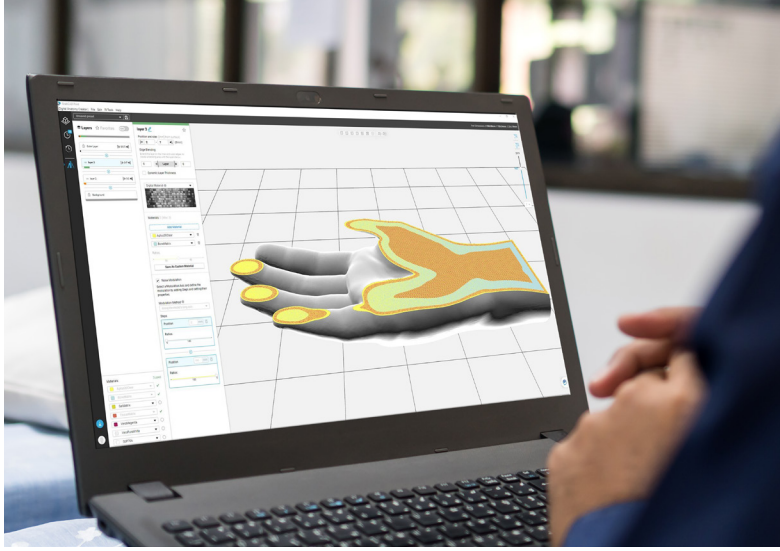
Research Lab Story

Unlocking the “Secret Recipe” for New Pediatric Anatomy Models



Digital Anatomy™ Creator Gives Seattle Children’s Research Lab Unprecedented Ability to Find the Perfect “Recipe” for 3D Printed Pediatric Pathologies

Seth Friedman, PhD, runs the research lab at Seattle Children’s. Over the past year, he has been on a quest to craft the “secret recipe” to recreate the precise pediatric pathologies they treat at their center.

“Surgeons request anatomy models that mimic internal properties and function exactly like human tissue. The anatomical presets available today weren’t robust enough to meet our needs,” says Dr. Friedman.

Dr. Friedman uses the Stratasys Digital Anatomy Printer to tinker and to test—to find the exact, mixtures of Stratasys’ unique tissue materials to create biomechanically accurate anatomy models.

“I’ve calibrated 3D print materials to recapitulate sinus inserts that would replace cadaver models and to create tissue planes that realistically mimic the dissection of skin.”

Introducing Digital Anatomy Creator

To address the need for new anatomies and pathologies, Dr. Friedman has worked with the Stratasys engineering team and an advisory board of technical experts to develop a software add-on to the Digital Anatomy Printer that allows the slice-by-slice control of material combinations.

The Digital Anatomy Creator unlocks total control of the Digital Anatomy Printer. With the ability to customize material combinations in each print slice, centers like Seattle Children’s can create new pathology “recipes” that can be printed iteratively and shared easily for unprecedented research and highly-skilled training.

“The Digital Anatomy Creator is the missing link between the printer and the patient. The ability to customize models to exact patient pathologies is the next step toward realism that will revolutionize research, training, and ultimately, patient care.”

Learn more about Digital Anatomy Creator software at www.stratasys.com/dac-software.

> “It’s control to a mind-blowing level.”
>
> Seth Friedman, PhD
> Manager of Innovation Imaging and Simulation Modeling, Seattle Children’s Hospital, Seattle, USA

Digital Anatomy Creator Software

The control to calibrate tissue materials to your exact specifications.
Slice-by-slice control of each print allows you to change combinations of materials so you can create ultra-realistic anatomies that behave and respond like the real thing.

An open door to new 3D printed pathologies that can be iterated quickly.
Develop new material properties and pathologies to improve patient care and iterate quickly once you’ve developed your desired anatomy or pathology.

An invaluable tool in personalized medicine arsenal.
Replicate patient-specific anatomies for research, training, and treatment to take precision health to a new level.

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