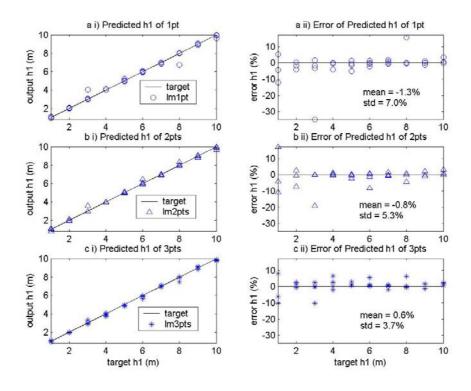
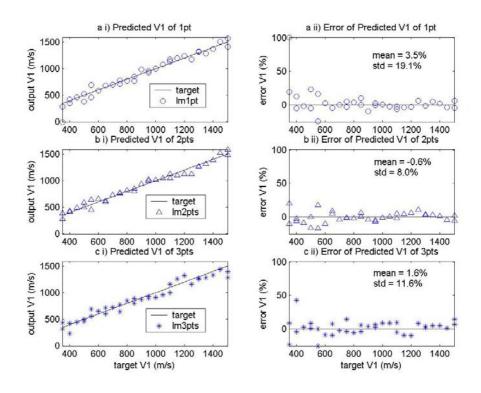
## Appendix A Testing results of horizontal interface

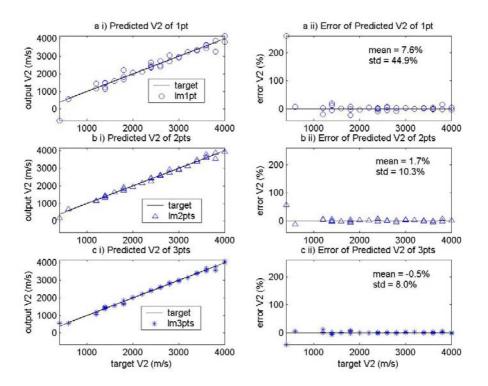
Estimated ground parameters of two-layer architecture network trained by non-normalization data



*Figure A1* Predicted h<sub>1</sub> by two-layer architecture network trained by non-normalization data

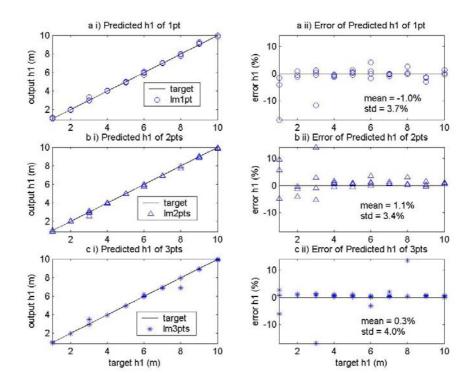


*Figure A2* Predicted V<sub>1</sub> by two-layer architecture network trained by non-normalization data

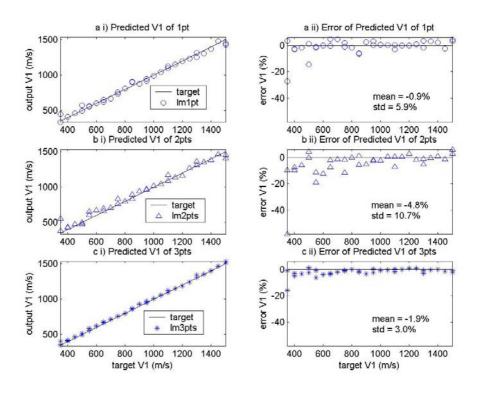


*Figure A3* Predicted V<sub>2</sub> by two-layer architecture network trained by non-normalization data

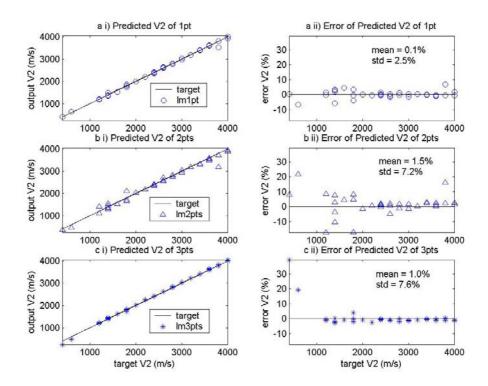
## Estimated ground parameters of three-layer architecture network trained by non-normalization data



*Figure A4* Predicted h<sub>1</sub> by three-layer architecture network trained by non-normalization data



*Figure A5* Predicted V<sub>1</sub> by three-layer architecture network trained by non-normalization data



