The People of Physical Sciences Podcast — Natalia Komarova and Dominik Wodarz

An episode about everything from colors to coronavirus

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This episode features applied mathematician Natalia Komarova of the Department of Mathematics, and Dominik Wodarz, a theoretical biologist with the Susan and Henry Samueli College of Health Sciences.

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Patterns are everywhere in nature, and Natalia Komarova, who's an applied mathematician in the UCI Department of Mathematics, thinks that patterns link

everything in the natural world. Once, Komarova discovered a connection between words and bubbles, and the same thinking she applied to that connection is helping her and her theoretical biologist husband, Dominik Wodarz of UCI's Susan and Henry Samueli College of Health Sciences, study the coronavirus pandemic.

"I'm a mathematician, and Dominik is the inspiration," Komarova said. "He's very creative, and he always comes up with good intuitions." Wodarz, alongside Komarova, simulates biological processes he sees in nature. When it comes to the pandemic, Wodarz sees a link between the forces at work between predators like lions and their prey and how coronavirus behaves. "There are many parallels between a pathogen-host system, coronavirus is, and a predator-prey system," Wodarz said.

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