

Augmenting Tactile 3D Data Exploration With Pressure Sensing

Xiyao Wang^{1,2}

Lonni Besançon^{1,2,3}

Mehdi Ammi^{3,2}

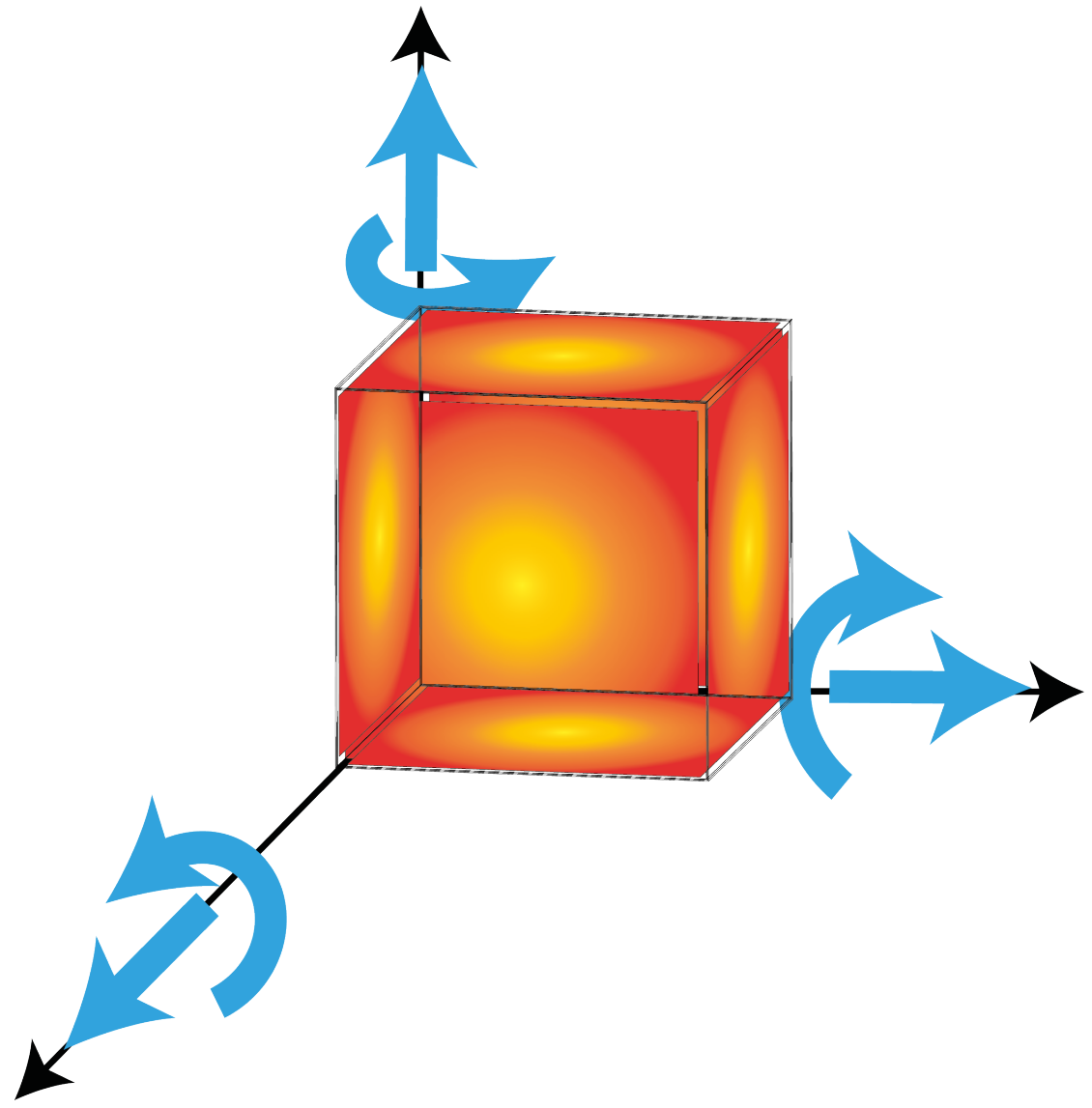
Tobias Isenberg^{1,2}

¹Inria

