

# Seminar Topics

## *Trends in Computer-Aided Verification*

### (Winter 2025/26)

First name: \_\_\_\_\_

Surname: \_\_\_\_\_

Matriculation no.: \_\_\_\_\_

Study programme: ☐ BSc Informatik ☐ MSc Informatik ☐ MSc SSE ☐ Other: \_\_\_\_\_Nickname: \_\_\_\_\_  
(to be displayed on web page in place of real name, if desired)

Please choose your three preferred topics from the following list (1st/2nd/3rd choice):

No.	Title	1.	2.	3.
<b>A. Compositional Verification of Probabilistic Systems</b>				
1	Compositional Learning			
2	Compositional Model Checking			
3	Assume-Guarantee Reasoning			
4	Compositional Strategy Synthesis			
<b>B. Analysis of Partially Observable Stochastic Systems</b>				
1	Efficient Computation of Belief Values			
2	Planning under Constraints			
3	Multi-Environment Models			
4	Monte-Carlo Methods			
5	Efficient Approximation			
<b>C. Analysing Quantum Programs</b>				
1	Detecting Bugs using QChecker			
2	Detecting Bugs using LintQ			
3	The Quantum Volume			
4	Resource Estimation			