VANI NARAYANAN, Ph.D.

xad9ht@virginia.edu, vnarayan@umw.edu, ORCHID: 0000-0002-5358-8472, Google Scholar

EXECUTIVE SUMMARY

- Cell biologist with a background in biomedical engineering and expertise in cell biomechanics, integrative physiology, and organismal development
- *Research Interests*: Cell Mechanobiology–focusing on cell-cell and cell-matrix interactions in organismal development and disease progression; epithelial physiology, and calcium signaling with a focus on organelle dynamics and tissue homeostasis
- Results-driven and detail-oriented leader: mentored twelve student researchers including four Ph.D. students, eight undergraduate students that includes two IMSD and three REU scholars, and a lab technician; mentored four students for national and/or international conference presentations
- Passionate and student-driven educator: integrated technology and modern tools to teach undergraduate/graduate courses in both virtual and in-person classroom settings

EDUCATION/TRAINING

Postdoctoral Associate, Cell & Developmental Biology, 2022 - present
University of Virginia, Charlottesville, VA
Mentor (s): Dr. Saurabh Kulkarni & Dr. Douglas W. DeSimone

Postdoctoral Associate, Cell Biomechanics, 2020- 2021
Virginia Commonwealth University, VA
Mentor: Dr. Daniel E. Conway

Ph.D., Biomedical Engineering, 2017 - 2020
Virginia Commonwealth University, VA
Ph.D. Thesis Title: *Higher Tensile Forces Across Cellular Junctions and an Intact Nuclear LINC Complex is Required for Epithelial Function and Stability*
Mentor: Dr. Daniel E. Conway

M.S., Biomedical Engineering, 2014 - 2016
Virginia Commonwealth University, VA
Master's Thesis Title: *The Role of E-cadherin Force in the Maintenance of Homeostasis in Epithelial Acini*
Mentor: Dr. Daniel E. Conway

B.S., Electrical and Electronics Engineering, 2001 - 2005
University of Calicut, India

PROFESSIONAL EXPERIENCE

Visiting Assistant Professor, University of Mary Washington Aug. 2025 – May 2026
Department of Biology

- Teaching an **introductory biology course** in biological concepts (100-level) and two sections of the laboratory course on introductory biology (**Fall 2025**); Class size: 38 students (lecture and lab)
- Teaching an upper-level course in **Cell Biology** (300-level) and a Cell Biology laboratory course (**Fall 2025**); Class size: 19 students
- Teaching an upper-level course in **Biostatistics & Research Design** (200-level) using the R programming language. This is also a writing-intensive course (**Spring 2026**); Class size: 18 students
- Teaching an upper-level course in **Human Physiology** (400-level) and two sections of the Human Physiology laboratory course (**Spring 2026**); Class size: 32 students

Visiting Assistant Professor, Hampden-Sydney College July 2024 – May 2025
Department of Biology

- Teaching one lecture and two sections of an Experiential Learning (EL)-based laboratory course (100-level): an introductory biology course in biological principles and a laboratory course on introductory biology (***Fall and Spring 2024-2025***); Class size: up to 36 students (lecture) and up to 24 students (laboratory)
- Teaching an upper-level course in Neurobiology (300-level) and a Neurobiology laboratory course in **Spring 2025**; Class size: 7 students

Postdoctoral Associate, University of Virginia Apr. 2022 - present
Advisor: Dr. Saurabh Kulkarni, Department of Cell Biology

- Identified the molecular mechanism underlying Piezo1-mediated calcium signaling in the regulation of centriole number in multiciliated cells, using *Xenopus Tropicalis* as a model organism. *Preprint available*; *Manuscript under review*
- Probing the role of mitochondrial dynamics in multiciliate cell differentiation in the *Xenopus* embryonic epidermis (*Co-mentored by: Dr. Douglas W. DeSimone*).

