

# On-line Dynamic Traffic Grooming

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- Optical networking will support faster next-generation networks and the evolution of the Internet
- We need a way to make routing decisions whenever a connection is requested (an *on-line* algorithm)
- The decisions should be made by the computers in the network rather than by a central controller (a *distributed* algorithm)

We give:

- a guide for setting up transceivers on the network (a *virtual topology*)
- an on-line, distributed algorithm that uses this setup to satisfy connection requests

We prove that our algorithm guarantees any traffic pattern (subject to a bandwidth usage limit on each node).

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