PA, Nov 2008 (Oral). * *Won GE travel grant*
96. Srivastava S. K., Leonard K. M., Burgess S. C., Minerick A. R.; "Direct Current Dielectrophoretic Characterization of Erythrocytes: Positive ABO Blood Types," NSTI-Nanotech Conference, Boston, MA, Jun 2008 (Poster).
97. Srivastava S. K., Srivastava A. K., Minerick A. R., Schulz N. N.; "Challenges for International Students in a Globally Changing Environment," ASEE Annual Conference, Pittsburgh, PA, Jun 2008 (Oral).
98. Srivastava S. K., Minerick A. R.; "Design of Lab-on-a-Chip System for characterization of Particles and Erythrocytes using DC electric field," Society of Plastic Engineers, Mississippi State University, MS, April 2008 (Poster).

99. **Srivastava S. K.**[#], Minerick A. R.; "DC- Dielectrophoretic Characterization of Particles and Erythrocytes in a Lab-on-a-Chip System," Graduate Student Association Symposia, Mississippi State, MS, April 2008 (Oral).
100. **Srivastava S. K.**[#], Daggolu, P. R., Burgess, S. C., Minerick, A. R.; "Spatial Quantification of ABO Blood Antigen Contributions to Field Modulated Dielectrophoresis," American Institute of Chemical Engineers Annual Meeting, Salt Lake City, UT, Nov 2007 (Oral).

9.5 Invited Seminars / Talks

1. Srivastava S. K.; "Diagnostic Microfluidic Platforms *Via* Dielectrophoresis," ChE 102 Class, West Virginia University, WV, Apr 16, 2024 (04/24)
2. Oladokun, R., and Srivastava, S. K.; "Utilizing Dielectrophoresis for Disease Detection, Cell Analysis, and Sorting: An Electric Field-Driven Microfluidic Device," 2024 WVU Faculty Justice Network, West Virginia University, Morgantown, WV, Feb 26, 2024 (02/24)
3. Srivastava S. K.; "Dielectrophoretic lab-on-a-chip platform for non-invasive disease diagnostics," Emerging Engineers and Scientists Seminar Series, Microsystems and Nanosystems Laboratory at The Ohio State University, OH (04/23)
4. Srivastava S. K.; "Microscale Bioseparation of Blood Cells Via Dielectrophoresis," ChE 312 Class, West Virginia University, WV, Apr 14, 2022 (04/22)
5. Srivastava S. K.; "Dielectric characterization and detection on a microchip," BMEG 501 class, West Virginia University, WV (11/21)
6. Srivastava S. K.; "Electrokinetic characterization and detection of vector-borne diseases," Microbiology Seminar Series, West Virginia University, WV (10/21)
7. Srivastava S. K.; "Designing lab-on-a-chip platform for applications in health," West Virginia University Cancer Cell Biology, WV (09/21)
8. Srivastava S. K.; "Electrokinetic lab-on-a-chip platform for applications in disease diagnostics and recovery of rare earth elements," Michigan Technological University, MI (03/21)
9. Srivastava S. K.; "Electrophysiological characterization and detection of diseases by dielectrophoresis," Oregon Health and Sciences University, OR (12/20)
10. Srivastava S. K.; Invited Panelist for Women in Engineering (WIE) Day, Society of Women in Engineering (SWE), University of Idaho, Moscow, ID (10/19)
11. Srivastava S. K.; "Motivating women in STEM," Women in Idaho Science and Engineering (WIISE), University of Idaho, Moscow, ID (09/19)
12. Adekanmbi E. O., Srivastava S. K.; "Detection of tick-borne diseases using non-uniform electric field," Short and Sweet Research Speaker Series (SAS Talks), University of Idaho, Moscow, ID (05/19)
13. Srivastava S. K.; "Designing microfluidic platforms via electrokinetics for medical diagnostics and environmental biotechnology applications," Ralph E. Martin Department of Chemical Engineering, University of Arkansas, Fayetteville, AR (05/19)
14. Srivastava S. K.; "Dielectrophoretic characterization of cells to achieve early disease detection," Department of Biological Engineering, University of Idaho, Moscow, ID (03/19)
15. Adekanmbi E. O., Srivastava S. K.; "Dielectrophoresis and its application," Corning Inc., NY (08/17).
16. Srivastava S. K.; "Developing low-cost diagnostic and analyses tools using electrokinetics," Environmental Molecular Sciences Laboratory, Pacific Northwest National Lab (PNNL), Richland, WA (02/17)

