

# Cruise control starts runners on right 'note'

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A new app based on technology designed at Simon Fraser University is helping runners to more effectively – and enjoyably – reach and maintain their pace or heart rate goals.

The Cruise Control app is the latest development of biomedical [physiologist](#) Max Donelan and PhD candidate Mark Snaterse from the Locomotion Lab at SFU. The researchers earlier spent years perfecting how to apply the cruise control philosophy to runners of all levels, enabling them to select and then converge on their desired running speed and intensity.

The new app takes it a step further, matching the runner's footsteps to a musical tempo, cued to a runner's song playlist. "It feels like your favorite band is right there with you, timing their kick drum to drive you faster and further," Snaterse says.

The idea grew from the discovery that sound tempo can be used to control running speed. "This works much like cruise control in a car, where sound takes the throttle's role," explains Donelan, noting the research used human experiments and [control theory](#) to produce algorithms to control running speed and intensity. "You can set the preferred speed for your run – say, 10 km in 50 minutes – before you head out.

"During the run you just need to synchronize your steps with the sound, almost like you're dancing. The tempo of the sound is automatically adjusted so that you reach your running goal. Given that you can keep

up, of course."

Cruise Control automatically pulls "good running songs" from the music already on the runner's phone into the app and operates in several modes. It's available at the Apple App Store.

Runners can also receive recommended songs for running on [twitter](#) (by following @CruiseCtrlRun) or by checking [www.cruisecontrolrun.com](http://www.cruisecontrolrun.com).

SFU's Innovation Office (IO) has filed international patent applications after reviewing the technology.

Donelan is a professor of [biomechanics](#) and [neurophysiology](#) in the Department of Biomedical Physiology and [Kinesiology](#) at SFU. In addition to being director of the Locomotion Lab he is chief science officer of Bionic Power – a university spin-off company that is developing energy-harvesting technology for people whose lives depend on portable power.

Prior to [Cruise Control](#), his best-known invention is the Bionic Energy Harvester, featured in the journal Science and named to TIME's best invention list of 2008.

**More information:** [itunes.apple.com/app/id586453280](https://itunes.apple.com/app/id586453280)

Provided by Simon Fraser University

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