

WIP

Poster session 1P (16:00-16:30 for 20 sec teaser, 16:30-18:00 for poster session 1, July 10th)

[WP1P.01] Thermal Wear for Stuffed Animal to Enhance Therapy Effect.

Katsunari Sato, Nanako Matsuda

[WP1P.02] The stress reduction effect of pneumatic tactile stimulation

Kiyoshi Taninaka, Susumu Ogata

[WP1P.03] Development of a Multi-Functional Handheld Device for Rendering Complex Haptic Sensations on Fingertips.

Yuan-Hao Lu, Shana Smith

[WP1P.04] Resizing of the Peripersonal Space for Different Step Frequencies of Vibrations at the Soles

Tomohiro Amemiya, Michiteru Kitazaki, Yasushi Ikei

[WP1P.05] Method for Modifying Haptic Feedback by Displaying Onomatopoeia

Izumi Mizoguchi, Takuya Nojima

[WP1P.06] A Haptic Substituting System to Enhance the Auditory Perception of the Direction of Arrival

Ryota Sakuma, Yuki Fujita, Keiichi Zempo

[WP1P.07] A Tri-Modal Tactile Display Integrating Electro vibration, Ultrasonic Vibration and Mechanical Vibration

GuohongLiu, Xiaoying Sun, Qionglong Wang, Jian Chen, Xuezhi Yan

[WP1P.08] High-Fidelity Multiphysics Finite Element Modeling of Finger-Surface Interactions with Tactile Feedback

Gokhan Serhat, Katherine J. Kuchenbecker

[WP1P.09] Pseudo-Haptic Feedback in a Projected Virtual Hand for Tactile Perception of Textures

Yushi Sato, Naruki, Tanabe Kohei, Morita Takefumi, Hiraki Parinya, Punpongsanon, Haruka Matsukura, Daisuke Iwai, Kosuke Sato

[WP1P.10] Noncontact Pain Display by Temperature Control

Mitsuru Nakajima, Yasutoshi Makino, Hiroyuki Shinoda

[WP1P.11] Effects of Vibrotactile Cues on Cutaneous Force Feedback in a Task of Grasping Force Modulation

Massimiliano Gabardi, Daniele Leonardis, Michele Barsotti, Massimiliano Solazzi, Antonio Frisoli

[WP1P.12] Tactule: Tactile display modules utilizing multilayer-bimorph piezoelectric vibrators -Their applications in tactile game controllers (TactCon)-

Takahiro Miura, Atsushi Katagiri, Ken-ichiro Yabu, Masaki Matsuo, Masatsugu Sakajiri, Tohru Ifukube

[WP1P.13] Guiding Attention with Tactile Feedback

Kazuki Sakurada, Masashi Nakatani

[WP1P.14] Human-Arm Roll Estimation in Underactuated Grippers with Proprioceptive Feedback

Juan M. Gandarias, Francisco Pastor, Antonio J. Muñoz-Ramírez, Jesús Manuel Gómez-de-Gabriel

[WP1P.15] Phase-control Free Vibrotactile Rendering Method for Flexible Vibrotactile Actuator

Dong-Soo Choi, Sang-Youn Kim

[WP1P.16] Development of Strain Gauge Wound Flexible Tactile Sensor using a Liquid Metal

Tatsuho Nagatomo, Norihisa Miki

[WP1P.17] Human-in-the-loop stability analysis of haptic rendering of a virtual stiffness with delay – the effect of arm impedance.

Reut Nomborg, Ilana Nisky

[WP1P.18] Stiffness Perception in Scaled Interaction using a Haptic Gripper

Amit Milstein, Lidor Bahar, Ilana Nisky

[WP1P.19] Tactile Perception Similarity Between Physically Continuous Stimulation and Discrete Point Stimulation

Tao Morisaki, Masahiro Fujiwara, Yasutoshi Makino, Hiroyuki Shinoda

[WP1P.20] Mid-Air Ultrasonic Stimulations of the Palm – The Influence of Frequency and Stimulus Duration on Perceived Intensity

Karina Driller, William Frier, Sylvia Pont, Jess Hartcher-O'Brien

[WP1P.21] Measurement of Touch Interaction Cues in Discriminating Soft Fruit

Chang Xu, Hankun He, Steven Conrad, Hauser Gregory, John Gerling

[WP1P.22] The Effect of Kinesthetic Uncertainty on Stiffness Perception

Hanna Kossowsky, Mor Farajian, Ilana Nisky

[WP1P.23] Shape Dependent Change of Effective Cues for Shape Discrimination

Ryoma Tanase, Hiroaki Gomi

[WP1P.24] Friction perception at initial contact with textured and rough surfaces

