Concordia University researchers led by professor Benjamin Fung have developed a technique to determine the authors of anonymous emails with a high degree of accuracy. Malicious anonymous emails can "transmit threats or child pornography, facilitate communications between criminals, or carry viruses," Fung says. Although authorities can use the Internet protocol address to locate the building where the email originated, they have no way to differentiate between several suspects. Fung's method uses speech recognition and data-mining techniques to identify an individual author. First the researchers identify the patterns found in emails written by the suspect, and then they filter out any patterns that also are found in the emails of other suspects, leaving only the patterns that are unique to the original suspect. "Using this method, we can even determine with a high degree of accuracy who wrote a given email, and infer the gender, nationality, and education level of the author," Fung says. Testing showed that the system can identify an individual author of an anonymous email with up to 90 percent accuracy.

Full article: http://www.concordia.ca/now/what-we-do/research/20110307/identifying-anonymous-email-authors.php