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(54) **SYSTEMS AND METHODS OF ADAPTIVELY
SECURING NETWORK COMMUNICATION
CHANNELS**

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(57) **ABSTRACT**

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Systems and methods for monitoring suspicious communication network traffic. The methods include obtaining data associated with a sequence of communication events transmitted via the communication network and determining an entropy approximation measure associated at least one event attribute for the sequence of communication events. The method includes generating a threat prediction value based on an anomaly classification model and the entropy approximation measure. The anomaly classification model is trained based on prior sequences of communication events to identify a non-outlier anomaly range associated with the at least one event attribute. The threat prediction value is generated based on classification of the entropy approximation measure relative to the non-outlier anomaly range associated with the at least one attribute for identifying a potential threat. The method includes transmitting a signal for communicating that the sequence is a potential threat within the communication network.

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