PACKAGE ID - 001178IBMPC00 ESPENN

KWIC TITLE - Analysis of Stochastic Response of Neural Networks with Stochastic Input

AUTHORS - Robinson, D.
Sandia National Labs., Albuquerque, NM (United States)

Atcitty, C.
Sandia National Labs., Albuquerque, NM (United States)

LIMITATION CODE -COPY **AUDIENCE CODE -** LIM

COMPLETION DATE - 07/01/1994 **PUBLICATION DATE -** 07/01/1994

DESCRIPTION - Software permits the user to extend capability of his/her neural network to include probablistic characteristics of input parameter. User inputs topology and weights associated with neural network along with distributional characteristics of input parameters. Network response is provided via a cumulative density function of network response variable.

PACKAGE CONTENTS - Media Directory; Software Abstract; Media Includes Source Code, Executable Module, Auxiliary Material, Sample Problem Input and Output Data;

SOURCE CODE INCLUDED? - Yes

MEDIA QUANTITY - 1 3.5 Diskette

METHOD OF SOLUTION - The approach used is a combination of advanced mean value, first order, second moment structural reliability methods and classical feed-forward, back propagation neural networks.

COMPUTER - IBM PC

OPERATING SYSTEMS - Windows for Workgroups Version 3.11

PROGRAMMING LANGUAGES - Borland Turbo C++ Version 4

SOFTWARE LIMITATIONS - Input distribution are currently limited to Gaussian and lognormal.

SOURCE CODE AVAILABLE (Y/N) - Y

UNIQUE FEATURES - No other software package provides the even limited capabilities of this software in combining neural networks and advanced reliability methods.

HARDWARE REQS - IBM PC compatible computer running Windows 3.1 or 3.11.

TIME REQUIREMENTS - Run time depends heavily on the number of input parameters and the convergence criteria set by the user.

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TIME REQUIREMENTS -(CONT)
ABSTRACT STATUS - Submitted 8/7/97. Released AS-IS 10/17/97

SUBJECT CLASS CODE - OP

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COMPUTER PROGRAM DOCUMENTATION
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SPONSOR - DOE/DP

PACKAGE TYPE - AS - IS