17. Srivastava S. K.; "On-chip disease detection through electrokinetics," Department of Chemical Engineering, Indian Institute of Technology-Kanpur, India (12/15)
18. Srivastava S. K.; "On-chip disease detection through electrokinetics," Department of Chemical & Materials Engineering, University of Idaho, Moscow, ID (9/15)
19. Srivastava S. K.; "On-chip disease detection via electrokinetics," Center for emerging and re-emerging infectious diseases, University of Washington School of Medicine, Seattle, WA (08/15)
20. Srivastava S. K.; High school & Middle school students outreach hosted as a part of the Engineering Design EXPO showcase at the University of Idaho, Moscow, ID (5/15)
21. Srivastava S. K.; "Lab record maintenance and drafting an abstract," Graduate Seminar, Department of Chemical & Materials Engineering, University of Idaho, Moscow, ID (08/14)
22. Srivastava S. K.; "Chemical Engineering Profession: What you can do & What I did," Freshmen & Senior class seminar, Department of Chemical & Materials Engineering, University of Idaho, Moscow, ID (12/13)
23. Srivastava S. K.; "Designing micro- nano-devices for dielectrophoretic separation of bio-particles," Department of Chemical and Materials Engineering, University of Idaho, Moscow, ID (05/13)
24. Srivastava S. K.; "Human ABO-Rh blood typing on a lab-chip microdevice via dielectrophoresis," Department of Chemical Engineering, Indian Institute of Technology-Kanpur, India (05/11)
25. Srivastava S. K.; High school outreach "Dream your future: Be an Engineer and impact society," presented as a part of the Imagine U at WSU at Bridgeport High School, Bridgeport, WA (11/10)
26. Srivastava S. K.; "Insulator based dc-dielectrophoretic blood typing: human abo system," Cornelius Ivory's Group, Voiland School of Chemical Engineering, WSU (09/10)
27. Srivastava S. K.; Invited Panelist, Mississippi Association of International Educators (MAIE) conference, Mississippi State University (02/09)
28. Srivastava S. K.; Conducted AutoCAD workshop for M.D.-ERL, Mississippi State University (02/08)

10. Professional Development

- NRT Summer Workshop School on AI & Data Science in Smart Health (07/23)
- Cybersecurity Awareness Training, WVU (03/23)
- NSF-NIH Smart Health Workshop (10/22)
- "Leadership Workshop for Rising Star Women," hosted by AIChE (03/21)
- NIH Grant writing workshop by NIH-funded GUMSHOE under the National Research Mentoring Network (NRMN) (04/16; 01/19) (**All expenses covered by organizers*)
- "CBET CAREER Grant writing webinar," NSF – CBET (04/16)
- Frontiers of Engineering Education Symposium organized by NAE (10/15) (**All expenses covered by organizers*)
- National Effective Teaching Institute (NETI) workshop by Felder and Brent (06/15)
- WEPAN Annual Meeting, Denver, CO (06/15) (**All expenses covered by organizers*)
- "Active learning by Felder and Brent" hosted by WEPAN- EIT (04/15)
- Promotion, tenure, 3rd-year review workshop, University of Idaho, Moscow, ID (3/15)
- "CAREER proposal writing webinar," CBET – NSF (10/14)
- "Writing winning grants seminar" by Dr. Stephen Russell (10/10)
- Women's Leadership Conference, University of Idaho (10/10)

- Workshop “COACHing Strong Women in the Art of Strategic Persuasion,” sponsored by Women’s Initiative Committee (WIC), AIChE Annual Meeting 2009, Nashville, TN (11/09) (*COACH Awarded travel grant to attend the workshop*).

