



**Non-Contact Sleep Tracking Mobile App, SleepScore, Inspired in Part by ApneaApp™ Research
Performed by University of Washington Researchers**

*Non-contact sleep tracking mobile app provides greatly improved accuracy, simplicity, and ease of use
over current methods*

SEATTLE – July 30, 2018 – [ApneaApp](#), a mobile technology conceived and researched at the University of Washington’s Paul G. Allen School of Computer Science & Engineering and UW Medicine designed to track breathing and body movements without requiring contact with the human body, has helped inspire the active sonar portion of the just-launched [SleepScore mobile application](#), available worldwide to iOS and Android users.

The ApneaApp research was licensed to ResMed, a global leader in sleep technology and medical devices, by CoMotion, the collaborative innovation hub at the University of Washington. The goal of the ApneaApp research was to transform a mobile phone into an active sonar system that emits frequency-modulated sound signals and listens to their reflections. The phone would then monitor the minute chest and abdomen movements caused by breathing as well as other body movements.

ResMed licensed certain intellectual property from CoMotion, including a pending patent application, and leveraging its 15 years of experience in sleep sensing, developed the technology that powers the SleepScore mobile app.

The project was the passion of [Rajalakshmi Nandakumar](#), a PhD student in the UW’s Paul G. Allen School of Computer Science & Engineering. She researched ApneaApp under the supervision of her advisor, UW Associate Professor of Computer Science & Engineering, [Shyam Gollakota](#), and in collaboration with UW Professor of Neurology and Co-director of the UW Medicine Sleep Center, [Dr. Nate Watson](#). Nandakumar earned the [CoMotion Graduate Innovator Award](#) in 2016 for her work on ApneaApp.

“We are excited that ResMed licensed our research into transforming the smartphone into an active sonar system,” says Gollakota, who was recognized by CNN as one of five visionaries changing the world. “And now, through their joint venture with SleepScore Labs, they’ve launched a product that will help enable millions of people to better understand their sleep.”

Sleep problems affect 70 million Americans, 60% of which have a diagnosable sleep disorder. “It’s exciting that SleepScore has the potential to be a simple, noninvasive way for the average person to better understand their sleep longitudinally in a contactless manner,” says Watson of the [UW Medicine Sleep Center](#). “Because what you measure you can manage, this improved understanding of sleep provides the basis for sleep improvement for users.”

“It is extremely gratifying to bring this research from the lab to the public,” says Nandakumar.

“We’re excited about all the great work achieved by University of Washington researchers, ResMed’s Ireland-based software developers and the SleepScore Labs team for making it easier than ever for

anyone to quantify and improve their sleep,” said Michael Wren, senior director of ResMed Sensor Technologies, which developed the sleep tracking technology that powers the SleepScore app. “To see and manage a key facet of your health with just your smartphone is an incredible advancement that I hope millions take advantage of.”

“Improving your health can now be as easy as downloading the free SleepScore app,” said Colin Lawlor, CEO of SleepScore Labs. “I hope everyone downloads it and knows their SleepScore. Individuals worldwide will get a better assessment of their sleep and, collectively, we’ll all learn so much more about how our sleep quality is affected by our lifestyle choices such as when we eat, drink and exercise.”

About ApneaApp:

ApneaApp was researched by a UW-based research team made up of current UW PhD student, Rajalakshmi Nandakumar and her advisor, Associate Professor at the Paul G. Allen School of Computer Science & Engineering Shyam Gollakota, in collaboration with UW Medicine’s Dr. Nate Watson, UW Professor of Neurology, director of the Harborview Medical Center Sleep Clinic, and Co-director of the UW Medicine Sleep Center.

The ApneaApp research project was the basis for a pending patent application, which is part of the intellectual property licensed to ResMed by CoMotion. The ApneaApp research project focused on the use of a mobile device to create an active sonar system that can track the breathing motion and other body movements by transmitting inaudible acoustic signals from the speaker and tracking the reflections from the human body.

About the University of Washington and CoMotion:

Recently ranked by Reuters as the #1 most innovative public university in the U.S., UW is a leading recipient of federal funding research, producing innovations that have the power to change the world—from biofuel alternatives, to more effective treatments for Alzheimer’s disease and brain cancer, to purification technology for drinking water in the developing world.

CoMotion at the UW is the collaborative innovation hub dedicated to expanding the economic and societal impact of the UW community. By developing and connecting to local and global innovation ecosystems, CoMotion helps innovators achieve the greatest impact from their ideas and discoveries.

Contact:

Donna O’Neill

Marketing and Communications

CoMotion at University of Washington

p: 206.685.9972

f: 206.543.0586

e: donnao3@uw.edu

###