Course content. In this class, we study the topology of ordered and unordered configuration spaces using homotopy and (co)homology groups. Here is an outline of some initial topics.

- Fadell-Neuwirth fibrations
- Braid groups
- The Reidemeister-Schreier method
- Integral cohomology in the ordered case
- The Serre spectral sequence
- Hypercover methods
- Mapping space models
- Local-to-global methods in the unordered case
- Local mod $p$ homology

Further topics may include the Cohen-Taylor spectral sequence, the failure of homotopy invariance, homological stability, and graph braid groups.

Course material. Lecture notes and references will be posted to scholar.harvard.edu/knudsen/classes.

Course work. Undergraduates opting to take the course will prepare an end-of-term project on a subject related to the content of the course. Further details to follow.

Course meetings.
- Class: MWF 2-3, Science Center 411
- Office hours: Th 1-3, Science Center 520

Contact information.
- Email: knudsen@math.harvard.edu
- Office: Science Center 520