

# Appendix B

## Figures

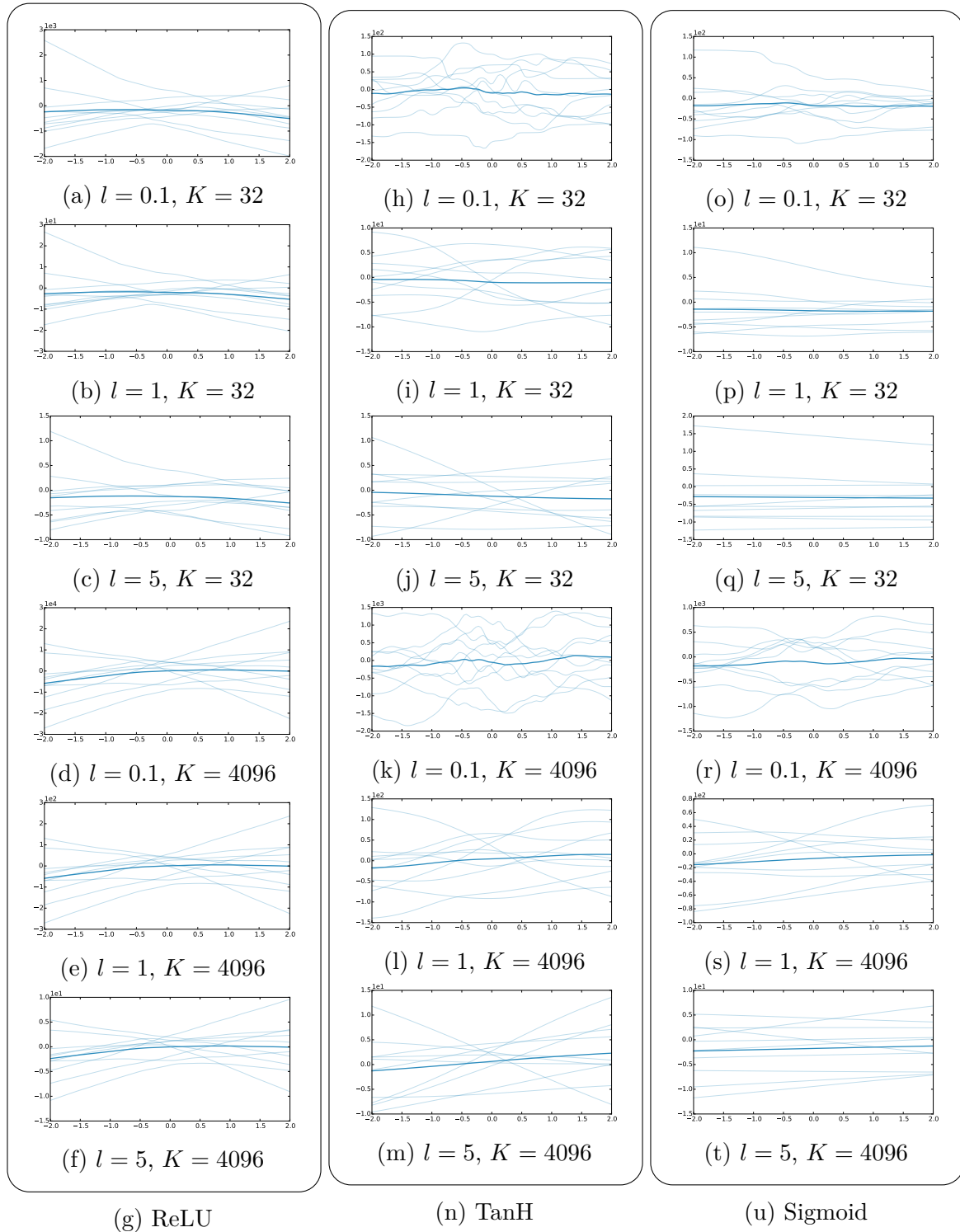


Fig. B.1 Draws from Bayesian neural network prior with  $L = 1$  hidden layers. Here  $l$  is the prior length-scale and  $K$  is the number of units.

