

### CMD-L5: Data Structures and Algorithm Design

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<b>Semester</b>	This lecture should be taken in semester 2 or 3
<b>Topic cluster</b>	Computational method development
<b>Duration/Credit</b>	6 lectures of 1.5 hours (to be discussed)
<b>Time</b>	The exact date incl. time will be announced separately
<b>Place</b>	Online. Dial-in data are sent separately
<b>Prerequisite for the lecture</b>	Basic concepts of programming
<b>Aim of the lecture</b>	<p>This lecture aims at achieving the following objectives:</p> <ul style="list-style-type: none"><li>● Study basic data structures (e.g., stack, queues, hash tables, trees)</li><li>● Study abstract data types and learn how to define new abstract data types</li><li>● Learn different implementation decisions for basic data structures and abstract data types</li><li>● Learn different algorithms to manage basic data structures and abstract data types</li><li>● Study and apply different algorithm techniques to solve computational problem (e.g., greedy algorithms, binary search, sorting, dynamic programming)</li><li>● Study criteria for efficient algorithms and data structures.</li></ul>