11. Professional Service

11.1 Proposal Review Panelist and Reviewer

Proposal Review Panelist:

- NIH SBIR/STTR Review Panelist (Mar 20-21, 2024)
- NSF SBIR/STTR Review Panelist (2023)
- Peer review panelist of the 2023 Tick Borne Disease Research Program (TBDRP) for the Department of Defense (DOD) Congressionally Directed Medical Research Programs (CDMRP)
- NASA Proposal Review Panelist (2021, 2017, 2015)
- NSF- CBET Panelist (2017)
- NSF- GRFP Panelist (Graduate Research Fellowship Program) (2015)
- North Dakota EPSCOR’s Doctoral Dissertation Assistantship Program Reviewer (2015)
- Department of Defense (DoD) - Army Research Office, Ad-hoc review (2014)

Journal Reviewer:

- Reviewer *Frontiers in Lab on a Chip Technologies*
- Reviewer *Biomedical Microdevices*
- Reviewer *Micromachines*: MDPI Publishers
- Reviewer *Bioengineering*: MDPI Publishers
- Reviewer *Communications Biology*: A Nature research journal
- Reviewer *Journal of Pharmaceutical Research International*
- Reviewer *Chemical Engineering & Processing- Process Intensification*
- Reviewer *Nanoscale*
- Reviewer *Journal of Separation Science*
- Reviewer *Journal of Microbiological Methods*
- Reviewer *Scientific Reports*: A Nature research journal
- Reviewer *Computer Methods and Programs in Biomedicine*
- Reviewer, *Journal of Chromatography A*
- Reviewer, *Journal of Separation Science*
- Reviewer, *Journal of Optomechatronics*
- Reviewer, *Analyst*
- Reviewer, *Biomicrofluidics*
- Reviewer, *Electrophoresis*
- Reviewer, *Bioprocess and Biosystems Engineering*
- Reviewer, *Microfluidics and Nanofluidics*
- Reviewer, *Medical Devices: Evidence and Research*, Dove Medical Press
- Reviewer, *International Journal of Engineering Education*
- Reviewer, *European Journal of Engineering Education*

Conference Reviewer:

- Reviewer for National Council on Undergraduate Research (NCUR) 2024 Conference

- Reviewer for The Novel Intelligent and Leading Emerging Sciences conference (NILES 2020- IEEE conference)
- Reviewer, Women in Engineering Division, ASEE
- Reviewer, New Engineering Educators Division, ASEE
- Reviewer, Chemical Engineering Division, ASEE
- Reviewer, Student Division, ASEE

11.2 Institutional Service Activities

- Committee Member, Faculty Senate Research Committee, West Virginia University (8/24 – Present)
- Committee Member, Chemical & Biomedical Engineering Graduate Committee, West Virginia University (8/23 – Present)
- Committee Member, West Virginia Clinical and Translational Science Institute (WVCTSI) Females Advancing Clinical and Translational Science (FACTS) group (05/23 – Present).
- Organized ‘Thriving Women Seminar Series’ by hosting Ms. Elizabeth Schierman, Patent Attorney (4/3/24)
- Organized ‘Thriving Women Seminar Series’ by hosting Dr. Ann Fornof from 3M (2/21/24)
- Organized ‘Thriving Women Seminar Series’ by hosting Prof. Noel Schulz in co-ordination with Women Leadership Institute and Statler College of Engineering (10/26/23)
- Committee Member, Chemical & Biomedical Engineering Undergraduate Curriculum Committee, West Virginia University (8/21 – 7/23)
- Organized lab tour at Statler Research Week Open House (03/23)
- Committee Member, Faculty Search Committee (Instrumentation Specialist) for Chemical & Biomedical Engineering (1/23 – 2/23)
- Committee Member, Faculty Search Committee (Tenure track and Teaching Assistant/Associate Professor) for Biomedical Engineering (7/22 – Present)
- NOBCCHE UI Chapter Faculty Advisor, University of Idaho (10/17 – 5/21)
- Committee member, Academic Hearing Board (AHB), University of Idaho (8/18 – 5/21)
- Biosafety level (BSL) labs Chair, Department Safety Committee, University of Idaho (08/18 – 08/20)
- Committee member, 3rd Year Review Committee, Chemical & Materials Engineering Department, Moscow, ID (11/17)
- Committee member, 3rd Year Review Committee, Chemical & Materials Engineering Department, Idaho Falls, ID (08/16)
- Committee member, Evaluating ENGR courses, College of Engineering (01/16 – 08/16)
- Committee member, Chemical & Materials Engineering Department, Faculty Search Committee (8/15 – 03/16)
- Committee member, Temporary Instructor Search Committee (Moscow) (07/15)
- Committee member, Chemical & Materials Engineering Department Chair Search Committee (11/14 – 05/15)
- Committee member, Temporary Instructor Search Committee (Moscow) (07/14)
- Committee member, Faculty search committee (Idaho Falls) (11/13 – 4/14)