Postdoctoral Associate, Virginia Commonwealth University, May 2020 – Aug. 2021
Advisor: Dr. Daniel E. Conway, Department of Biomedical Engineering

- Assessed the role of myosin-mediated regulation of epithelial tissue polarity in glandular acini (*In collaboration with Lele Lab at Texas A&M University*).
- Examined the role of mechanosensitive ion channels such as Piezo 1&2 and TRPV4 in glandular development homeostasis.
- Examined the effects of Cystic Fibrosis mutations in the CFTR ion channel on glandular morphology, homeostasis, and susceptibility to EMT progression (*In collaboration with Bao Lab, Rice University*).
- Probed the role of CFTR activity and cellular mechano-transduction in the regulation and maintenance glandular homeostasis during branching morphogenesis. Designed and established an assay using Collagen and FRET biosensors for 3D-live FRET imaging (*In collaboration with Gleghorn Lab, University of Delaware*).
- Investigated the role of UNC-45A, a cytoskeletal chaperone, in epithelial barrier integrity, and maintenance of mechanical tension across epithelial junctions (*In collaboration with Ivanov Lab at Cleveland Clinic*).
- Studied the role of Angiomotin protein, AmotL2, and its isoforms, P60 and P100, in the modulation of cell-cell junctions and actin cytoskeleton coupling using FRET biosensors for E-cadherin and Nesprin-2 (*In collaboration with Holmgren Lab, Karolinska Institutet*).

Ph.D. Candidate, Virginia Commonwealth University, Aug.2017 – May 2020
Advisor: Dr. Daniel E. Conway, Department of Biomedical Engineering

- Established the incidence of osmotic gradient-induced stretch in epithelial acini and its role in maintaining tissue homeostasis using FRET biosensors. Designed and developed an experimental set-up to compress acinar structures in order to probe the effects of CFTR activity and tension across E-cadherin on acinar deformation.
- Established the role of increased myosin contractility as a result of LINC disruption on mitotic spindle orientation and glandular architecture (*In collaboration with Lele Lab at Texas A&M University*).
- Probed the functional role of vinculin in cellular mechano-transduction via FRET biosensors and cell-matrix interactions.
- Investigated the role of desmosomal cadherin, Dsc2, on the regulation of mechanical forces across cell-cell junctions, cell-cell adhesion, and barrier function in intestinal epithelial cells using FRET biosensors.

- Estimated the effect of TGF-beta induced Epithelial to Mesenchymal Transition on cell-cell junction forces in epithelial cells cultured on micropatterned surfaces (*In collaboration with Lemmon Lab, Virginia Commonwealth University*).

Research Technician, Virginia Commonwealth University May 2016 – Aug 2017
Advisor: Dr. Daniel E. Conway, Department of Biomedical Engineering

- Probed the effects of nucleo-cytoskeletal decoupling during acinar morphogenesis and maintenance.

Graduate Research Assistant, Virginia Commonwealth University Oct. 2014 – May 2016
Advisor: Dr. Daniel E. Conway, Department of Biomedical Engineering

- Probed the effects of decoupling desmosomal cadherins from the cytoskeleton and performed 3D-live FRET imaging experiments using the DSG-2 FRET biosensor.
- Designed and established a technique to perform live-FRET imaging on 3D epithelial spheroids generated using Matrigel™

Project Engineer, Wipro Technologies Ltd. Nov. 2005 – May 2006
Bangalore, India

- Confirmed product performance by conducting tests and redesigns.
- Reviewed application specification and created documents to identify test scenarios.
- Reviewed design, specifications for project plans and scheduled changes.
- Worked as part of a team of engineers to accomplish larger projects.

TEACHING & MENTORING

Teaching Experience:

Visiting Assistant Professor (BIOL 413, **Human Physiology**, 4 credits) Jan 2026 – May 2026
Department of Biology, University of Mary Washington

- Teaching a 400-level course in Human Physiology that covers mechanistic questions about the human body; students will learn how the human body copes to stress and maintains homeostasis through processes that occur at the cellular and organismal level; ***Spring 2026***
- Teaching two sections of Human Physiology laboratory in addition to the lecture
- Teaching a class of up to 32 undergraduate biology majors
- Developing assignments and exams to track student academic progress; Experience with Canvas
- Maintaining office hours and conducting study-review sessions to provide academic support to students

Visiting Assistant Professor (BIOL 260, **Biostatistics & Research Design**, 4 credits), Jan 2026 – May 2026
Department of Biology, University of Mary Washington

- Teaching a 200-level course in biostatistics and research design, which is a writing-intensive course that covers statistical methods of data analysis and interpretation using the R programming language, conducting surveys of research practices in biology and designing experiments, and scientific communication; ***Spring 2026***
- Teaching a class of 18 undergraduate students
- Developing assignments and exams to track student academic progress; Experience with Canvas
- Maintaining office hours and conducting study-review sessions to provide academic support to students

