

NIST Decision Tree Report

Summary

Include	Laboratory	Result	Uncertainty	DegreesOfFreedom
FALSE	IRMM	34.30	1.03	60
TRUE	KRISS	32.90	0.69	4
TRUE	NARL	34.53	0.83	18
TRUE	NIST	32.42	0.29	2
TRUE	NMIJ	31.90	0.40	13
FALSE	NRC	35.80	0.38	60

Date: 2023-04-07

Type of DoE: Degrees of Equivalence for Prediction

Selected Procedure: Hierarchical Laplace-Gauss

Consensus estimate: 32.69

Standard uncertainty: 0.3894

95% coverage interval: (31.91, 33.46)

Dark uncertainty (tau): 0.7664

Tau posterior 0.025 and 0.975 quantiles: (0.03475,2.447)

Decision Tree Hypothesis test results

Cochran's test for Homogeneity:

p-value: 0.035

Q = 8.605 (Reference Distribution: Chi-Square with 3 Degrees of Freedom)

tau est. = 0.6548

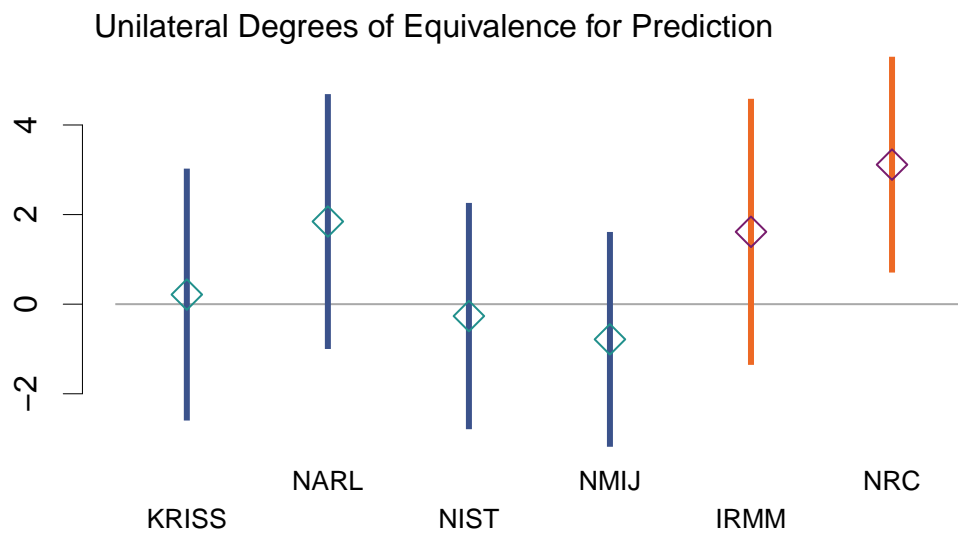
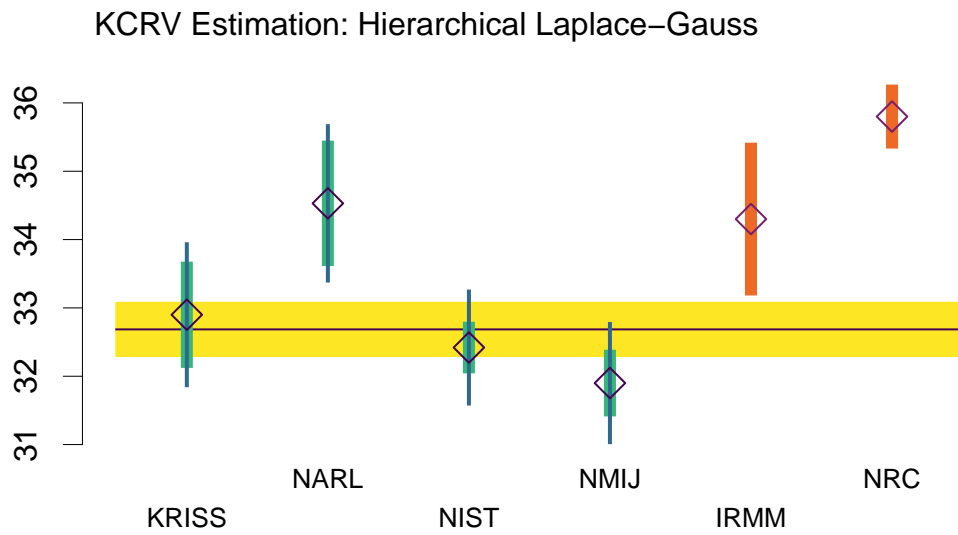
tau/median(x) = 0.02005

tau/median(u) = 1.201

Shapiro-Wilk test for Normality: p = 0.9037

Miao-Gel-Gastwirth test of Symmetry: p = 0.1252

Plots



DoE Table

	Lab	DoE.x	DoE.U95	DoE.Lwr	DoE.Upr
IRMM	IRMM	1.6150	2.952	-1.2880	4.517
KRISS	KRISS	0.2145	2.730	-2.5300	2.959
NARL	NARL	1.8450	2.810	-0.9331	4.622
NIST	NIST	-0.2655	2.372	-2.7240	2.193
NMIJ	NMIJ	-0.7855	2.362	-3.1160	1.545
NRC	NRC	3.1150	2.374	0.7729	5.456

MCMC Sampler Diagnostics Table (if applicable)

If one of the Bayesian models is run (Hierarchical Gauss-Gauss, Hierarchical Laplace-Gauss, or Hierarchical Skew-Student-t), then diagnostics for the MCMC sampler will be given below. As a general recommendation, if any of the R-hat values are greater than 1.05, then the sampler may not have reached equilibrium, and the “Total Number of MCMC Steps” should be increased, and the run repeated. The “Number of MCMC Warm-Up Steps” should be about half of the “Total Number of MCMC Steps.” The “Effective Sample Size” (n.eff) is approximately the size of the MCMC sample that the results are based on.

	Rhat	n.eff
deviance	1.001	10000
lambda[1]	1.001	10000
lambda[2]	1.001	10000
lambda[3]	1.001	7800
lambda[4]	1.001	10000
mu	1.001	7800
sigma[1]	1.001	8100
sigma[2]	1.002	3000
sigma[3]	1.001	10000
sigma[4]	1.001	10000
tau	1.001	10000