

**ALGEBRAIC GEOMETRIC BACKGROUND OF
THE CHARGE 3 MONOPOLES THE
YANG-MILLS-HIGGS THEORY**

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We consider so called Bogomolny equations in the Yang-Mills-Higgs theory and construct their solutions that called monopoles, because they generalize Dirac monople to the case of higher gauge group. Namely, we integrate the Bogomolny equation for the case of charge 3 in terms of the Riemann theta-functions of the associated algebraic curve by using the method of finite gap integration.

Our work involve various remarkable results of mathematics: Ramanujan hyperegeometric relations, Schottky-Jung proportionalities for unramified covers, results on moduli of genus two algebraic curve. Some movies visualizing our results will be presented.