Naqash Afzal, Heba Khamis, Michael Wiertelwski, Stephen J. Redmond, Richard, M Vickery, Ingvars Birznieks

[WP1P.25] Effect of Vibro-Tactile Stimulation to Toenail on Control of Center of Mass During Walking

Haruki Toda, Mitsunori Tada, Yuki Hashimoto

[WP1P.26] Interferometric Tribometer for Wide-Range/High-Bandwidth Measurement of Tactile Force Interaction

Corentin Bernard, Jocelyn Monnoyer, Sølvi Ystad, Michael Wiertelwski

[WP1P.27] Characterization of Active Haptic Feedback for User Interface Design and Development

Stefan Heijboer, Stefan Josef, Breitschaft, Claus-Christian Carbon

[WP1P.28] Mid-Air Haptic Textures from Graphics

David Beattie, Orestis Georgiou, Adam Harwood, Rory Clark, Benjamin Long, Tom Carter

[WP1P.29] Mind the Spatiotemporal Gap: Skin Viscoelasticity Limits our Perception of Discontinuous Motion

Laurence Willemet, Bruno Cochelin, Michael Wiertelwski

[WP1P.30] Evaluation of Time Domain and Frequency Domain Classification Ability in Acceleration Tactile Signals

Masahiro Koga, Satoshi Saga, Shotaro Agatsuma, Junya Kurogi, Tsuyoshi Usagawa

[WP1P.31] Soft Haptic Display using DEA Composed of Slide-Ring Material for Wearable in Daily Life

Tadatoshi Kurogi, Yuji Yonehara, Ryusuke Horibe, Roshan L. Peiris, Masatoshi Shimada, Takeshi Fujiwara, Kouta Minamizawa

[WP1P.32] PATCH: Pump-Actuated Thermal Compression Haptics

David Kwame Owusu-Antwi, Weicheng Wu, Heather Culbertson

[WP1P.33] Providing Proprioceptive Feedback by Means of Vibrotactile Stimuli: A Way to Improve Body Integration of A

Prosthetic Arm

Malika Auvray, Gabriel Arnold, Yann Kechabia, Nathanael Jarasse

[WP1P.34] Control Tactile Feel of Glass by Visually Imperceptible Structure

Misa Inamoto, Satoru Tomeno

[WP1P.35] Effects of Directions of Lateral Motion on Perceived Strength in Fingertip

Harue Sasaki, Hiroshi Haga, Kengo Fujii, Sho Onose, Hirotsugu Yamamoto, Koji Shigemura

[WP1P.36] Fingertip Friction Enhances Human Perception of Normal Force Changes,

David Gueorguiev, Julien Lambert, Jean-Louis Thonnard, Katherine J. Kuchenbecker

Interactive session I (16:00-16:30 for 20 sec teaser, 16:30-18:00 for interactive session 1, July 11th)

[WPI.01] Potential for Multiplexing Information during Electrical Burst Stimulation of Digital Nerves.

Kevin KW Ng, Christoffer Olausson, Richard M Vickery, Ingvars Birznieks

[WPI.02] Describing the Sensation of 'Velvet Hand Illusion' in Terms of Common Materials.

Takumi Yokosaka, Scinob Kuroki, Shin'ya Nishida

[WPI.03] Tactile perception of pleasantness in relation to perceived softness.

Achille Pasqualotto, Megan Ng, Ryo Kitada

[WPI.04] Fingers differ in judging softness due to sensory and motor factors.

Aaron Cedric Zoeller, Knut Drewing

[WPI.05] Spatial recognition through upper-body proximity sensing and displaying wearable device.

Kohki Serizawa, Yuichi Masuda, Akihito Noda, Masahiro Fujiwara, Yasutoshi Makino, Hiroyuki Shinoda

[WPI.06] Using haptic shapes for orientation and identification in automotive user interfaces.

Stefan Josef Breitschaft, Stella Clarke, Claus-Christian Carbon

[WPI.07] Numerosity perception of temporally grouped vibration pulses.

Myrthe Plaisier, Raymond John Holt, Astrid Kappers

[WPI.08] Haptic feedback in a myoelectric prosthesis: Task performance and neurophysiological cognitive load assessment.

Neha Thomas, Garrett Ung, Hasan Ayaz, Jeremy Brown

[WPI.09] Hold-through: Run-through of the holds on the bouldering wall by haptic/tactile guide for blind climbers.

