ANNOTATED BIBLIOGRAPHY FOR MINICOURSE ON *EXCEPTIONAL SURGERIES AND BRIDGE DISTANCE*

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This is an annotated bibliography of sources relevant to relating the existence of an exceptional surgery to the bridge distance of a knot.

(1) Francisco González-Acuña and Hamish Short.
Knot surgery and primeness.
Math. Proc. Cambridge Philos. Soc. 99 (1986), no. 1, 89–102.

– The first statement of the cabling conjecture.

(2) David Gabai
Foliations and the topology of 3-manifolds III
J. Differential Geom. 26 (1987), no. 3, 479–536

– Defines the original thin position for knots in S^3 and utilizes it in connection with sutured manifold theory.

(3) Marc Culler, Cameron Gordon, John Luecke, and Peter Shalen.
Dehn surgery on knots
Ann. of Math 125 (1987), no. 2, 237–300.

– Proves that one summand of a reducible manifold obtained by surgery on a knot in S^3 must be a lens space.

(4) Cameron Gordon and John Luecke.
Knots are determined by their complements
J. Amer. Math. Soc. 2 (1989), no. 2, 371–415.

– Shows that non-trivial knots in S^3 do not have cosmetic surgeries. Utilizes the graphic.

(5) Andrew Casson and Cameron Gordon
Reducing Heegaard splittings
Topology Appl. 27 (1987), no. 3, 275–283

– Shows that a weakly reducible Heegaard splitting of a non-Haken 3-manifold is stabilized.

(6) Martin Scharlemann and Abigail Thompson
Thin position for 3-manifolds
Contemp. Math 164 (1994), 231–238

– Shows that every Heegaard splitting of a 3-manifold may be untelescoped to a generalized Heegaard splitting

(7) Hyam Rubinstein and Martin Scharlemann
Comparing Heegaard splittings of non-Haken 3-manifolds
Topology 35 (1996), no. 4, 1005–1026.

– Uses the graphic to show that two strongly irreducible Heegaard splittings can be isotoped to intersect in curves that are essential in both surfaces.

(8) Chuichiro Hayashi and Koya Shimokawa
Thin position of a pair (3-manifold, 1-submanifold)
Pacific J. Math. 197 (2001), 301–324

– Shows that Scharlemann-Thompson untelescoping can be applied to bridge surfaces

(9) John Hempel
3-manifolds as viewed from the curve complex
Topology 40 (2001), no. 3, 631–657

– Defines "distance" of a Heegaard splitting and shows that there are Heegaard splittings of arbitrarily high distance.

(10) David Bachman and Saul Schleimer
Distance and bridge position
Pacific J. Math. 219 (2005), no. 2, 221–235.

– Defines bridge distance for a bridge surface and shows that the negative euler characteristic of a c-essential surface in the knot complement bounds bridge distance.

(11) Martin Scharlemann and Maggy Tomova
Alternate Heegaard genus bounds distance
Geom. Topol. 10 (2006), 593–617

– Shows that the distance of one Heegaard splitting is bounded above by twice the genus of another Heegaard splitting.

(12) Maggy Tomova
Multiple bridge surfaces restrict knot distance
Algebr. Geom. Topol. 7 (2007), 957–1006

– Shows that the bridge distance of a bridge surface is bounded above by $2-\chi(Q-K)$ where Q is either an alternate bridge surface for the knot K or a Heegaard surface for its exterior.

(13) Scott Taylor and Maggy Tomova
C-essential surfaces in (3-manifold, graph) pairs

arXiv: 0910.3251, (2009)
Accepted by Communications in Analysis and Geometry.

– Shows that bridge surfaces for graphs can be untelescoped and that in most cases the resulting thin surfaces are essential in the graph complement.

(14) Marion Campisi
Alpha-sloped generalized Heegaard splittings
arXiv: 1102.3135, (2011)

– Shows Heegaard splittings with boundary on torus boundary components of a 3–manifold can be untelescoped to generalized sloped Heegaard splittings

(15) Jesse Johnson
Bounding the stable genera of Heegaard splittings from below
J. Topol. 3 (2010), no. 3, 668–690

– Introduces spanning/splitting terminology for analyzing graphic

(16) Jesse Johnson, Yair Minsky, and Yo'av Moriah
Heegaard splittings with large subsurface distances
J. Topol. 3 (2010), no. 3, 668–690

– Proves a "relative" version of the Scharlemann-Tomova result using spanning/splitting analysis of the graphic.

(17) Ryan Blair, Maggy Tomova, and Michael Yoshizawa
High distance bridge surfaces
arXiv: 1203.4294 (2012)

– Constructs examples of knots and links with bridge surfaces of arbitrarily high distance.

(18) Kazuhiro Ichihara and Toshio Saito
Knots with arbitrarily high distance bridge decompositions
arXiv: 1209.0097 (2012)

– Shows that if the 3-manifold is fixed, then there are knots and links with bridge surfaces of arbitrarily high distance.

(19) Ryan Blair, Marion Campisi, Jesse Johnson, Scott A. Taylor, and Maggy Tomova
Bridge distance, Heegaard genus, and exceptional surgeries
arXiv: 1209.0197 (2012)

– Shows that the genus (and not just the negative euler characteristic) of an alternately sloped essential surface or Heegaard surface gives an upper bound on bridge distance.

(20) Ryan Blair, Marion Campisi, Jesse Johnson, Scott A. Taylor, and Maggy Tomova
Genus bounds bridge number for high distance knots
arXiv: 1211.4787 (2012)

– Shows that if a knot has a bridge surface of distance at least 3 in the curve complex, then the genus of any non-meridional essential surface with non-empty boundary gives an upper bound on the bridge number. In particular, the bridge distance of any bridge sphere for a counter-example to the cabling conjecture has distance at most 2 in the curve complex, assuming an unpublished result of Hoffman.

(21) Ryan Blair, Marion Campisi, Jesse Johnson, Scott A. Taylor, and Maggy Tomova
Distance 2 links
In preparation.

– Shows that every link in S^3 with a bridge sphere of distance 2 in the curve complex either has an essential meridional planar surface intersecting the bridge sphere in a single simple closed curve, has a sphere bounding a monkey clasp and intersecting the bridge sphere in a single simple closed curve, or is obtained by "banding" a link of lower bridge number or bridge distance.