

5. CONCLUSION

Based on work on synthesis and analysis of 3-RSR spherical parallel mechanism, it was proposed the steps of synthesis of 3-RSR spherical parallel mechanism namely synthesis with respect to desired workspace, optimization with respect to singularity and optimization based on motion range of spherical joint. Based on the synthesis result it was obtained the optimum set of kinematic constants, mounted angle of revolute joint to the base $(\alpha) = 45^\circ$, mounted angle of revolute joint to the platform $(\beta) = 30^\circ$, length of connecting link between revolute joint in the base and spherical joint $(L_c) = 2.5$, radius of platform $(r_p) = 0.7$ and radius of base $(r_b) = 1$. It was also successfully derived the forward and inverse kinematic formulation of the mechanism which is validated by CAD program.