Takahiro Miura, Sho Aita, Tadahiro Sakai, Toshihiro Shimizu, Takuya Handa, Masatsugu Sakajiri, Junji Onishi

[WPI.10] Less Frictional Skin-like materials Are Felt Softer in a Physically Inconsistent Manner.

Naomi Arakawa, Shogo Okamoto

[WPI.11] Effects of Visual Motion on Tactile Roughness Perception Do Not Appear with Passive Dynamic Touch.

Yosuke Suzuishi, Scinob Kuroki, Souta Hidaka

[WPI.12] Forward-Flexion Illusionary Force in Thumb-Index and Middle Fingers with Electrical Stimulation for Stickiness Haptic Feedback.

Vibol Yem, Yasushi Ikei, Hiroyuki Kajimoto

[WPI.13] Effects of skin softness on the coefficient of friction when a bare finger slides on the skin.

Koki Inoue, Shogo Okamoto, Yasuhiro Akiyama, Yoji Yamada

[WPI.14] Development of vibrotactile sensation sensor during the light brushing of skin.

Naoki Saito, Saito Sakaguchi, Kohei Matumori, Ryuta Okazaki, Naomi Arakawa, Shogo Okamoto

[WPI.15] A Computational Model of Skin Deformation Sensing from Simulated Mechanoreceptors.

Javier Tapia, Jesús Pérez Rodríguez, Miguel Otaduy

[WPI.16] Haptic perception of similarity between 3D-printed surfaces with well-defined relief and roughness parameters.

Riad Sahli, Aubin Prot, Kwang-Seop Kim, Chan Kim, Anle Wang, Martin Müser, Roland Bennewitz

[WPI.17] Searching for the oblique effect in whole-hand tactile perception.

Jarred Lerusso, Kristian Rusanov, Marlou Perquin, Yi-Jhong Han, Holly E. Rossiter, James Kolasinski

[WPI.18] Design and Development of a Garment-based, Dynamic Compression System using Active Materials.

Esther W Foo, J Walter Lee, Simon Ozbek, Crystal Compton, Nicholas Schleif, Brad Holschuh

[WPI.19] Sensitivity to Haptic-Audio Envelope Asynchrony.

Alfonso Balandra, Shoichi Hasegawa

[WPI.20] Frequency characteristics of phase differences between normal and shear forces induced during tactile exploration of natural materials.

Hikaru Hasegawa, Shogo Okamoto, Yoji Yamada

[WPI.21] The Dispersive Nature of Mechanical Waves in Human Fingers.

Camille Fradet, Louise R Manfredi, Sliman Bensmaia, Vincent Hayward

[WPI.22] Investigating the effects of exploration dynamics on stiffness perception.

Mohit Singhala, Jeremy Brown

[WPI.23] Neuro-Hapband: A Portable Haptic Solution for Neurofeedback Therapy.

Farhad Shabani, Sajid Nisar, Hemma Philamore, Fumitoshi Matsuno

[WPI.24] Understanding the Pull-off Force of the Human Fingerpad.

Saekwang Nam, Katherine J Kuchenbecker

[WPI.25] Impulsive force display by a string and a brake system.

Naoto Ikeda, Satoshi Saga

[WPI.26] Improved finger dexterity via vibration applied to fingernails.

Xuqing Tang, Yuki Hashimoto

[WPI.27] An Attempt of Displaying Method by Passive Touch with Electrostatic Tactile Display.

Hirobumi Tomita, Satoshi Saga, Hiroyuki Kajimoto, Simona Vasilache, Shin Takahashi

[WPI.28] Tactile Subitisation With a Finger Braille Device.

Basil Duvernoy, Vincent Hayward

[WPI.29] Haptic Sketches on the Arm for Manipulation in Virtual Reality.

Mine Sarac, Allison M Okamura, Massimiliano Di Luca

[WPI.30] Roughness Perception in an Encountered Haptic Interface Using Drone.

Yuta Saito, Photchara Ratsamee, Yoshihiro Kuroda, Nobuchika Sakata, Kiyoshi Kiyokawa

[WPI.31] Empirical Study on Transfer Functions from Wrists to Hands.

Taku Hachisu, Yitian Shao, Kenji Suzuk, Yon Visell

[WPI.32] A Vibrotactile Haptic Interface based on Particle Jamming.

Joshua Brown, Ildar Farkhatdinov

[WPI.33] Perceptual effects of tendon vibration and visual manipulations in VR and AR.

