Automata Theory

- Marcelo Fiore. Lecture Notes on Regular Languages and Finite Automata. Cambridge University. Section 1 and 2. https://www.cl.cam.ac.uk/teaching/1011/RLFA/LectureNotes.pdf
- Hugo A. López. Slides Week 2 – System Integration. https://learn.inside.dtu.dk/d2l/le/content/187723/viewContent/759597/View

Petri Nets

Petri Net model elements and properties

- 4 - Behavioral Models with Petri Nets slides (1-35, 43-54)
- Van der Aalst et al. - Workflow Management: Models, methods and systems
  - Available at: https://pure.tue.nl/ws/files/2456322/543561.pdf
  - Read Chapter A.1, 2.2

Reachability graph

- 4 - Behavioral Models with Petri Nets slides (36-42)
- Van der Aalst et al. - Workflow Management: Models, methods and systems
  - Available at: https://pure.tue.nl/ws/files/2456322/543561.pdf
  - Read Chapter 4.1 to 4.2

Workflow nets

- 4 - Behavioral Models with Petri Nets slides (56-61)
- Van der Aalst et al. - Workflow Management: Models, methods and systems
  - Available at: https://pure.tue.nl/ws/files/2456322/543561.pdf
  - Read Chapter A.2, 2.3 (not 2.3.3)

Soundness

- 4 - Behavioral Models with Petri Nets slides (62-69)
- Van der Aalst et al. - Workflow Management: Models, methods and systems
  - Available at: https://pure.tue.nl/ws/files/2456322/543561.pdf
  - Read Chapter A.3, 4.3

Models for Distributed Systems

CCS and Label-Passing CCS

- Roberto Gorrieri and Cristian Versari. Introduction to Concurrency Theory: Transition Systems and CCS. Springer, 2015. https://findit.dtu.dk/en/catalog/2688358590
- Chapter 2: labelled transition systems, trace equivalence, bisimilarity.
  - Definitions 2.1-2.4. Pages 21-26.
  - Definitions 2.8 - 2.11. Pages 30 – 35
  - Definitions 2.12 - 2.13.
  - Definition 2.14
  - Definition 2.17
  - Definition 2.19 - 2.21
- Chapter 3: CCS and value-passing CCS
  - Section 3.1 (Informal syntax) and Section 3.2 (Structural Operational Semantics)
  - Section 3.6 (Value Passing CCS. Pages 151-154.

Introduction to the Pi Calculus

- Joachim Parrow. An Introduction to the π-Calculus. Book chapter, Elsevier, 2001. https://findit.dtu.dk/en/catalog/2608173696
  - Section 1: introduction
  - Section 2: basic definitions and examples

Summary of the concepts:

- Hugo A. López - CCS and the Pi Calculus https://learn.inside.dtu.dk/d2l/le/content/187723/viewContent/768399/View

Timed Automata

- Behrmann et al. - A Tutorial on UPPAAL. Available at: https://link.springer.com/chapter/10.1007/978-3-540-30080-9_7

Summary of the concepts:

- Hugo A. López - Timed Automata: Available at https://learn.inside.dtu.dk/d2l/le/content/187723/viewContent/774624/View

BPMN Process Models

Main elements and gateways

- 10 - Introduction to BPMN slides (1-13)
- Dumas et al. - Fundamentals of Business Process Management (2nd Edition)
    - Available at: https://link.springer.com/book/10.1007/978-3-662-56509-4
    - Read Chapter 3.1, 3.2

Events

- 10 - Introduction to BPMN slides (14-20)
- Dumas et al. - Fundamentals of Business Process Management (2nd Edition)
    - Available at: https://link.springer.com/book/10.1007/978-3-662-56509-4
    - Read Chapter 4.2

Pools and lanes

- 10 - Introduction to BPMN slides (21-26)
- Dumas et al. - Fundamentals of Business Process Management (2nd Edition)
    - Available at: https://link.springer.com/book/10.1007/978-3-662-56509-4
    - Read Chapter 3.4

Activity types

- 10 - Introduction to BPMN slides (27-32)
- Dumas et al. - Fundamentals of Business Process Management (2nd Edition)
    - Available at: https://link.springer.com/book/10.1007/978-3-662-56509-4
    - Read Chapter 4.1

Artifacts (Business Objects)

- 10 - Introduction to BPMN slides (33-35)
- Dumas et al. - Fundamentals of Business Process Management (2nd Edition)
    - Available at: https://link.springer.com/book/10.1007/978-3-662-56509-4
    - Read Chapter 3.4

DCR Process Models

Declarative Process Models:

- Maja Pesic – Constraint-Based
  Workflow Management Systems:
  Shifting Control to Users. PhD. Thesis. Introduction (Section 1 – 1.4, 1.6.1)
  https://learn.inside.dtu.dk/d2l/le/content/187723/viewContent/777394/View

Introduction to DCR graphs:

