Follows are prediction error chart and prediction output value chart with two kinds of models:

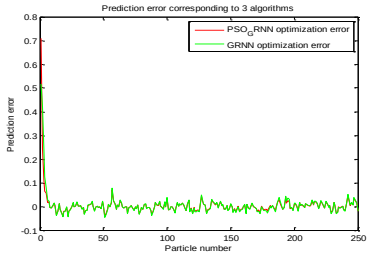

Fig. 1: prediction curve

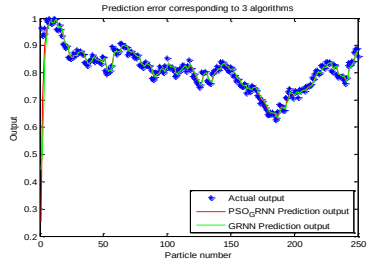

Fig. 2: prediction output value chart

Through the results， we can see that PSO-GRNN model's stability is obviously superior to the GRNN model's stability. Particle swarm optimization (PSO) algorithm improved GRNN neural network, and through the search renewal process for smoothing factor and the right value of the automatic optimization, can achieve better effect. On the basis of the same training samples, PSO-GRNN model has better accuracy, better stability and stronger generalization ability than the GRNN model.

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