

Quantitative Modelle der Informatik

February 19, 2015

1 Themenübersicht

Gewichtete Automaten

THEMA 01: Grundlagen gewichteter Automaten [6] (Ch. 1, 6.1, 6.2) ★★

THEMA 02: Algorithmen für gewichtete Automaten [6] (Ch. 6.3 - 6.8) ★★

THEMA 03: Ein probabilistischer Algorithmus für Sprachäquivalenz [9] ★

THEMA 04: Fuzzy Languages [6] (Ch. 12) ★★★

THEMA 05: Gewichtete Automaten für die Verarbeitung natürlicher Sprache [6] (Ch. 14) ★

Probabilistische Systeme

THEMA 06: Markow-Ketten [8] (Ch. 11) ★

THEMA 07: Hidden Markow Models [14] ★★★

THEMA 08: Probabilistische Bisimulation [12], [3] (Ch. 10.4.2) ★★

THEMA 09: Probabilistisches Model Checking [3] ★★

THEMA 10: Metrische Transitionssysteme [2] ★★/★★★

THEMA 11: Metriken für probabilistische Systeme [5] ★★/★★★

THEMA 12: Markow-Entscheidungsprozesse mit unendlichen Zustandsräumen [13] ★★★

THEMA 13: PRISM, ein probabilistischer Model-Checker [10, 11], URL zum Tool: <http://www.prismmodelchecker.org> ★★/★★★

Zeitautomaten

THEMA 14: Zeitautomaten [1], [3] (Ch. 9) ★/★★

THEMA 15: UPPAAL, ein Tool für Zeitautomaten [4], URL zum Tool: <http://www.uppaal.org> ★★/★★★

Quantencomputing

THEMA 16: Grundlagen des Quanten-Computing und Quanten-Signalübertragung

[15] ★★/★★★★

THEMA 17: Quanten-Programmierung in Quipper [7, 16] ★★/★★★★

THEMA 18: Faktorisierung ganzer Zahlen in Polynomzeit mit Quantencomputern [15] ★★/★★★★

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