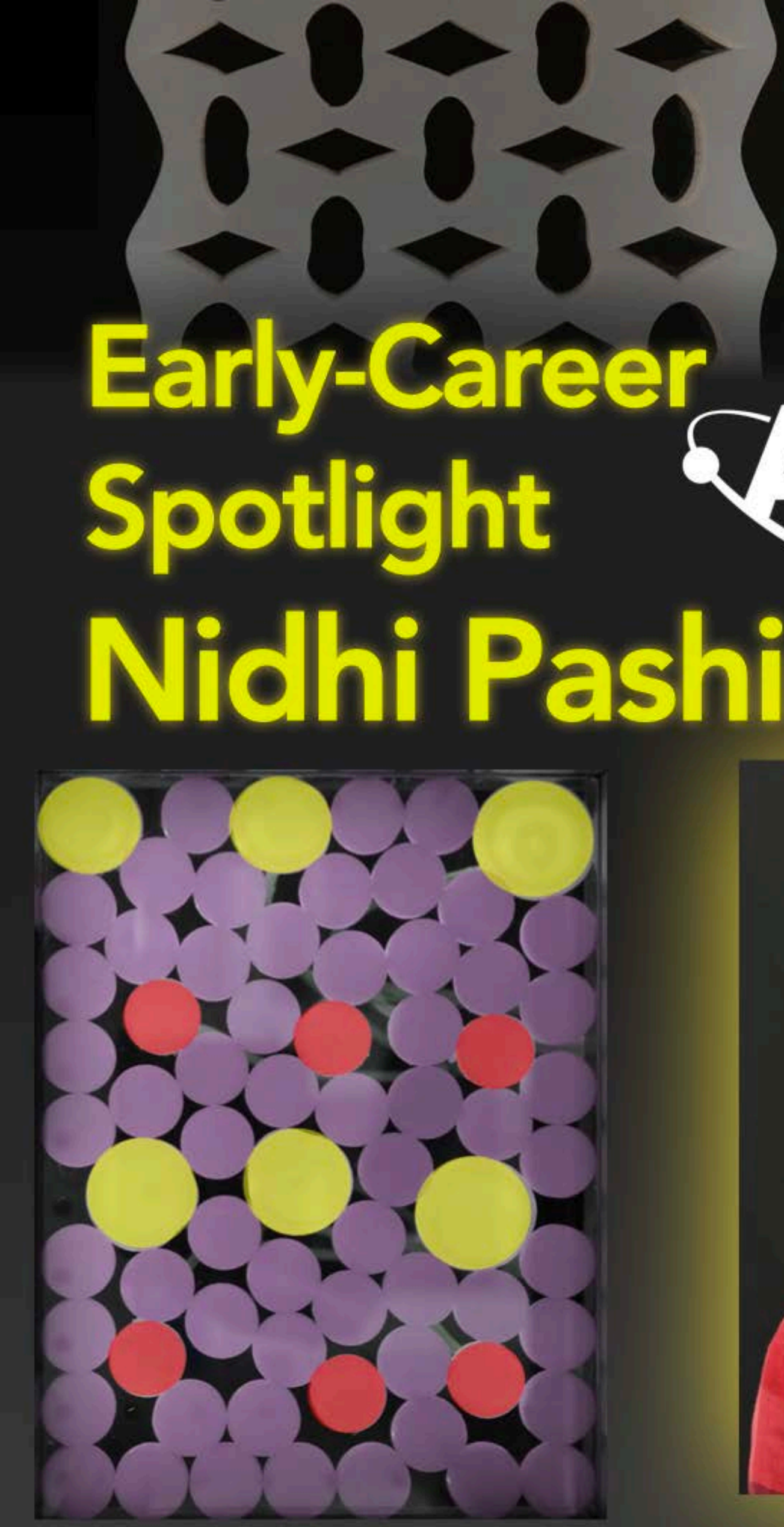


Early-Career Spotlight

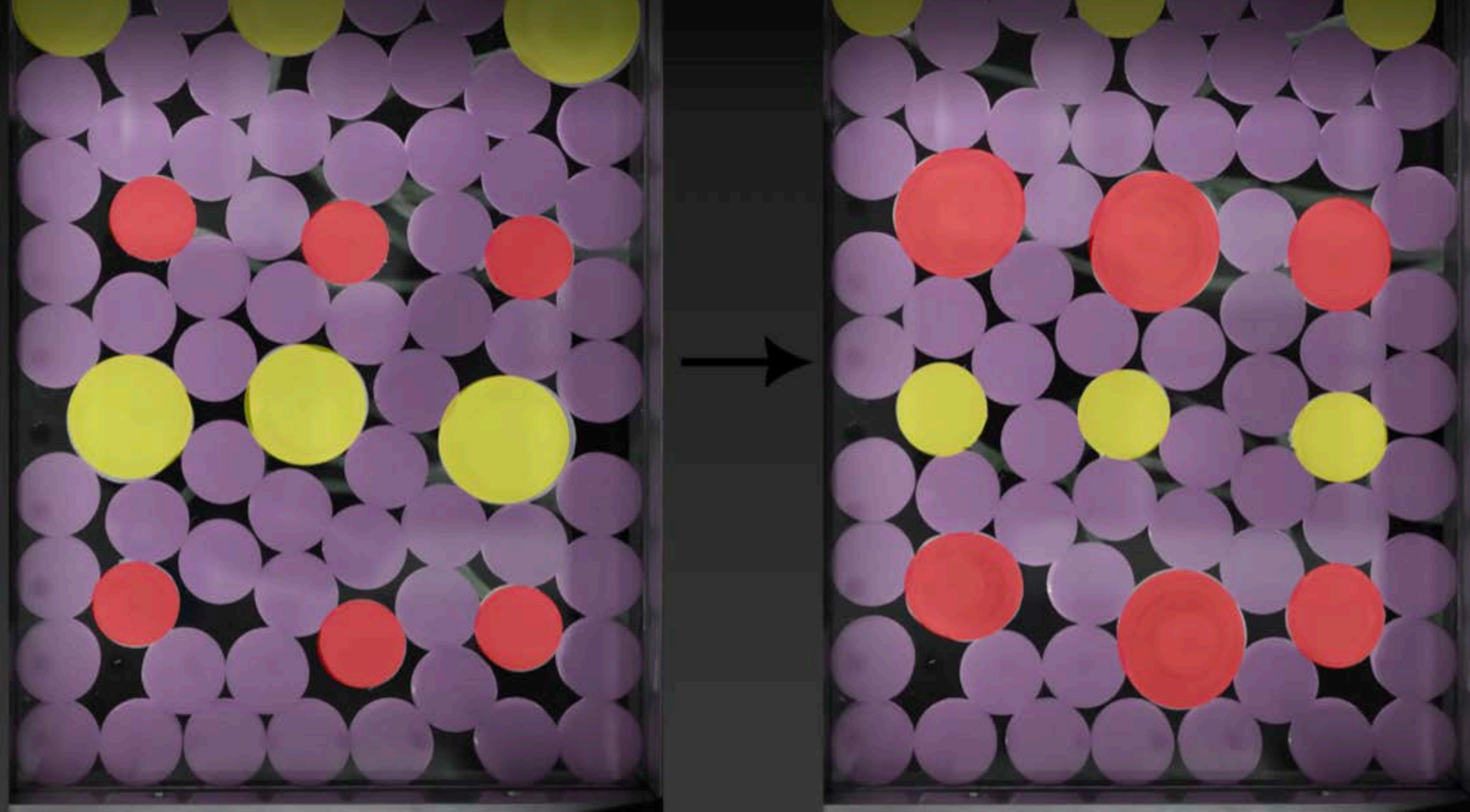
APS Division of Statistical & Nonlinear Physics

DSNP

Nidhi Pashine - PI@SU

1. Why does your research matter?

I design metamaterials—new types of materials with unusual properties due to *structure* rather than composition. My group is interested in extending concepts of learning and memory to materials science. *This work matters because it is a first step towards developing new materials, and new materials are needed everywhere—from construction to medicine*. We conduct macroscopic tabletop experiments, often paired with computer simulations, to study different systems. The design principles we discover through our research will eventually be applied to microscopic systems to create new, practically useful materials.



2. How did you end up here?

I've always been interested in physics, it was my favorite subject in high school. I enjoyed summer research programs in undergrads and I wanted to continue doing physics in graduate school. I quickly discovered that *I enjoy working in a lab - building experimental setups and running my own experiments*. I started working in a biophysics lab but I found that a limited background on biology background was getting in the way of completing my experiments, so I switched to non-biological soft matter, which is what I have been doing since then.

3. What's one thing you wish someone had told you when you were just starting out?

