

# Human and Automation

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One of the most successful achievements of modern technology is the introduction of computers and automation. Computers and automation participate in almost every part of modern life, including safety critical systems. As this participation proceeded, however, a considerable number of unpredicted problems were observed. These problems are a result of operators being surprised by unpredicted or counterintuitive behaviour of the system. Questions like “why did it do that?”, “what is it doing now?” and similar ones became very common and as more automation was used, even designers failed to understand the endless resulting peculiarities. In many systems these “peculiarities” remain unexplained and practitioners just learn “to live with them.”

However, learning to live with some peculiarities does not mean that all problems are resolved, nor does it mean that there are no more severe surprises. Many fatal accidents have been attributed to such surprises. The Cali and Nagoya accidents exemplify the phenomena. Both will be discussed briefly. The main part of the presentation will be devoted to various beliefs such as reduction of operator workload, skill compromise and elimination or overcoming human errors that automation has provoked but were found to be myths.