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On The Cover: BSU's Vicon Motion-Capture System

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Editor in Chief

Jenny Olin Shanahan, Ph.D.

Managing Editor

Susan J. Levasseur, Ph.D.

Assistant Editor

Rachel-Beth Gagnon

Layout

Ken Green

Contact Information:

Office of Undergraduate Research
200 Maxwell Library
10 Shaw Rd.
Bridgewater State University
Bridgewater, MA 02325
508-531-2805

http://vc.bridgew.edu/undergrad_rev/

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On the Cover:

Faculty and students conducting biomechanics research, such as walking-gait analyses, utilize BSU's state-of-the-art, eight MX-T10S-camera Vicon motion-capture system, which depicts 3D motion from any angle. The image on the cover was generated by first placing reflective markers at the participant's hips (greater trochanter of the femur), thighs (mid shaft of the femur), knees (lateral epicondyle of the femur), shanks (mid shaft of the tibia), ankles (lateral malleolus of the fibula), heels (base of the calcaneus) and toes (base of the second metatarsal). The joint markers were then captured by the Vicon Nexus software to assess walking gait and locomotion three-dimensionally. The wavy blue lines in the image represent the tracking of movement at the joints. The gray square labeled "1" is a force plate, which measures the force of movement. The red arrow indicates the magnitude and direction of the ground reaction force. Motion-capture technology facilitates the biomechanics research conducted by Dr. Tong-Ching Tom Wu (Associate Professor of Movement Arts, Health Promotion and Leisure Studies) and his students Tyler Champagne (p. 65) and Ariana LaFavre (p. 131), whose investigations of walking gait help improve fundamental human motion.