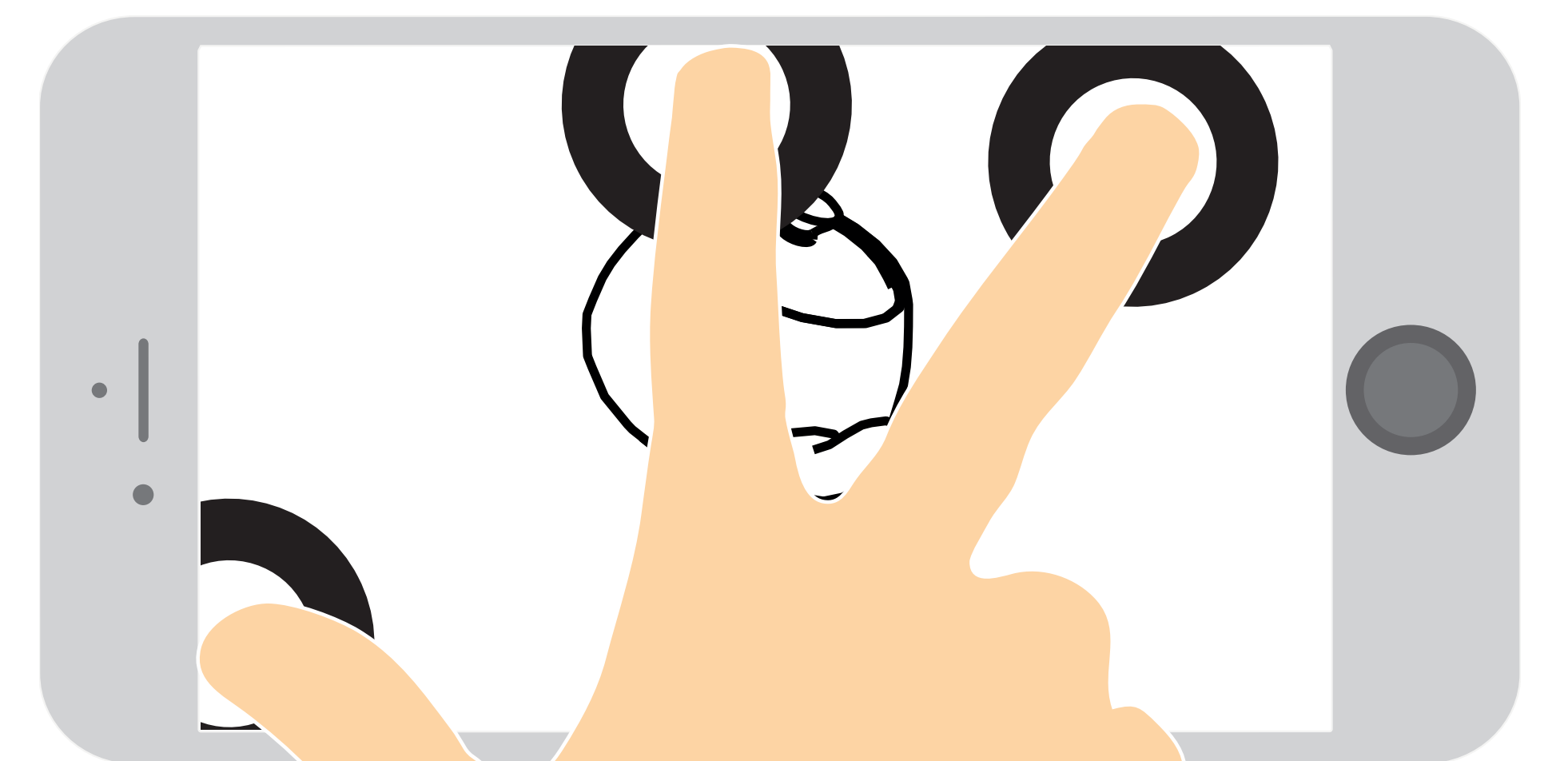
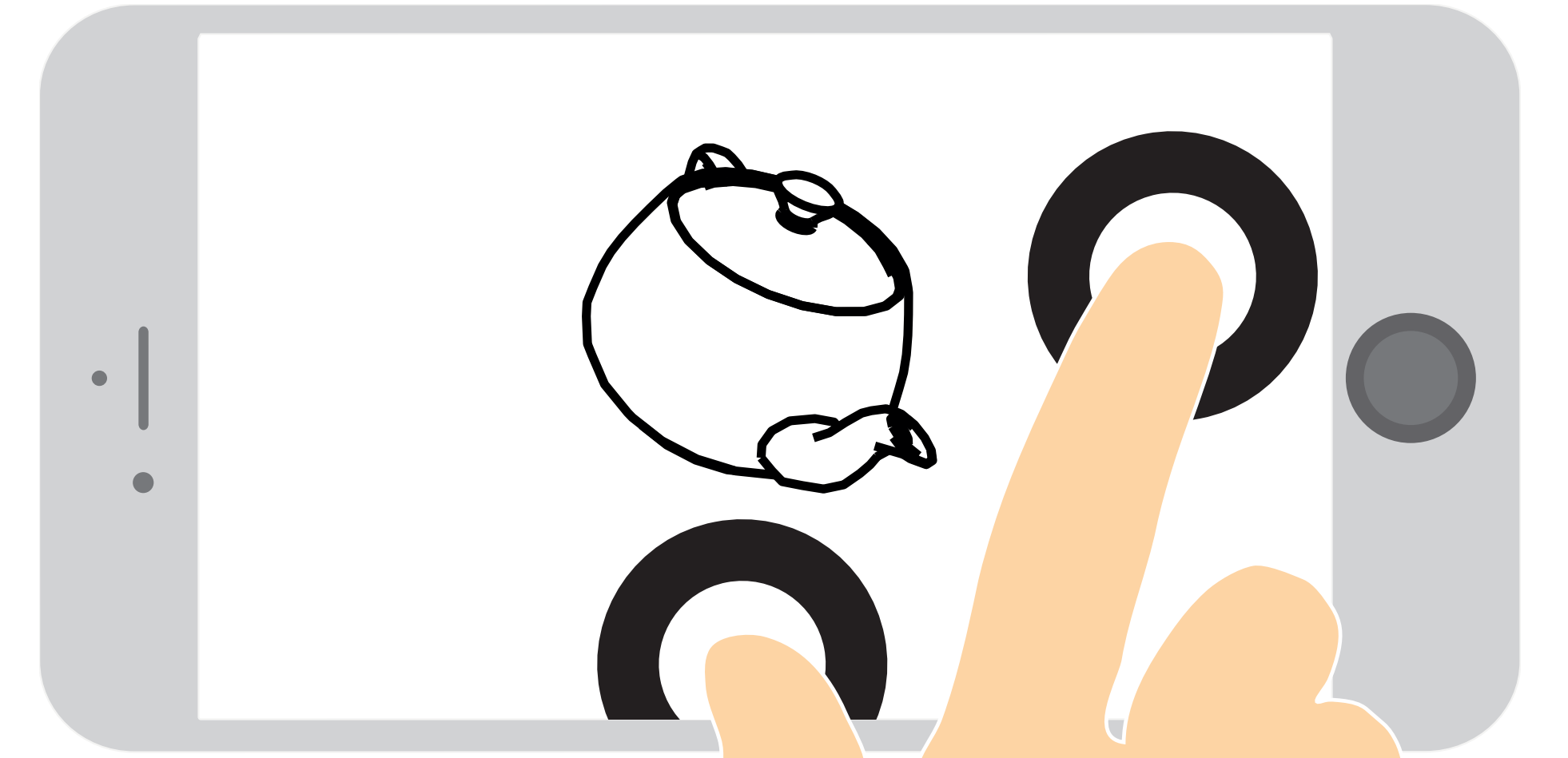
²Université Paris Saclay

