

# Multi-Model Based Incident Prediction and Risk Assessment in Dynamic Cybersecurity Protection for Industrial Control Systems

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Introduction

Hazardous Incident Prediction

The Bayesian Network Based Knowledge Modeling  
Incident Prediction

Dynamic Risk Assessment

Classification of Incident Consequences  
Quantification of Incident Consequences  
Calculation of Dynamic Risk

Simulation

Knowledge Modeling and Simulation Platform  
Simulation and Result Analysis

# Introduction

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# **Hazardous Incident Prediction**

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# Function Level

# Incident Level

# Collection of Evidence



# Calculation of Incident Probability

# Dynamic Risk Assessment

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# Harm to Humans

# Environmental Pollution

# Property Loss

# Quantification of Harm to Humans

# Quantification of Environmental Pollution

# Quantification of Property Loss



# Calculation of Dynamic Risk

# Simulation

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# Knowledge Modeling and Simulation Platform

# Simulation and Result Analysis

**Questions?**