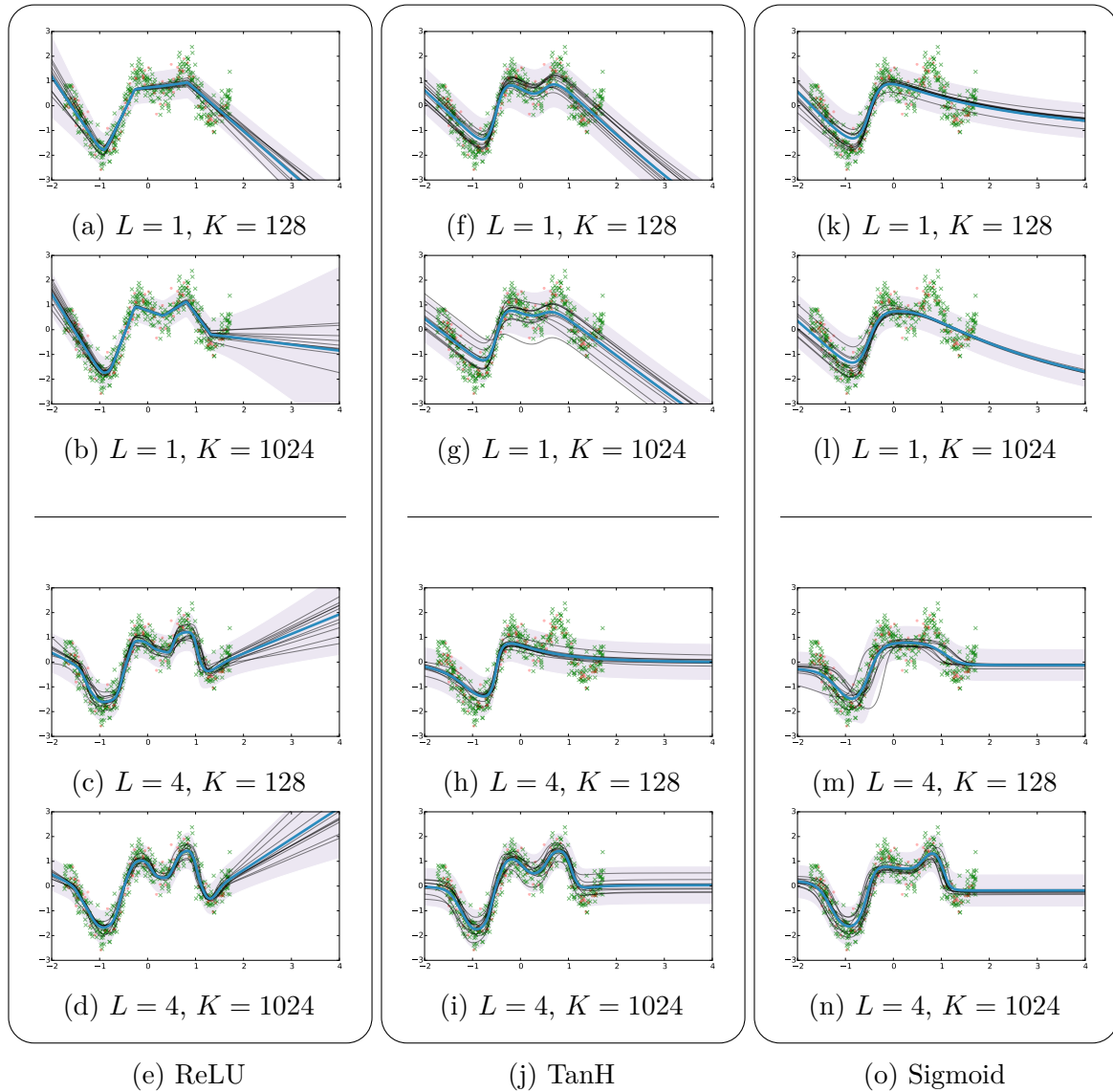


Fig. B.2 Draws from a Bayesian neural network posterior with **dropout approximating distribution**; shown are predictive mean (thick blue line), predictive uncertainty (shaded area, showing 2 standard deviations), and draws from the posterior (thin black lines). Scattered are training points. Best viewed on a computer screen. Here  $L$  is the number of network hidden layers and  $K$  is the number of units in each hidden layer.

