A knot is an embedding of a circle $S^1$ in $\mathbb{R}^3$. Two knots are equivalent if one can be transformed into the other via a deformation of $\mathbb{R}^3$ upon itself. A surface-knot is an embedding of a surface in $\mathbb{R}^4$. Two surface-knots are equivalent if one can be transformed into the other via a deformation of $\mathbb{R}^4$ upon itself. A quandle is an algebraic structure with a binary operation satisfying certain conditions derived from Reidemeister moves which are local moves of knot diagrams. In this talk, I'll introduce invariants of links and surface-links, called quandle coloring invariants. (Received September 16, 2017)