Anders Dahlbom is part of the information fusion research program at the University of Skövde, Sweden. He is also a member of the Skövde Artificial Intelligence Lab, SAIL. His main research interests are artificial intelligence, machine learning, information fusion and computer games.

In this doctoral thesis, Dahlbom looks at the problem of recognising situations that may be of partial temporal nature. The purpose of situation recognition is to aid decision makers to focus on relevant information by filtering out situations of interest. This is an important problem to solve due to the large amount of available information in various decision making situations. In this thesis, Dahlbom investigates the viability of Petri nets for addressing the situation recognition problem.

In the thesis, Dahlbom presents an extended Petri net based technique for addressing the situation recognition problem, since existing approaches for recognition using Petri nets have some limitations when it comes to the specific problem of situation recognition. Experiments are carried out that compares the Petri net based technique with a rule based technique using the Rete algorithm. Results show that the Petri net based technique can be as efficient in solving the task. In the thesis, Dahlbom also empirically investigates the problem of learning Petri nets representing interesting situation types, through the use of genetic algorithms.