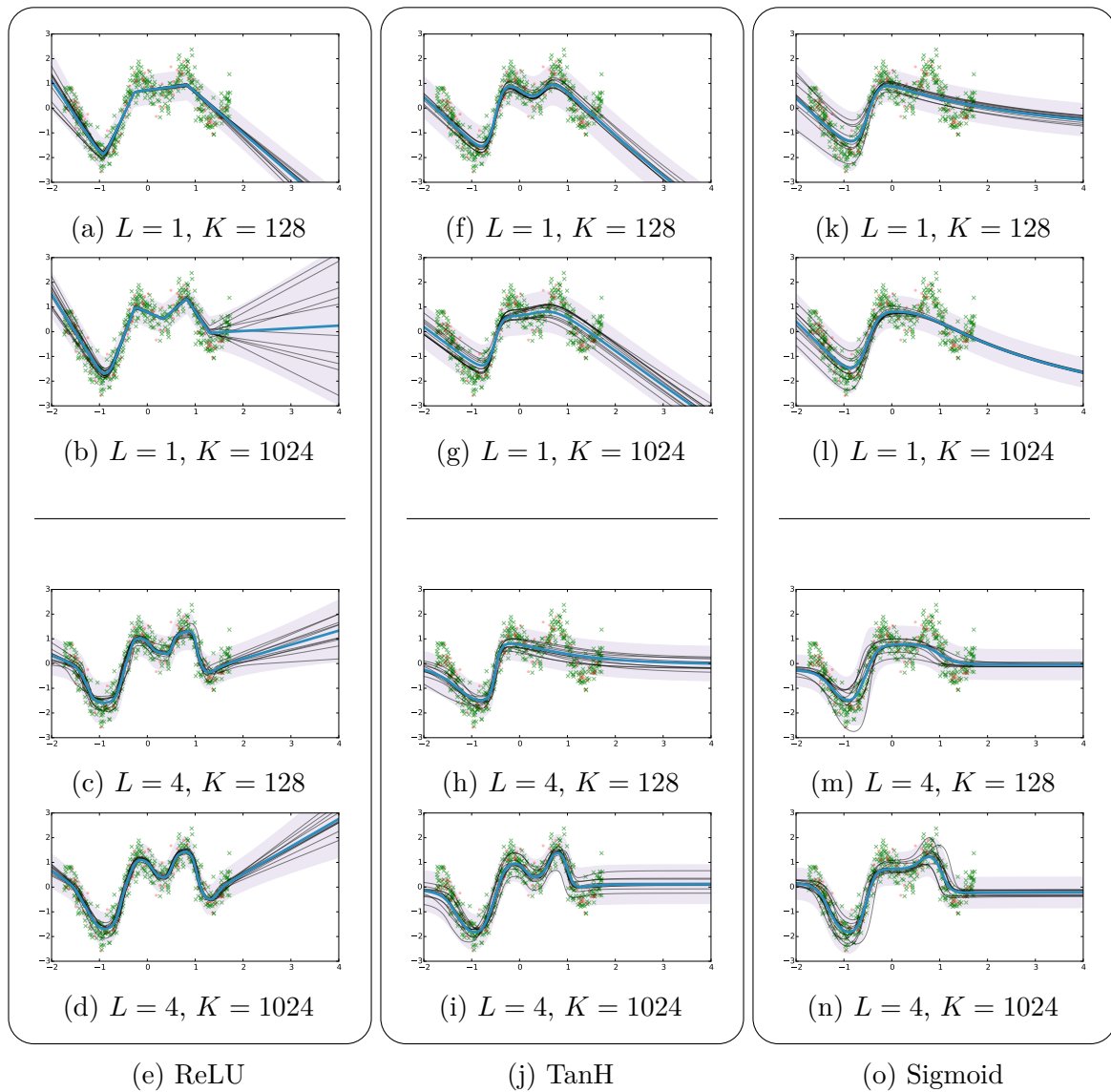


Fig. B.3 Draws from a Bayesian neural network posterior with **multiplicative Gaussian noise (MGN) approximating distribution**; shown are predictive mean (thick blue line), predictive uncertainty (shaded area, showing 2 standard deviations), and draws from the posterior (thin black lines). Scattered are training points. Best viewed on a computer screen. Here  $L$  is the number of network hidden layers and  $K$  is the number of units in each hidden layer.