11.3 Professional Service Activities

- Chair-Elect, Women in Chemical Engineering (WIC) Community at AIChE (1/24 – 12/24)

- Guest Editor, *Micromachines* (https://www.mdpi.com/journal/micromachines/special_issues/E8009MS96T) (12/23 – 12/24)
- Conference Organizer, 2024 American Electrophoresis Society Annual Meeting in conjunction with SciX Annual Meeting at Raleigh, NC (10/23 – Present)
- Awards Chair, Women in Chemical Engineering (WIC) Community at AIChE (1/21 – 12/23).
- Session Chair, ASEE NCS Conference, West Virginia University, Morgantown, WV (03/23)
- Planning Committee Member, ASEE NCS Conference, West Virginia University, Morgantown, WV (11/22-03/23)
- Participant, ASEE Future-Ready Engineering Ecosystem (FREE) Convenings, Virtual (10/21/22 and 10/28/22)
- Guest Editor, *Micromachines* (https://www.mdpi.com/journal/micromachines/special_issues/bioparticles_electrical_manipulation_microfluidics) Jan 2022 – Jun 2023
- Guest Editor, *Micromachines* (<https://www.mdpi.com/si/62190>) Nov 2020 – Dec 20, 2021
- Topical Advisory Panel, *Biosensors* (https://www.mdpi.com/journal/biosensors/topic_editors) Oct 2020 – Present
- Guest Editor, *Micromachines* (https://www.mdpi.com/journal/micromachines/special_issues/Microdevices_Electrokinetic), Jun 2019 – Feb 2020
- Organizing committee member, Dielectrophoresis 2016 and 2020 biennial meeting (11/15 – Present)
- Conference Organizer, American Electrophoresis Society (AES) 2017 at Minneapolis, MN (11/15 – 10/17)
- Councilor, American Electrophoresis Society (10/14 – 12/17)
- Editorial Board Member, Journal of Biosensors and Bioelectronics (<http://www.omicsonline.org/jbsbehome.php>) (01/11 – Present)
- Member, ASEE-Women In Engineering Division (WIED) Nominating Committee (02/11)
- Vice-Chair, Interactions with K-12, Education Division Session, AIChE Annual meeting 2009, Nashville, TN (11/09)

11.4 Other Service Activities

- K-3 Video: Floating Water Experiment, Vanessa An, High School Intern, Jul 2022
- Judge, AIChE K-12 STEM Showcase and Outreach Competition, Nov 15th, 2021
- Women in Engineering (WIE) Day lab activities demo for local high school students (2014 – 2020)
- Online science expert for Conrad Spirit of Innovations Award Competition (09/2009)
- Judge, Mississippi Region V Elementary and Secondary Science and Engineering Fair, Mississippi State University, Mississippi (03/09)
- Judge, Mississippi Region V Elementary and Secondary Science and Engineering Fair, Mississippi State University, Mississippi (02/08)

12. Association with Professional Organizations

- American Association of Blood Banks (AABB)
- American Society of Engineering Education (ASEE)
- Associate Member, Sigma Xi Honor Society
- Lifetime Member, American Electrophoresis Society (AES)

- Senior Member, American Institute of Chemical Engineers (AIChE)
- Women in Engineering ProActive Network (WEPAN)