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Dorothy Buck, Kai Ishihara, Matt Rathbun* (mrathbun@imperial.ac.uk) and **Koya Shimokawa**. *On cutting fiber surfaces along arcs, and ramifications for DNA*.

Fibered links are those whose complements fiber over the circle, with fibers that are copies of a Seifert surface for the link. It is known that every fibered link can be obtained from the unknot by a sequence of operations called Hopf plumbing and its inverse de-plumbing. Hopf de-plumbing amounts to cutting a fiber of the link along a particular type of arc in the surface. We investigate the problem of when cutting along different arcs might result in a fibered link. The solution to this problem has ramifications in Biology and understanding how certain enzymes interact with DNA. (Received September 25, 2012)