MISHA SHAPIRO, Michigan State University Single and double Hurwitz numbers

The classical problem of finding numbers of ramified covers of the two dimensional sphere of fixed ramification types goes back to Hurwitz. The interests to Hurwitz numbers was revived after physicists discovered that these numbers play central role in quantum chromodynamics. I will describe the method of computing so-called single Hurwitz numbers. These formulas were used by Okounkov and Pandharipande to give another proof of Witten's conjecture. We will also discuss an approach to Hurwitz numbers of coverings with two non-simple branchings.