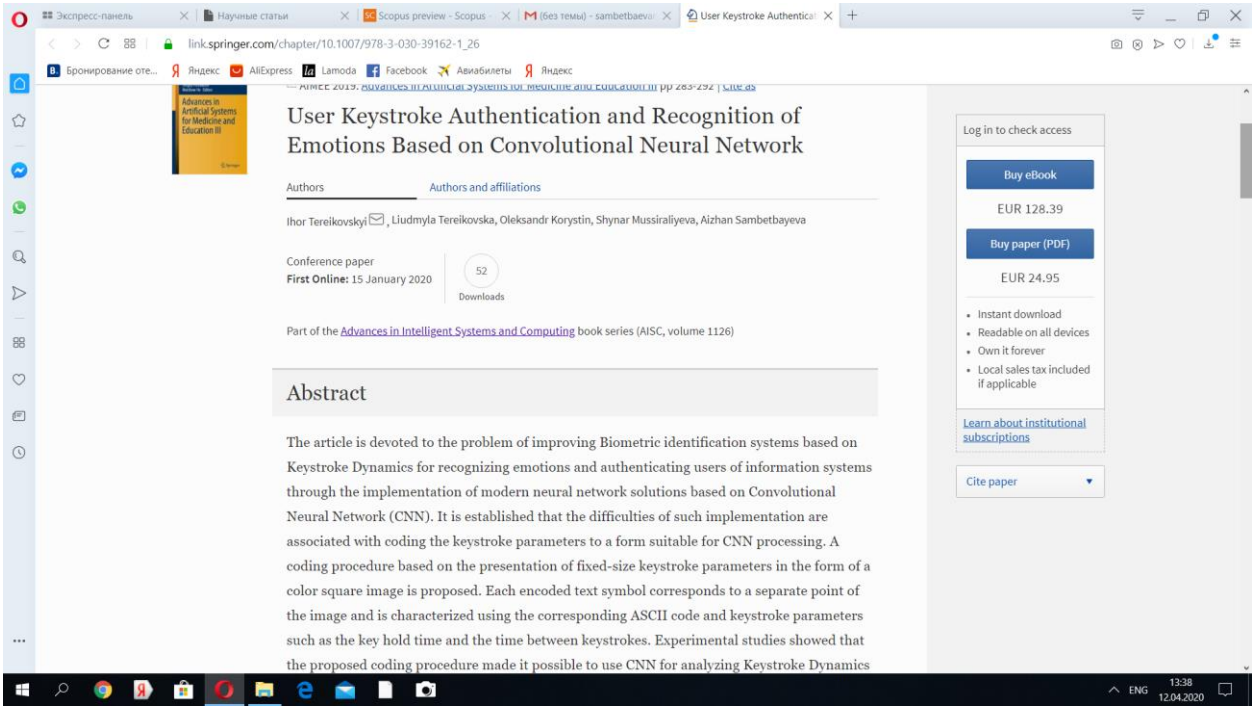
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Advances in Artificial Systems for Medicine and Education III
User Keystroke Authentication and Recognition of Emotions Based on Convolutional Neural Network
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Abstract
The article is devoted to the problem of improving Biometric identification systems based on Keystroke Dynamics for recognizing emotions and authenticating users of information systems through the implementation of modern neural network solutions based on Convolutional Neural Network (CNN). It is established that the difficulties of such implementation are associated with coding the keystroke parameters to a form suitable for CNN processing. A coding procedure based on the presentation of fixed-size keystroke parameters in the form of a color square image is proposed. Each encoded text symbol corresponds to a separate point of the image and is characterized using the corresponding ASCII code and keystroke parameters such as the key hold time and the time between keystrokes. Experimental studies showed that the proposed coding procedure made it possible to use CNN for analyzing Keystroke Dynamics
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