Visiting Assistant Professor (BIOL 121, **Biological Concepts**, 4 credits) Aug 2025 – Dec. 2025
Department of Biology, University of Mary Washington

- Teaching a 100-level introductory course in biology that covers the fundamental principles and concepts in biology that include but are not limited to biochemistry, cellular metabolism,

physiological processes, and how evolutionary processes influence the adaptation and survival of organisms; ***Fall 2025***

- Teaching two sections of the introductory biology lab in addition to the lecture
- Teaching a class of up to 38 undergraduate students, both majors and non-majors
- The laboratory course covers fundamental biological principles and serves as a co-requisite for BIOL 121 lecture course
- Developing assignments and exams to track student academic progress; Experience with Canvas
- Maintaining office hours and study-review sessions to provide academic support to students

Visiting Assistant Professor (BIOL 340, **Cell Biology**, 4 credits) Aug 2025 – Dec. 2025
Department of Biology, University of Mary Washington

- Teaching a 300-level course in cell biology that covers the key concepts in cell and molecular biology with a special emphasis on cell structure and function, proteins, cellular metabolism, cell-cell and cell-matrix interactions, signaling mechanisms that promote proper cellular function, and cancer; ***Fall 2025***
- Teaching one section of cell biology lab in addition to the lecture
- Teaching a class of 19 undergraduate biology majors
- Developing assignments and exams to track student academic progress; Experience with Canvas
- Developed and incorporated an active learning tool using AlphaFold and Molstar to teach protein structure and visualization in the Cell Biology classroom; *Manuscript under preparation*
- Maintaining office hours and conducting study-review sessions to provide academic support to students

Visiting Assistant Professor (BIOL 333, **Neurobiology**, 4 credits) January 2025 – May 2025
Department of Biology, Hampden-Sydney College

- Teaching an upper-level course in biology with a laboratory component that explores the general concepts in neurobiology and focuses on developing an understanding of the biological basis of the brain function and organismal behavior; ***Spring 2025***
- Key topics such as electrophysiology, synaptic transmission, sensory neuroscience, motor control systems, developmental neurobiology, and behavioral plasticity, with an emphasis on neurological and psychiatric disorders are being covered in the class
- Scientific literature is reviewed and discussed during lectures and laboratory sections to apply and reinforce concepts; students develop science communication and literature analysis skills through weekly individual presentations and worksheets
- Teaching a class of 7 undergraduate biology majors
- Developing assignments, lab worksheets, and exams to track student academic progress; Experience with Canvas
- Maintaining office hours to provide academic support to students

Visiting Assistant Professor (BIOL 110, **Principles of Biology**, 3 credits) July 2024 – May 2025
Department of Biology, Hampden-Sydney College

- Teaching an introductory course in biology that covers the fundamental principles with a special emphasis on evolution as the unifying theme; ***Fall and Spring 2024-2025***
- Key topics such as biochemistry, cellular metabolism, physiological processes, and how evolutionary processes influence the adaptation and survival of organisms are being covered in the class
- Teaching a class of up to 36 undergraduate students, both majors and non-majors
- Developing assignments and exams to track student academic progress; Experience with Canvas
- Maintaining office hours to provide academic support to students

Visiting Assistant Professor (BIOL 151, Principles of Biology Laboratory) July 2024 – May 2025
Department of Biology, Hampden-Sydney College

- Taught two sections of the introductory biology lab in Fall 2024, and teaching one section of the lab in Spring 2025, 1-credit each
- The laboratory course covers fundamental biological principles and serves as a co-requisite for BIOL 110 lecture course; ***Fall and Spring 2024-2025***
- Using the Experiential Learning (EL) approach to complement topics being introduced in the lecture class to aid with gaining an in-depth understanding of key principles
- Each class consists up to 24 undergraduate students
- Developing quizzes, assignments, and exams to track student academic progress; Experience with Canvas
- Maintaining office hours to provide academic support to students

Mentor, Engineering Professional Development Course Feb. 2024 – May 2024
School of Engineering, Virginia Commonwealth University

- Mentoring undergraduate students from all engineering majors
- Introducing students to the various prospects of the field through meeting sessions

Teaching Faculty, CCIB (Core Course in Integrative Biosciences) Sept. 2023
School of Medicine, University of Virginia

- Mentored first-year graduate students during faculty office hours for the cytoskeleton, cell adhesion, migration and cell polarity block
- Encouraged scientific thinking and discussion to promote active engagement with scientific literature
- Assisted with grading of assignments; experience with Blackboard

