




Requests for Collaboration

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<p>Research Interests</p> <ul style="list-style-type: none"> ● Wireless networking ● Signal processing ● ICT for healthcare and medical applications ● Vital sensing 	
<p style="text-align: center;">Creative Achievements in The Application of New and Existing Science and Technology</p>	
<p>(1) Development of a health monitoring system applicable for a group of schoolchildren during physical training in schools</p> <p>(2) Development and implementation of a heart rate sensing technique canceling motion artifact induced during exercise</p> <p>(3) Development and implementation of a wireless ad-hoc networking protocol for a group of exercisers spread in a large sports field</p>	 <div style="border: 1px solid black; border-radius: 15px; padding: 10px; width: fit-content; margin: 10px auto;"> <ul style="list-style-type: none"> • Collection of vital information such as heart rate, energy expenditure and core body temperature • From hundreds of exercisers spread in a large sports field • Using stressless wearable vital sensor devices • By wireless networking technique in real-time, regularly and reliably </div> 
<p style="text-align: center;">Technology (Product, Process, Device, Service etc.) That I Want to Request for Collaboration</p>	
<ul style="list-style-type: none"> ● Infrastructureless indoor localization technique ● Wearable vital sensing technique ● New applications of ICT for healthcare and medicine ● Beyond 5G wireless communications 	
<p>A List of 5 Key Publications</p>	
<ul style="list-style-type: none"> • K. Nakanishi, T. Naka, <u>S. Hara</u>, T. Matsuda, K. Takizawa, F. Ono, and R. Miura, “Route Referencing and Ordering for Synchronization-Free Delay Tomography in Wireless Networks,” <i>EURASIP Journal on Wireless Communications and Networking</i>, 2018. • <u>S. Hara</u>, A. Danjo and K. Matsui, “An Accurate Clock Synchronization Method among Moving Objects Based on Maximum Likelihood Estimation,” (Second Best Paper Award), <i>Proceedings of the 25th International Conference on Telecommunications</i>, Saint Malo, France, 26-28 June 2018. • T. Matsuda, K. Yokota, K. Takemoto, <u>S. Hara</u>, F. Ono, K. Takizawa, and R. Miura, “Multi-Dimensional Wireless Tomography Using Tensor-Based Compressed Sensing,” <i>Wireless Personal Communications</i>, pp 1-24, March 2017. • <u>S. Hara</u>, H. Yomo, R. Miyamoto, Y. Kawamoto, H. Okuhata, T. Kawabata, and H. Nakamura, “Challenges in Real-Time Vital Signs Monitoring for Persons during Exercises,” <i>International Journal of Wireless Information Networks</i>, pp. 1-18, February. 2017. • <u>S. Hara</u>, H. Okuhata, T. Kawabata, H. Nakanura, and H. Yomo, “Real-Time Vital Monitoring for Persons during Exercises — Solutions and Challenges —,” <i>IEICE Transactions on Communications</i>, Vol. E99-B, No. 3, pp. 556-564, March 2016. 	