

# Learning Sum-Product Networks

Nicola Di Mauro   Antonio Vergari

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# The need for SPN

- ▶ tractable inference

# Representation

# Interpretation

- ▶ probabilistic model
- ▶ deep feedforward neural network

# Network Polynomials

# Arithmetic Circuits

- ▶ SPNs are a special case of ACs

# Inference(s)

# Parameter Learning



# Structure Learning

# SPN Understanding

# (SPN-based) Representation Learning

# Applications

# Open Problems and Future Investigations