Guest Lecturer (EGRB 101, Biomedical Engineering Practicum) Mar. 2021
Department of Biomedical Engineering, Virginia Commonwealth University

- Planned and designed the lecture for first-year undergraduate students
- Integrated technology for virtual instruction using online tools
- Presented lab research and prospective research topics of interest in the field
- Advised undergraduate students on prospective courses to support their research interests

Guest Lecturer (EGRB 102, Introduction to Biomedical Engineering) Jan. 2021 – May 2021
Department of Biomedical Engineering, Virginia Commonwealth University

- Assisted with teaching 30 undergraduate students
- Planned and designed the course syllabus for the "conservation of charge" unit with emphasis on circuits, circuit analysis and its applications in biological systems
- Integrated technology and modern tools for virtual classroom instruction
- Developed lesson plans and taught six lectures to 30 undergraduate students
- Implemented selected strategies and methods to teach complex topics
- Distributed and graded assignments, and managed exams to track student progress
- Maintained office hours to provide educational support to students

Research Trainees:

AXEL LOPEZ, Undergraduate Researcher, Sept. 2022 – May 2024
UVA Human Biology Distinguished Majors Program,
Saurabh Kulkarni Laboratory, University of Virginia
Current Position: Medical student, UVA School of Medicine

EWELINA SOCHACKA, Ph.D., Full-Bright Scholar, Apr. 2022 – May 2023

Saurabh Kulkarni Laboratory, University of Virginia
Current Position: Postdoctoral Researcher, Polish Academy of Sciences

ASHLEY CARDENAS-ALVIAR, Undergraduate Researcher, Jan 2021 - Aug.2021
Initiative for Minority Student Development (IMSD) Scholar,
Current Position: Ph.D. Candidate, Cornell University

JESSICA CORNTHWAITE, Undergraduate Researcher, June 2021- July 2021
Research Experiences for Undergraduates (REU) Scholar,
Current Position: Ph.D. Student, Virginia Commonwealth University

SYDNIE TRAN, Graduate Rotation Student, May 2020 – Aug. 2021
Current Position: Ph.D. Candidate, Virginia Commonwealth University

BROOKE DANIELSSON, Ph.D., Graduate Researcher, May 2020 – Aug. 2021
Current Position: Research Scientist, Virscio, New Haven, CT

UZAIR REHMAN, Graduate Researcher, Aug. 2019 – Aug. 2021
Current Position: Ph.D. Student, Virginia Commonwealth University

VIDAL BEJAR-PADILLA, Undergraduate Researcher, May 2018 – May 2020
Initiative for Minority Student Development (IMSD) Scholar,
Current Position: Ph.D. Student, University of Texas at Austin

JACKSON WHITE, Undergraduate Researcher, May 2019 – Aug. 2019
Research Experiences for Undergraduates (REU) Scholar,
Current Position: DPhil, Oxford University (Oxford-NIH program)

HAYLEY EICHER, Undergraduate Researcher, June 2018 – July 2019
Research Experiences for Undergraduates (REU) Scholar,
Current Position: Manufacturing Supervisor at Krystal Biotech Inc.

NIHARIKA RAJESHKUMAR PATEL, Undergraduate Researcher, Jan. 2018 – July 2019
Current Position: Research Associate, The Ohio State University

DAHLIA ABUTALEB, Undergraduate Researcher, Jan. 2018 – May 2018
Current Position: Career Solutions Engineer, Telecom

PUBLICATIONS

*denotes equal contribution

- **Narayanan, V.**, Rao, V.G., A.A, Kulkarni, S. (2025). "Multiciliated cells adapt the mechanochemical Piezo1-Erk1/2-Yap1 cell proliferation axis to fine-tune centriole number." bioRxiv preprint, https://doi.org/10.1101/2025.01.21.634139 *(under review)*
- **Narayanan, V.***, Purkayastha, P.*, Yu, Bo. *, Pendyala, K., Chukkapalli, S., Cabe, J., Dickinson, R., Conway, D., Lele, T. (2023). "Rho activation drives luminal collapse and eversion in epithelial acini." ***Biophysical Journal***. PMID: 36617192.
- Subramani A, Cui W, Zhang Y, Friman T, Zhao Z, Huang W, Fonseca P, Lui WO, **Narayanan V**, Bobrowska J, Lekka M, Yan J, Conway DE, Holmgren L. (2023)."Modulation of E-Cadherin Function through the AmotL2 Isoforms Promotes Ameboid Cell Invasion." ***Cells***. PMID: 37443716
- Bejar-Padilla, V., Cabe, J., Lopez, S., **Narayanan, V.**, Mezher, M., Maruthamuthu, V., Conway, D. (2022). "Vinculin recruitment is perturbed in alpha-catenin mutants during collective cell movement." ***Molecular Biology of the Cell***. PMID: 35921161.
- Lechuga, S., Cartagena-Rivera, A. X., Khan, A., Crawford, B. I., **Narayanan, V.**, Conway, D. E., Lehtimäki, J., Lappalainen, P., Rieder, F., Longworth, M. S., & Ivanov, A. I. (2022). "A myosin