³Limsi/CNRS

Problem

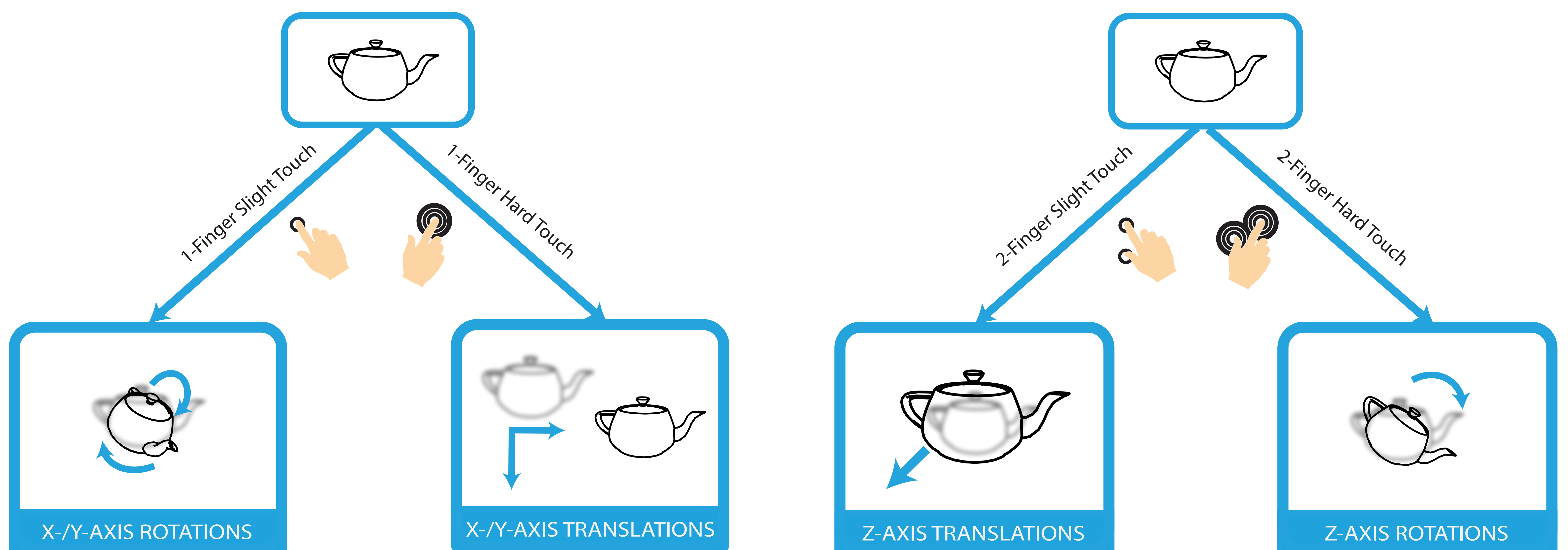
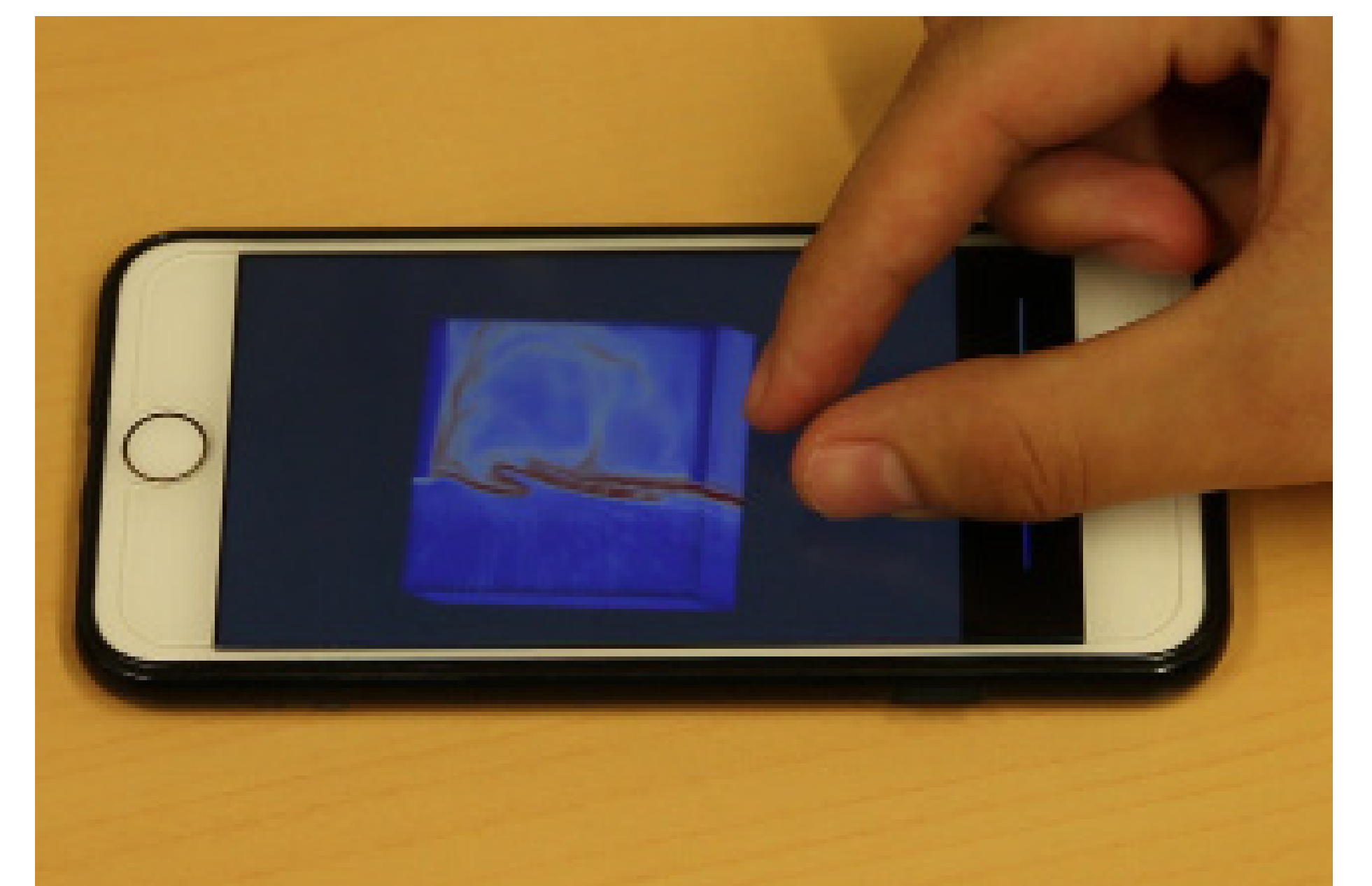
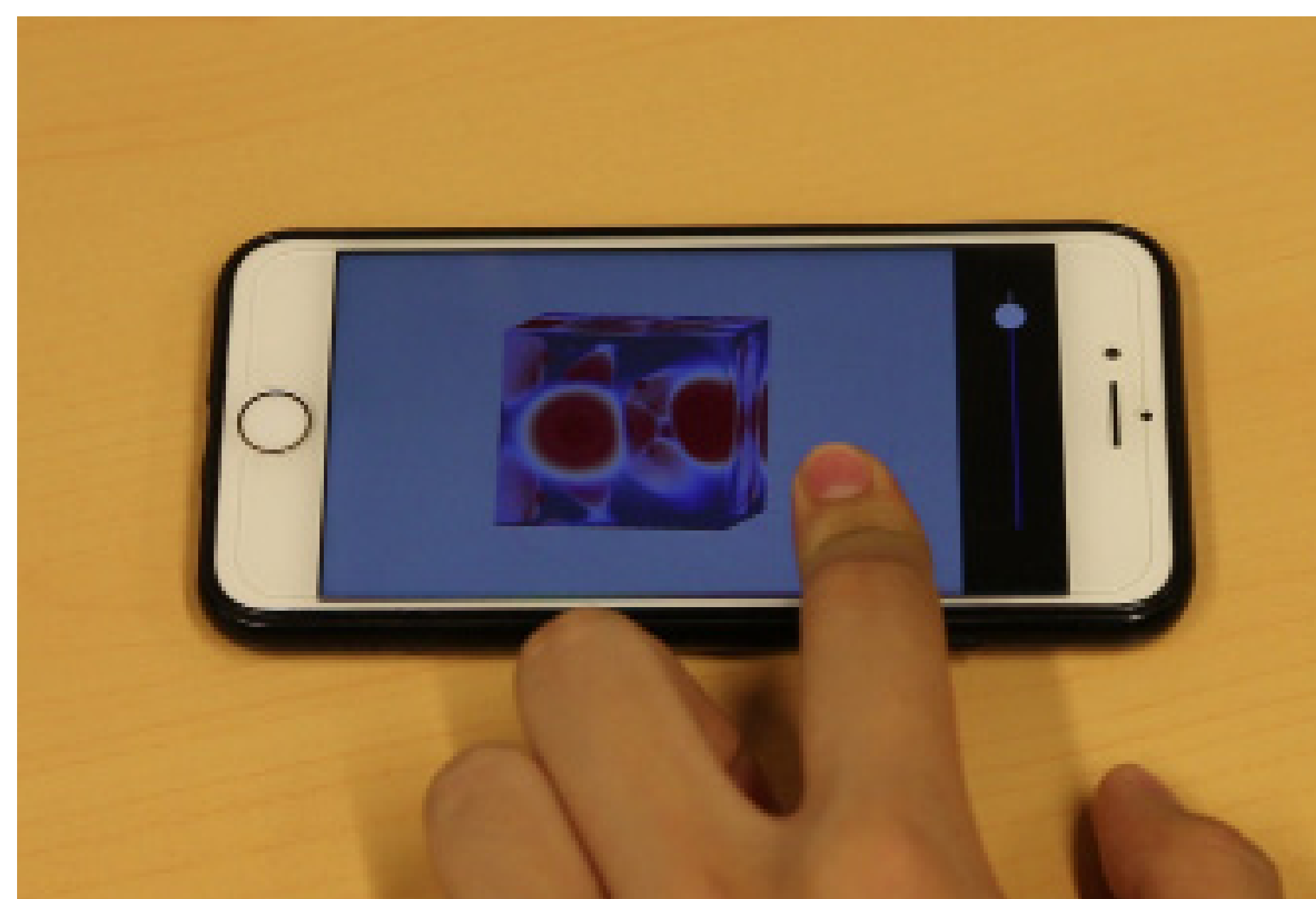


3D data exploration requires up to seven Degrees of Freedom (DoF) for manipulations. Tactile interaction only provides two DoF per finger. Thus, several techniques have been developed which make use of multiple fingers to provide the necessary DoF. However, on mobile devices, using more than two fingers can severely impair data viewing.



Our Approach: Pressure-based Moding

We propose to augment tactile interaction with pressure input. Specifically, we use the pressure input to design quasi-postural moding: based on the pressure at the start of an interaction, we do not manipulate the 3D data but rather with between DOF to be affected by tactile input.



Inria
INVENTEURS DU MONDE NUMÉRIQUE

Aviz

Limsi

université
PARIS-SACLAY

Contact:

lonni.besancon@gmail.com

tobias.isenberg@inria.fr

<http://tiny.cc/pressuretactile>