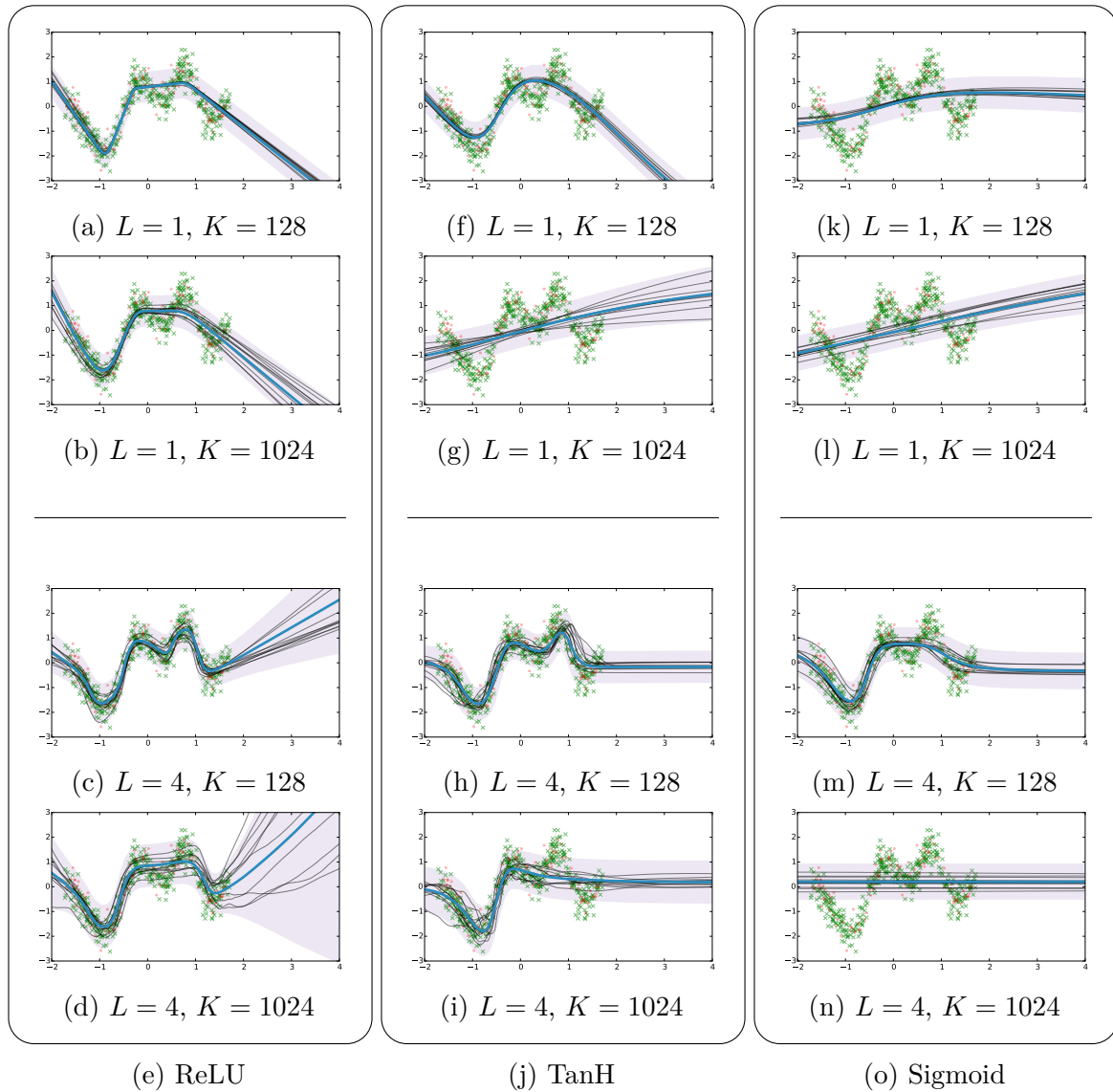


Fig. B.4 Draws from a Bayesian neural network posterior with a **factorised Gaussian approximating distribution**; shown are predictive mean (thick blue line), predictive uncertainty (shaded area, showing 2 standard deviations), and draws from the posterior (thin black lines). Scattered are training points. Best viewed on a computer screen. Here  $L$  is the number of network hidden layers and  $K$  is the number of units in each hidden layer.

