

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LULULEMON ATHLETICA CANADA INC. and LULULEMON USA INC.
Petitioner,

v.

NIKE, INC.,
Patent Owner.

Patent: 8,620,413

DECLARATION OF DR. KEVIN LYNCH, PH.D.

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1. My name is Kevin Lynch. I have been retained regarding an *inter partes* review proceeding involving U.S. Patent No. 8,620,413 (Ex. 1001, “the ’413 patent”). I have been asked to analyze how a person of ordinary skill in the art (“POSITA”) would have understood certain references before April 17, 2003, and whether a POSITA would have modified or combined them. I identify the references that I considered and describe my opinions regarding them in this declaration. I understand that Petitioner will submit this declaration as an exhibit to a petition for *inter partes* review of U.S. Patent No. 8,620,413.

2. I have personal knowledge of the facts and opinions set forth in this declaration and believe them to be true. If called upon to do so, I would testify competently thereto. I have been warned that willful false statements and the like are punishable by fine or imprisonment, or both.

3. I am being compensated for my time at my standard consulting rate. I am also being reimbursed for expenses that I incur during my work. My compensation does not depend on the results of my study and analysis, the substance of my opinions, or the outcome of any proceeding involving the Challenged Claims. I have no financial interest in the outcome of this matter or in any litigation involving the ’413 patent.

I. Qualifications

4. I am a professor at Northwestern University's McCormick School of Engineering and the director of Northwestern University's Center for Robotics and Biosystems. I earned my Bachelor of Science in Engineering in Electrical Engineering with honors from Princeton in 1989 and my Ph.D. in Robotics from Carnegie Mellon University in 1996. I joined Northwestern University's faculty a year later, in 1997.

5. My research interests include (1) motion planning and control for dynamic robotic systems, robotic manipulation, and underactuated systems, (2) assembly and automation, (3) control of networked multi-robot systems ("swarm robotics"), (4) and physical human-robot interaction. My research in these areas has been funded by the National Science Foundation, the National Institutes of Health, the Office of Naval Research, the Army Research Lab, and other funding agencies.

6. In our work on physical human-robot interaction, one or more robots physically interact with one or more humans in tasks such as assistive manipulation of large loads in warehouse-type settings, rehabilitation after injury, or assistance after injury. We use a variety of sensors such as force-torque sensors, vision tracking, accelerometers, inertial measurement units (IMUs), encoders, and electromyography (EMG) sensors to detect human activity. In one example of physical human-robot interaction, the activity of one human is measured (and

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