chaperone, UNC-45A, is a novel regulator of intestinal epithelial homeostasis controlling epithelial barrier integrity and cell migration." ***FASEB J.*** PMID: 35344227.

- Raya-Sandino, A., Luissint, A. C., Kusters, D. H., **Narayanan, V.**, Flemming, S., Garcia Hernandez, V., Godsel, L., Green, K., Hagen, S., Conway, D., Parkos, C., Nusrat, A. (2021). "Regulation of intestinal epithelial intercellular adhesion and barrier function by desmosomal cadherin Desmocollin-2." ***Molecular Biology of the Cell***. PMID: 31402305
- **Narayanan, V.**, Schappell, L., Mayer, C., Duke, A., Armiger, T., Arsenovic, P., Mohan, A., Dahl, K., Gleghorn, J., Conway, D. (2020). "Osmotic Gradients in Epithelial acini increase mechanical tension across E-cadherin, drive morphogenesis, and maintain homeostasis." ***Current Biology***, PMID: 31983640.
- Scott, L., Griggs, L., **Narayanan, V.**, Conway, D., Lemmon, C. & Weinberg, S. (2020). "A hybrid model of intercellular tension and cell-matrix mechanical interactions in a multicellular geometry." ***Biomechanics and Modeling in Mechanobiology***. PMID: 32193709.
- Zhang, Q.* and **Narayanan, V.***, Mui, K., O'Bryan, C., Anderson, R., KC, B., Cabe, J., Denis, K., Antoku, S., Roux, K., Dickinson, R., Angelini, T., Gundersen, G., Conway, D. & Lele, T. (2019). "Mechanical stabilization of the glandular acinus by linker of nucleoskeleton to cytoskeleton complex." ***Current Biology***. PMID: 31402305.
- Mohan, A., Schlue, K., Kniffin, A., Mayer, C.R., Duke, A., **Narayanan, V.**, Arsenovic, P., Bathula, K., Danielsson, B., Dumbali, S., Maruthamuthu, V., Conway, D. (2018). "Spatial proliferation of epithelial cells is regulated by E-Cadherin force." ***Biophysical Journal***. PMID: 30131170.
- Baddam SR*, Arsenovic PT*, **Narayanan V***, Duggan NR*, Mayer, C., Newman, S., Abutaleb, D., Mohan, A., Kowalczyk, A., Conway, D. (2018). "The desmosomal cadherin Desmoglein-2 experiences mechanical tension as demonstrated by a FRET-Based tension biosensor expressed in living cells." ***Cells***. PMID: 29949915.

MANUSCRIPTS IN PREPARATION

Narayanan, V. (2025). "AlphaFold and Molstar: protein structure visualization tools for active learning in the cell biology classroom." (*In preparation*)

HONORS & AWARDS

Outstanding Graduate Research Assistant Award, *Finalist* — May 2020
VCU College of Engineering, Richmond, VA

ASCB|EMBO Travel Grant — Sept. 2019
ASCB | EMBO 2019 annual meeting, Washington, DC.

Dissertation Assistantship Award, — Aug. 2019 – May 2020
VCU College of Engineering

Best Poster Award, — May 2017
95th annual meeting of Virginia Academy of Science 2017, Richmond, VA.