Rakshatha Kabbaligere, Massimiliano Di Luca, Anne Hermes, Femk van Beek

[WPI.34] Why Surface Haptics Cannot Represent Realistic Tactile Sensations: Pilot Study.

Shoki Kitaguchi, Hiroki Ishizuka

[WPI.35] Midair Tactile Reproduction of Real Objects Using Microphone-Based Tactile Sensor Array.

Emiri Sakiyama, Daichi Matsumoto, Masahiro Fujiwara, Yasutoshi Makino, Hiroyuki Shinoda

[WPI.36] Haptic exploration of a cell morphology and rheology properties at nanoscale using AFM PeakForce mode.

Marwene Kechiche, Claudie Petit, Florence Marchi, Rosario Toscano, Valentine Bolcato, Emmanuelle Planus, Ioan-Alexandru Ivan

Poster session 2P (16:00-16:30 for 20 sec teaser, 16:30-18:00 for poster session 2, July 11th)

[WP2P.01] Thresholds of Haptic Perception and Bone Conduction in Midair Facial Stimulation

Saya Mizutani, Masahiro Fujiwara, Yasutoshi Makino, Hiroyuki Shinoda

[WP2P.02] Verification of Phantom Sensation inside the Forearm

Yoshiki Hosoya, Junji Watanabe, Yuki Hashimoto

[WP2P.03] An investigation of the influence of false heartbeat feedback on subjective facial attractiveness

Yizhen Zhou, Koyo Nakamura, Aiko Murata, Katsumi Watanabe, Junji Watanabe

[WP2P.04] Vibro-Vestibular Wheelchair for Motion Sensation and Road Material Property Feedback

Tsubasa Morita, Vibol Yem, Yasushi Ikei

[WP2P.05] Inflatable Haptic Sensor for the Torso of a Hugging Robot

Alexis E Block, Katherine J. Kuchenbecker

[WP2P.06] Haptic Texture Illusions using Sound and Vibration Cues for Use in Surgical Simulation

Carolyn Mattes-O'Brien, Marino Menozzi, Markus Oelhafen, Roger Gassert

[WP2P.07] Step-Change in Friction under Electro-vibration

Idil Ozdamar, Mohammedreza Alipour Sormoli, Cagatay Basdogan

[WP2P.08] ThermalTex : A thermal-texture display for presenting surface texture

Xingwei Guo, Yuru Zhang, Wenxuan Wei, Dangxiao Wang, Jian Jiao

[WP2P.09] Adaptic: A Shape Changing Prop with Haptic Retargeting

John C. McClelland, Johann Felipe Gonzalez Avila, Robert J. Teather, Pablo Figueroa, Audrey Girouard

[WP2P.10] Thermal-Radiation-Based Haptic Display - Laser-Emission-Based Radiation Control -

Satoshi Saga

[WP2P.11] Human-centered Control of a Growing Soft Robot for Object Manipulation

Fabio Stroppa, Ming Luo, Giada Gerboni, Margaret M. Coad, Julie M. Walker, Allison M. Okamura

[WP2P.12] Development of Thermal Tactile Sensation Display Platform with Controllable Thermal Conductivity

Seiya Hirai, Norihisa Miki

[WP2P.13] Display of Simultaneous Vibrotactile Rhythms on the Fingertips and Forearm

Sophia R. Williams, Allison M. Okamura

[WP2P.14] Impact of Direct Velocity Measurement on Uncoupled Stability of Haptic Simulation Systems

Victor A. Luna Laija, P. Gizem Ozdil, Keyvan Hashtrudi-Zaad

[WP2P.15] Preliminary results of an Exoskeleton-based Bimanual and Bilateral Teleoperation with Time Domain Passivity Approach

Francesco Porcini, Domenico Chiaradia, Simone Marcheschi, Massimiliano Solazzi, Antonio Frisoli

[WP2P.16] Preliminary investigation into how limb choice affects kinesthetic perception

Mohit Singhala, Amy Chi, Maria Coleman, Jeremy Brown

[WP2P.17] Quantifying the mechanical impedance of the tissues about the wrist for haptic display design

Gaurav Mukherjee, Elia Gatti, Ali Israr, Andrew Doxon, Daniele Piazza, Cesare Parise, Raymond King

[WP2P.18] Evaluating the Efficiency of Six-DoF Haptic Rendering-Based Virtual Assembly Training

Danyong Zhao, Mianlun Zheng, Jernej Barbic