During the seminar the students will read and present articles about the design of
algorithm for solving problems in the area of concurrent and distributed computing. Some of the topics are: concurrent data structures for multi-core computers; synchronization algorithms; resource allocation; lock-based and lock-free algorithms; fault-tolerance; reliability; self-stabilization; agreement problems; biological distributed algorithms; blockchain; deadlock detection; failure-detectors; network algorithms; the relative power of shared objects and models. Other topics can be suggested by the students. Most of the course material is based on recent research papers and books.

Each student or a pair of students will have to study one of the topics, prepare a presentation and present it in class. Each student (or pair) who give a presentation should also prepare a short report (4-5 pages) which critically evaluates the papers/topic and includes: the strongest contribution and the major shortcoming of the papers/topic presented, etc.

Each student should submit a one-paragraph summary of each topic presented by each of the other students, a few days after the lecture.

Final grade is based on your presentation (including the additional report) (85%), your summaries (10%), and participation in class discussions (5%).

Another requirement is to be presented in class. For any $k > 1$, missing $k$ classes ‘costs’ $2^{k-1}$ points in the final grade.

A list of topics is published at the course website (this includes a list of papers, books, etc.) and topic assignment will be done during the first two weeks of the semester. The earlier the better! You are also most welcome to select a topic immediately, before the beginning of the semester, if you can prepare and present it at one of the first four Lectures of the semester.

It is your responsibility to select a topic and contact me for approval. I will give a brief survey of the topics in the first meeting.

You are most welcomed to suggest additional relevant topics – please contact me with your ideas.

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מטרות הקורס

.To learn various topic in Distributed Computing

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מענה 짝

Final grade is based on your presentation (including the additional report) (85%), your summaries (10%), and participation in class discussions (5%
Another requirement is to be presented in class. For any $k > 1$, missing $k$ classes ‘costs’ $2^{k-1}$ points in the final grade.

You are most welcomed to suggest additional relevant topics – please contact me with your ideas.

A detailed list of topics will be published at the course website two weeks before the beginning of the semester (this includes a list of papers, books, etc).