PROFESSIONAL SERVICE

Outreach:

Reader & Judge, 2024 Annual Meeting & Research Symposium — March 2024 – May 2024
Virginia Junior Academy of Sciences (VJAS)

Member, Annual Conference Planning committee (COMPASS), — June 2023 – present
American Society of Cell Biology

Co-organizer and Volunteer, Saturday Science Fair, — April 2023 – present
UVA Cell Biology Outreach

State Exam Co-author, 2023 Cell Biology VA State Tournament, — March 2023
Virginia Science Olympiad

Grant Liaison, COMPASS Career and Outreach committee, American Society of Cell Biology — Oct. 2023 – Jan. 2024

Outreach Grant Reviewer, COMPASS Career and Outreach committee, American Society of Cell Biology — Jan. 2022 – present

Peer Review:

Peer-reviewer, American Chemical Society **(ACS-Nano)** — Sept. 2020– present
https://orcid.org/0000-0002-5358-8472

PROFESSIONAL DEVELOPMENT

R and Python Workshop — January 16 – 25, 2024
UVA Health Sciences Library, University of Virginia

FLIM, FRET and FLIRR (Metabolism) Microscopy Workshop — March 6 – 11, 2023
W.M. Keck Center for Cellular Imaging, University of Virginia

Cellular Dynamics and Genomics Research Group Meeting — Sept. 6 – Dec. 13, 2022
Department of Cell Biology, University of Virginia

PROFESSIONAL AFFILIATIONS

Member, COMPASS Career and Outreach committee, ASCB — 2022 – Present
Member, Tau Beta Pi Engineering Honor Society — 2020 – Present
Member, Biomedical Engineering Society — 2017 – 2021
Member, American Society of Cell Biology (ASCB) — 2017 – Present
Member, Virginia Academy of Science — 2017 – Present

CONFERENCE TALKS & POSTER PRESENTATIONS

*denotes undergraduate student

- **Vani Narayanan**. 2004. "Electrical Impedance Tomography." Talk at the 2004 Association of Electrical and Electronics Engineering Seminar, Kerala, India.
- **Vani Narayanan**, Daniel Conway. 2016. *Forces across cell-cell junctions contribute to lumen formation and homeostasis in epithelial acini.* Poster presented at the 2016 annual meeting of Biomedical Engineering Society (BMES), Minneapolis, MN.
- **Vani Narayanan**, Daniel Conway. 2017. *Mechanical forces across E-Cadherin regulate epithelial acini homeostasis.* Poster presented at the 95th annual meeting of Virginia Academy of Science (VAS), Richmond, VA, **Best Poster Award**.
- **Vani Narayanan**, Daniel Conway. 2017. *Mechanical forces across E-Cadherin regulate epithelial acini homeostasis.* Poster presented at the 2017 annual meeting of Biomedical Engineering Society (BMES), Phoenix, AZ.
- **Vani Narayanan**, Daniel Conway. 2017. *The LINC complex contributes to epithelial acini homeostasis.* Talk at the 2017 ASCB/EMBO annual meeting, Philadelphia, VA.
- **Vani Narayanan**, Daniel Conway. 2018. *The LINC complex contributes to epithelial acini homeostasis.* Talk at the 96th annual meeting of Virginia Academy of Science (VAS), Longwood University, VA.
- **Vani Narayanan**, Daniel Conway. 2018. *Osmotic Stretch Regulates Epithelial Acini Morphogenesis and Homeostasis*. Poster presented at the 2018 annual meeting of Biomedical Engineering Society (BMES), Atlanta, GA.
- Qiao Zhang, **Vani Narayanan**, Andrew Tamashunas, Daniel E. Conway, Tanmay P. Lele. 2018. *An intact LINC complex is required for acini development*. Talk at the 2018 annual meeting of Biomedical Engineering Society (BMES), Atlanta, GA.
- Hayley Eicher*, **Vani Narayanan**, Daniel Conway. 2018. *The Role of Desmosomes in 3D Epithelial Acini Formation*. Poster presented at the 2018 annual meeting of Biomedical Engineering Society (BMES), Atlanta, GA.

