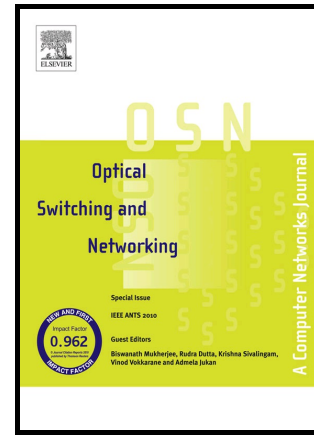# Author's Accepted Manuscript

An optimization framework for traffic restoration in optical wireless networks with partial link failures

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An optimization framework for traffic restoration
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Abstract

In the paper we introduce an optimization framework for traffic restoration in optical wireless networks. As such networks experience multiple partial link failures, we introduce a generic extension of restoration strategies developed for wired networks (that assume total link failures) which enables handling partial link failures as well. The particular traffic restoration strategy studied in the paper combines a known rerouting method for total link failures (Restricted Restoration – RR) and a recently developed restoration method for partial failures (Flow Thinning – FT).

The paper presents a generic optimization model for link dimensioning for arbitrary sets of failure states, and its specific version that assumes the above described RR/FT strategy. For the RR/FT case, an exact solution method based on path generation is described, together with numerical results illustrating its efficiency.

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