

## Instructions for Submitting Handshakes

The submission should include a one-page abstract describing the rational behind the proposed handshake and a force function, written in python, that depends on time, position and its time derivatives.

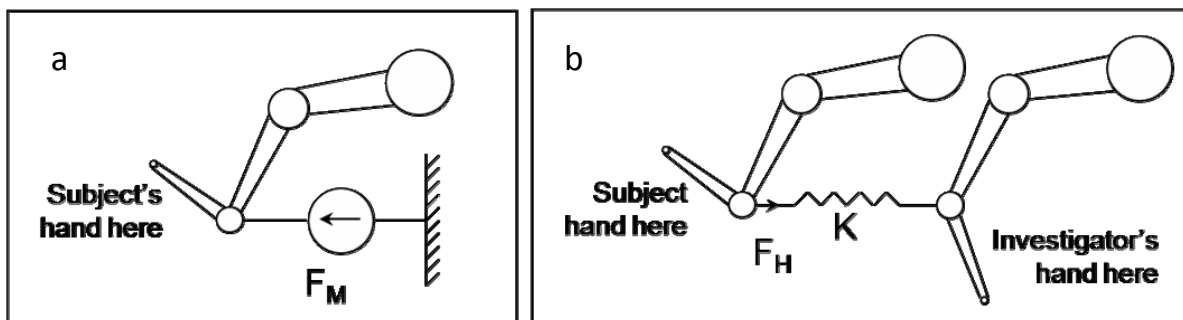
$$F = F(t, y(t))$$

Please send proposals and any inquiries to [akarniel@bgu.ac.il](mailto:akarniel@bgu.ac.il)

Submission deadline – January 2011, email us with requests for extensions.

Check <http://www.bgu.ac.il/~akarniel/HANDSHAKE//index.html> for updates.

The Turing-like handshake test will be administered with two PHANToM® Desktop haptic devices by SensAble Technology Inc, operated using SenseGraphics H3D API. The interrogator and the second human subject are each asked to hold the handle of a haptic device and to generate handshake movements. The force feedback to the interrogator is a force generated by either the tested simulated model of a handshake (fig. a), the other human (fig. b), sometimes combined with noisy force, or a linear combination of the simulated model and the human. Each *handshake* lasts 5 seconds. Each *trial* consists of two handshakes. At the end of the trial, the interrogator is asked which one is more human-like. The answers of the interrogator from all the trials are used to extract a quantitative grade for the proposed simulated model, in terms of similarity to the human handshake- the Model Human-Likeness Grade (MHLG).



It is not necessary to purchase an expensive robotic device and try your function on your own system. Submissions could be based on theoretical concepts only and we would be willing to invest some time on fine tuning promising submissions; however we cannot guarantee such service to each and every submission.

If you would-like to test your proposed model and to see how it feels when implemented in the handshake system, you must have a PHANToM® Desktop haptic devices by SensAble Technology and follow the software installation instructions.

Shortly after the submission deadline we will test the submissions and allow authors to improve their function in case we encounter some implementation problems before we run the actual test.

Then we will run a preliminary subjective selection of the best algorithms based on a quick tournament with one interrogator followed by an extensive experiment with a few interrogators for the leading functions. We will inform the authors about the results of the first round and allow them the option to appeal if they think that they can easily improved their function and get into the second round.