- Debois, S., Hildebrandt, T. T., & Slaats, T. (2018). Replication, refinement & reachability: complexity in dynamic condition-response graphs. Acta Informatica, 55(6), 489-520. Section 1 & 2. https://link.springer.com/article/10.1007/s00236-017-0303-8

Milestones and Nesting Operators

- Hildebrandt, Thomas, Raghava Rao Mukkamala, and Tijs Slaats. "Nested dynamic condition response graphs." International conference on fundamentals of software engineering. Berlin, Heidelberg: Springer Berlin Heidelberg, 2011. Sections 1-3. Available from https://link.springer.com/chapter/10.1007/978-3-642-29320-7_23

Timed DCR graphs, refinement and compliance

- López, H. A., Debois, S., Slaats, T., & Hildebrandt, T. T. (2020, April). Business Process Compliance Using Reference Models of Law. In International Conference on Fundamental Approaches to Software Engineering (pp. 378-399). https://link.springer.com/content/pdf/10.1007/978-3-030-45234-6_19.pdf

Summary of the papers:

- Hugo A. López - Declarative Process Modelling.
  https://learn.inside.dtu.dk/d2l/le/content/187723/viewContent/777393/View
- Hugo A. López - Declarative Process Modelling: Advanced
  Operators and Compliance.
  https://learn.inside.dtu.dk/d2l/le/content/187723/viewContent/779899/View

DMN Decision Models

Motivation

- 12 – Introduction to DMN slides (1-7)
- Weske - Business Process Management
  - Available at: https://link.springer.com/book/10.1007/978-3-662-59432-2
  - Read Chapter 5.1

Decision requirements diagrams

- 12 – Introduction to DMN slides (8-10)
- Weske - Business Process Management
  - Available at: https://link.springer.com/book/10.1007/978-3-662-59432-2
  - Read Chapter 5.2

Decision tables

- 12 – Introduction to DMN slides (11-22)
- Weske - Business Process Management
  - Available at: https://link.springer.com/book/10.1007/978-3-662-59432-2
  - Read Chapter 5.3, 5.4

Verification in DMN

- 12 – Introduction to DMN slides (23-26)
- Calvanese et al.: Semantics and Analysis of DMN Decision Tables, BPM 2016 Conference Proceedings, 217-233 (2016)
  - Available at: https://doi.org/10.1007/978-3-319-45348-4_13

Enterprise Architecture

Definition and Zachman's Framework

- 1 – Introduction slides (22-36)
- Lankhorst et al. - Enterprise Architectures at Work (4th Edition)
  - Available at: https://link.springer.com/book/10.1007/978-3-662-53933-0
  - Read Chapter 1, 2.2.2

Goal-oriented Requirements Engineering

I-Star model elements

- 1 - Requirements Engineering slides (1-21, 26-42)
- Dalpiaz et al. - iStar 2.0 Language Guide
    - Available at: https://sites.google.com/site/istarlanguage/home

ArchiMate motivation perspective

- 1 - Requirements Engineering slides (1-25)
- Lankhorst et al. - Enterprise Architectures at Work (4th Edition)
    - Available at: https://link.springer.com/book/10.1007/978-3-662-53933-0
    - Read Chapter 5.6

ArchiMate Enterprise Architecture models

Introduction to ArchiMate

- 3 - Introduction to ArchiMate slides (1-19)
- Lankhorst et al. - Enterprise Architectures at Work (4th Edition)
    - Available at: https://link.springer.com/book/10.1007/978-3-662-53933-0
    - Read Chapter 5.1 to 5.5, 5.8 to 5.10, 5.13

Business perspective

- 3 - Introduction to ArchiMate slides (20-35)
- Lankhorst et al. - Enterprise Architectures at Work (4th Edition)
    - Available at: https://link.springer.com/book/10.1007/978-3-662-53933-0
    - Read Chapter 5.8

Application perspective

- 3 - Introduction to ArchiMate slides (36-43)
- Lankhorst et al. - Enterprise Architectures at Work (4th Edition)
    - Available at: https://link.springer.com/book/10.1007/978-3-662-53933-0
    - Read Chapter 5.9

Technology perspective

- 3 - Introduction to ArchiMate slides (44-54)
- Lankhorst et al. - Enterprise Architectures at Work (4th Edition)
    - Available at: https://link.springer.com/book/10.1007/978-3-662-53933-0
    - Read Chapter 5.10

Relations

- 3 - Introduction to ArchiMate slides (55-63)
- Lankhorst et al. - Enterprise Architectures at Work (4th Edition)
    - Available at: https://link.springer.com/book/10.1007/978-3-662-53933-0
    - Read Chapter 5.13

Modeling cloud levels in ArchiMate

- 3 - Introduction to ArchiMate slides (65-67)

Modeling multi-tier applications in ArchiMate

- 3 - Introduction to ArchiMate slides (68-70)

Modeling virtualized servers in ArchiMate

- 3 - Introduction to ArchiMate slides (71-73)