RESEARCH ACTIVITIES ON KNOTS, LINKS, AND SPATIAL GRAPHS

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0 Interest

I am interested in knot theory, graph theory, and spatial graph theory. I am also interested in their applications to chemistry and molecular biology.

1 Ordinary seminar

Usually seminar at university is held on every Thursday, under the guidances of professor Shin'ichi Suzuki and professor Kouki Taniyama. Currently we are reading [1], for I studied not so much knot theory as graph theory at undergraduate. I therefore would like to read it through soon and make an advanced research.

2 Spatial graph

Let G be a finite graph. Consider G as a topological space. We call an embedding $f : G \to S^3$ of G into 3-sphere S^3 a *spatial embedding* of G or simply a *spatial graph*. Especially if G is homeomorphic to S^1, we call $f(G)$ a knot, or if G is homeomorphic to $\bigcup_{i=1}^{n} S_i^1$, we call $f(G)$ a n-component link.

References

[1] Peter Cromwell. *Knots and Links*, Cambridge, 2004

[2] Kunio Murasugi. *Knot Theory and Its Applications*, Birkhäuser, 1996

[3] 鈴木 晋一, 『結び目理論入門』, サイエンス社, 1991