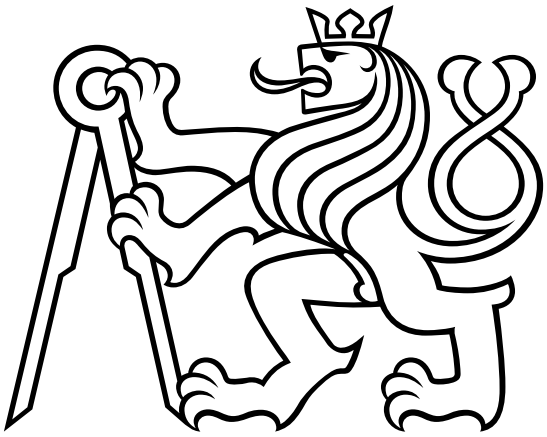
Czech Technical University in Prag
Faculty of Mechanical engineering
Department of instrumentation and control enfineering
Automation and industry informatics



Master Thesis

Title

Subtitle

January 29, 2021 **Roman Dušek**

Contents

Nomenclature

GRU	Gated Recurrent Unit
HONN	High Order Neural Network
HONU	High Order Neural Unit
LSTM	Long-Short-Term Memory
NN	Neural network
RHONN	Recurrent High Order Neural Network
RNN	Recurrent Neural network

References

[1] Filippo Maria Bianchi et al. *Recurrent Neural Networks for Short-Term Load Forecasting: An Overview and Comparative Analysis*. en. 1st ed. 2017. SpringerBriefs in Computer Science. Cham: Springer International Publishing : Imprint: Springer, 2017. ISBN: 978-3-319-70338-1. DOI: 10.1007/978-3-319-70338-1.

[2] Ivo Bukovský. "Nonconventional Neural Architectures and Their Advantages for Technical Applications". In: ().

[3] L.R. Desker and L.C. Jain. *Recurrent Neural Netowrks Design and Applications*.

[4] Ian Goodfellow, Yoshua Bengio, and Aaron Courville. *Deep Learning*.

[5] M. Madan Gupta and Ivo Bukovsky. "Fundamentals of Higher Order Neural Networks for Modeling and Simulation". In: ().

[6] LazyProgrammer. *Recurrent Neural Networks in Python*.

[7] Danilo Mandic and Jonathon A. Chambers. "Recurrent Neural Networks for Prediction Learning Algorithms, Architectures, and Stability by Danilo Mandic, Jonathon Chambers". In: ().

[8] Danilo P. Mandic and Jonathon A. Chambers. *Recurrent Neural Networks for Prediction*. en. Ed. by Simon Haykin. Wiley Series in Adaptive and Learning Systems for Signal Processing, Communications, and Control. Chichester, UK: John Wiley & Sons, Ltd, Aug. 2001. ISBN: 978-0-471-49517-8 978-0-470-84535-6. DOI: 10.1002/047084535X.

[9] Christopher Olah. *Understanding LSTM Networks*. en. Aug. 2015.

[10] Jorge D. Rios et al. *Neural Networks Modeling and Control: Applications for Unknown Nonlinear Delayed Systems in Discrete Time*. en. First. Waltham: Elsevier, 2019. ISBN: 978-0-12-817078-6.

[11] Ming Zhang. *Artificial Higher Order Neural Networks for Economics and Business*. en.

Appendix