

UNCERTAINTY ANALYSIS OF TWO-SHAFT GAS TURBINE PARAMETER OF
ARTIFICIAL NEURAL NETWORK (ANN) APPROXIMATED FUNCTION USING
SEQUENTIAL PERTURBATION METHOD

HILMI ASYRAF BIN RAZALI

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LIST OF SYMBOLS

y, p	Input vector
w, W	Weight matrix
θ	Threshold
b	Bias
u, n	S-element net input vector
a	Column vector
P_9	Combustion chamber pressure, (kPa)
T_9	Power turbine outlet temperature, (°C)
ΔP	Differential pressure, (kPa)
v_{out}	Outlet velocity, (m/s)
v_{in}	Inlet velocity, (m/s)
R	Specific gas constant, (kJ/kg.K)
A_9	Area of combustion chamber, (m ²)
F_n	Thrust produced, (kN)

LIST OF ABBREVIATIONS

ANN	Artificial neural network
NA	Newton approximation
SP	Sequential perturbation