

## Dehn surgery and Seifert surface systems

MAKOTO OZAWA AND KOYA SHIMOKAWA

**Abstract.** For a compact connected 3-submanifold with connected boundary in the 3-sphere, we relate the existence of a Seifert surface system with properties of Dehn surgeries along null-homologous links. As a corollary, we obtain a refinement of Fox's re-embedding theorem, and show the existence of a Seifert surface system for any closed surface in the 3-sphere.

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