*Figure A6* Predicted V<sub>2</sub> by three-layer architecture network trained by non-normalization data

## Estimated ground parameters of two-layer architecture network trained by normalization data

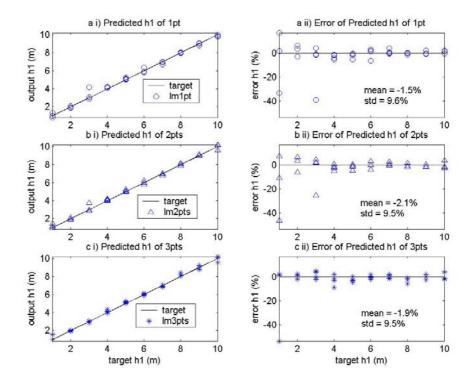


Figure A7 Predicted h<sub>1</sub> by two-layer architecture network trained by normalization data

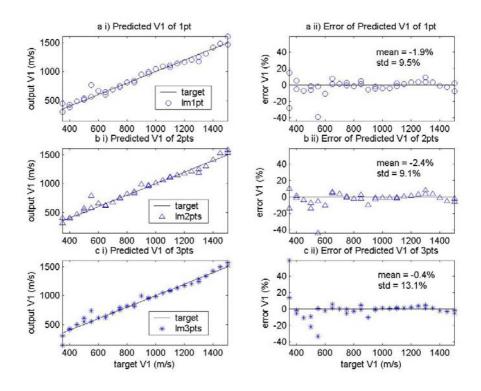
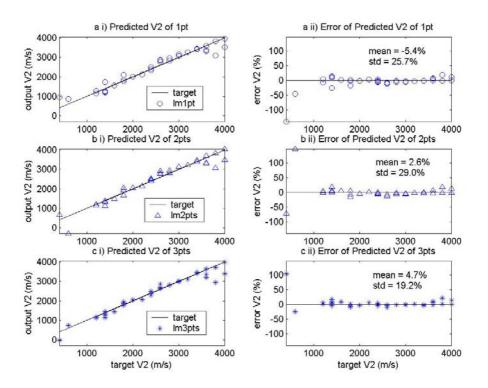


Figure A8 Predicted V<sub>1</sub> by two-layer architecture network trained by normalization data



*Figure A9* Predicted V<sub>2</sub> by two-layer architecture network trained by normalization data

## Estimated ground parameters of three-layer architecture network trained by normalization data

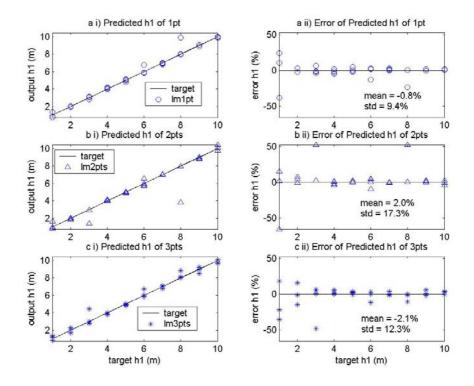


Figure A10 Predicted h<sub>1</sub> by three-layer architecture network trained by normalization data

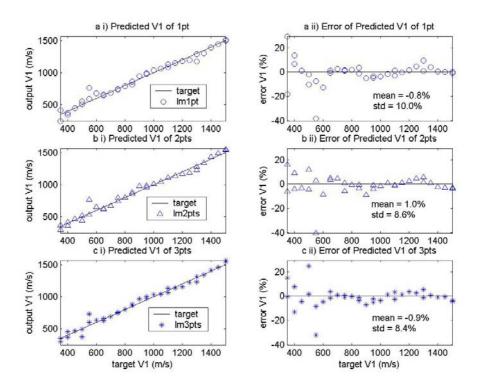


Figure A11 Predicted  $V_1$  by three-layer architecture network trained by normalization data

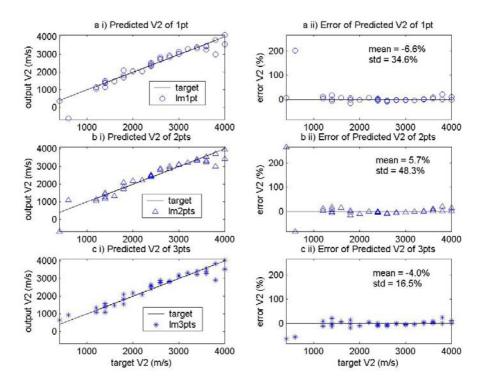


Figure A12 Predicted V<sub>2</sub> by three-layer architecture network trained by normalization data