- Vidal Bejar-Padilla*, **Vani Narayanan**, Daniel Conway. 2018. *The Nuclear Linc Complex is Necessary for Epithelial Acini Homeostasis.* Poster presented at the 2018 annual meeting of Annual Biomedical Research Conference for Minority Students (ABRCMS), Indianapolis, IN.
- **Vani Narayanan**, Qiao Zhang, Tanmay P. Lele, Daniel E. Conway. *Destabilization of The LINC Complex Alters Apico-basal Polarity and Spindle Orientation.* 2019. Poster presented at the 2019 annual meeting of Biomedical Engineering Society (BMES), Philadelphia, PA.
- Vidal Bejar-Padilla*, **Vani Narayanan**, Jolene I. Cabe, Daniel E. Conway. *Vinculin-dependent Cadherin Complexes Regulate Cell Migration.* 2019. Poster presented at the 2019 annual meeting of Biomedical Engineering Society (BMES), Philadelphia, PA.
- Hayley Eicher*, **Vani Narayanan**, Daniel E. Conway. 2019. *The Role of Desmosomes in Epithelial Tissue.* Poster session presented at the 2019 annual meeting of Biomedical Engineering Society (BMES), Philadelphia, PA.
- Vidal Bejar-Padilla*, **Vani Narayanan**, Jolene I. Cabe, Daniel E. Conway. 2019. *Vinculin-dependent Cadherin Complexes Regulate Cell Migration.* Talk at the 2019 annual meeting of Annual Biomedical Research Conference for Minority Students (ABRCMS), Anaheim, California.
- **Vani Narayanan**, Qiao Zhang, Tanmay P. Lele, Daniel E. Conway. 2019. "*Destabilization of the LINC Complex Alters Spindle Orientation and Apicobasal Polarity in Glandular Epithelia.*" Poster presented at the 2019 ASCB|EMBO annual meeting, Washington, DC, **ASCB|EMBO Travel Grant**.
- Jolene Cabe, **Vani Narayanan**, Vidal Bejar-Padilla*, Venkat Maruthamuthu, and Daniel E. Conway. 2019. *The mechanical implication and functional consequences of vinculin across cell-cell contacts.* Poster presented at the 2019 ASCB|EMBO annual meeting, Washington, DC.
- Arturo Raya-Sandino, Dennis H.M. Kusters, Anny-Claude Luissint, Daniel E. Conway, **Vani Narayanan**, Susan J. Hagen, Kyle H. Smith, Sven Flemming, Vicky-Garcia-Hernandez, Mark Yulis, Charles A. Parkos, Asma Nusrat. 2020. *Differential regulation of intestinal epithelial intercellular adhesion and barrier function by desmosomal cadherins.* Talk and poster presented at American Society for Investigative Pathology 2020 annual meeting at Experimental Biology (ASIP|EB), San Diego, CA.
- Bo Yu, **Vani Narayanan**, Daniel Conway, Tanmay Lele. 2020. *Myosin Contractility Inverts Tissue Polarity by Local Outward Cell Extrusion in LINC Disrupted Glandular Acini.* Poster presented at the 2020 virtual annual meeting of Biomedical Engineering Society (BMES).
- Vidal Bejar-Padilla*, **Vani Narayanan**, Jolene I. Cabe, Daniel E. Conway. 2020. *Vinculin Recruitment is Perturbed in &[alpha]-catenin Mutants.* Poster presented at the 2020 virtual annual meeting of Biomedical Engineering Society (BMES).
- Jessica Cornthwaite*, **Vani Narayanan**, Jolene Cabe, Carl Mayer, Daniel Conway. 2021. *Mechanical Tension on Vimentin Intermediate Filaments using a FRET-based Tension Sensor.* Poster presented at the 2021 annual meeting of Biomedical Engineering Society (BMES).
- Ashely Cardenas-Alivar*, **Vani Narayanan**, Daniel Conway. 2021. *Modulation of Piezo 1 Activity Affects Epithelial Cyst Morphology and Homeostasis.* Poster at the 2021 annual meeting of Annual Biomedical Research Conference for Minority Students (ABRCMS).
- Ashely Cardenas-Alivar*, **Vani Narayanan**, Daniel Conway. 2021. *Modulation of Piezo 1 Activity Affects Epithelial Cyst Morphology and Homeostasis.* Poster presented at the 2021 annual meeting of Biomedical Engineering Society (BMES).
- **Vani Narayanan**, Venkatramanan G. Rao, Saurabh Kulkarni. 2022. *Piezo1-mediated Mechanochemical Signaling Regulates Centriole Number in Multiciliated Cells.* Poster presented at the 2022 ASCB|EMBO annual meeting, Washington, DC.
- **Vani Narayanan**, Purboja Purkayastha, Bo Yu, Kavya Pendyala, Sasanka Chukkapalli, Jolene Cabe, Richard Dickinson, Daniel Conway, Tanmay Lele. 2022. *Rho activation drives luminal collapse and eversion in epithelial acini.* Poster presented at the 2022 ASCB|EMBO annual meeting, Washington, DC.