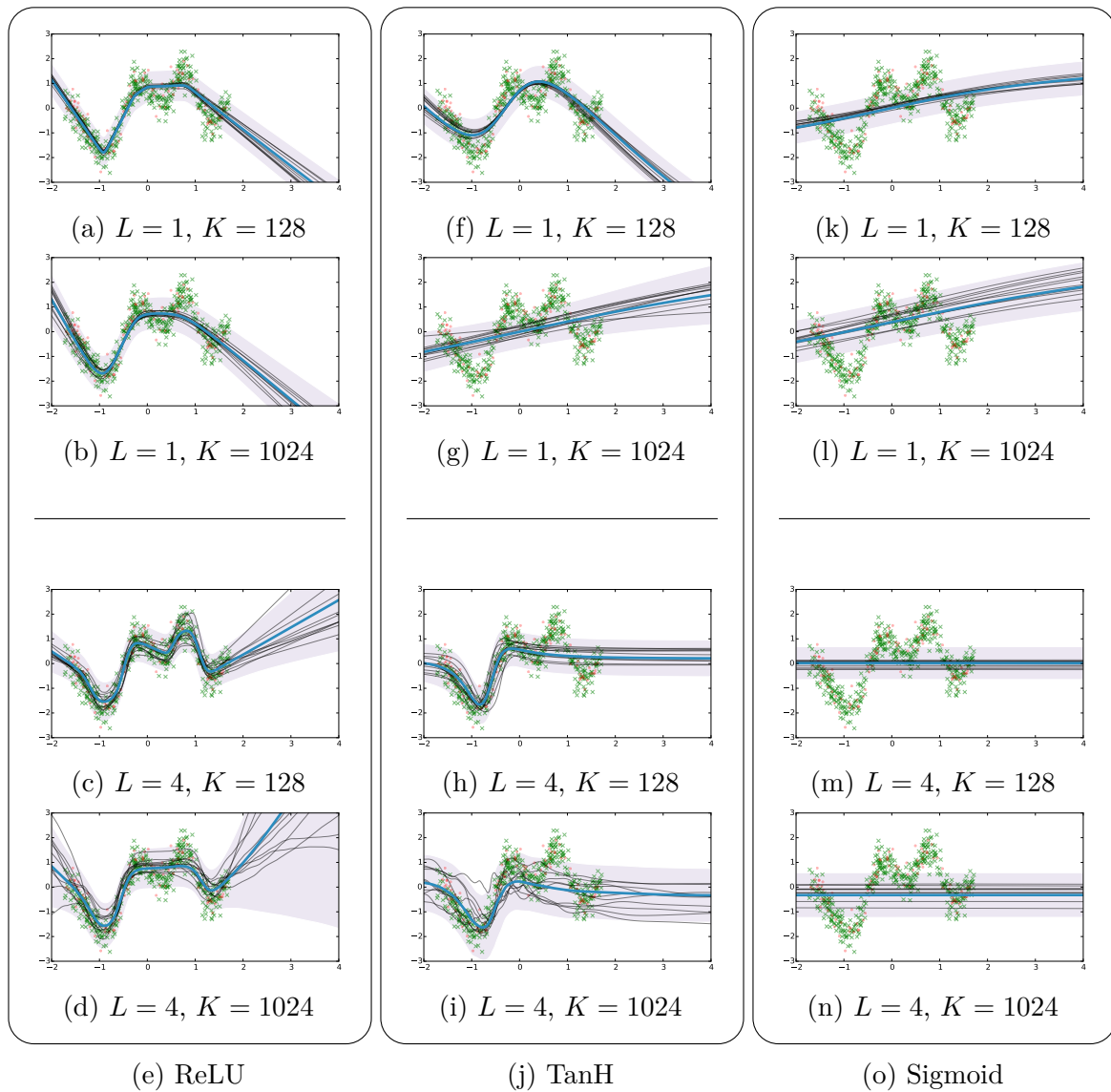


Fig. B.5 Draws from a Bayesian neural network posterior with a **mixture of Gaussians (MoG, row-wise) approximating distribution**; shown are predictive mean (thick blue line), predictive uncertainty (shaded area, showing 2 standard deviations), and draws from the posterior (thin black lines). Scattered in are training points. Best viewed on a computer screen. Here  $L$  is the number of network hidden layers and  $K$  is the number of units in each hidden layer.