A senior faculty member once told me: *a faculty job involves many different tasks that can consume all my time, so I should identify what's truly important to me and make sure I schedule time for those priorities*. There is so much flexibility in this job, so it's easy to spend all your time working on things you may not necessarily care about and neglect the things that are most important to you.

4. What's something in your work that you're really excited about?

Hard question! We have several projects running, and what excites me varies day by day. Whatever project presents a new challenge excites me most at that moment. I think that is the beauty of our field. We can pursue our interests and discover something cool. *What I love most about my work is that learning about new things, talking to people about science, and coming up with fresh ideas is a big part of the job*. If I see an interesting phenomenon around me, I can just go mess around with it in the lab. Having this freedom to study whatever you want is amazing!

5. Is there a mentor that really inspired you to pursue an academic career?

My PhD advisor was instrumental in inspiring me to pursue an academic career. Both his scientific approach and his mentorship style inspired me. He is incredibly kind to his students and genuinely invested in their success. He convinced me that an academic career can be very rewarding as you have the freedom to pursue whatever questions interest you.

6. Now that you're mentoring others, what's something you try to pass on?

I try to get my mentees excited about their research. I like to think that we're driving projects in directions that are interesting to both of us. *I also try to constantly help them understand that good science takes time*—they need to work hard, be patient and not lose their enthusiasm along the way.