Harold Malcolm Hudson

Emeritus Professor

Curriculum Vitae
April 2024

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Biography of Professor Malcolm Hudson (edited 2024)

Malcolm Hudson attended University of NSW (B.Sc.(Hons) in Pure Mathematics), and Stanford University (PhD in Statistics). He spent over 30 years on the faculty of the Department of Statistics, Macquarie University, where he is Emeritus Professor. He supervised seven PhD students who graduated from Macquarie University to successful statistical careers. Research interests include multiparameter estimation in Poisson and semiparametric models, statistical computing, and development of risk models. Hudson's current theoretical research includes the fitting of correlated competing risks data. Hudson contributes to the biostatistics community through long-standing (since 1974) involvement in research on statistical applications in medicine. He participates in projects of the NHMRC Program Grant of the NHMRC Clinical Trials Centre, University of Sydney, in which he was a Principal Investigator (2003-2007) and is now Honorary Professor in the Faculty of Medicine. Hudson's Biostatistics papers include both recent (e.g.) and earlier publications (e.g. Hudson, Lo, Heritier, Statistics in Medicine, 2014; Glare et al, BMJ, 2003; Lumley et al, SIM, 2001; Hudson, Biometrics, 1986; Hudson and Hahn, J. Theor. Biol., 1977; . . .). He taught in the Biostatistics Collaboration of Australia's postgraduate programs and assists students in statistical aspects of clinical medicine research.

Hudson now continues to share his research activities between FSE, Macquarie University, and NHMRC CTC, University of Sydney. In the last seven years, at NHMRC CTC, Hudson has collaborated on projects with Dr Chee Lee, Dr Sally Lord and several PhD students.

Hudson's research on Medical Imaging conducted during the period 1994-2000 has very high citation impact. In 2014 he was recipient of the IEEE Marie Sklodowska-Curie Award.

Education and qualifications

➤ **B.Sc. with Hons. 1 in Mathematics**,
University of N.S.W., 1970
➤ **Ph.D. in Statistics**,
Stanford University, 1974.
  – Thesis title: Empirical Bayes Estimation.
  – Thesis supervisors: Lincoln Moses, Charles Stein.

Current Appointments

➤ Emeritus Professor, Department of Mathematics and Statistics, Macquarie University
➤ Honorary Professor, NHMRC Clinical Trials Centre, Faculty of Medicine, University of Sydney

Employment history

Lecturer, SL, Associate Professor, Department of Statistics, Macquarie University	1974–2000
Head, Department of Statistics, Macquarie University	1994–1994
Visiting Professor, NHMRC Clinical Trials Centre, University of Sydney	2000–2005
Head, Department of Statistics, Macquarie University	2000–2004
Professor, Department of Statistics, Macquarie University	2000–2008
Honorary Professor, NHMRC Clinical Trials Centre, University of Sydney	2008–2024
Emeritus Professor, Macquarie University	2008–2024

Other positions

Scientific Secretary, *IASC, ISI*	2001–2005

Honours and Awards

➤ Recipient of the 2014 IEEE Marie Sklodowska-Curie award
➤ Principal Investigator, NHMRC Program Grant (2003-2007) of NHMRC CTC, University of Sydney
➤ Statistical Society of Australia, NSW Branch, invited presentation, 2015

Current memberships

➤ Elected Member, International Statistical Institute
➤ Member, International Association for Statistical Computing
➤ Member, International Biometric Society
➤ Member, Statistical Society of Australia

Professional contributions

Hudson recently examined two PhD student theses in Statistical Theory and Methods.
- ➤ Dr. K Jachno, Monash University, 2021.
- ➤ Dr F. Novkaniza, Bogor Agricultural University, Indonesia, 2021.

Publications

Refereed research papers (since 2016)

Al-Rubaie ZTA, Askie LM, Ray JG, Hudson HM, Lord SJ. The performance of risk prediction models for pre-eclampsia using routinely collected maternal characteristics and comparison with models that include specialised tests and with clinical guideline decision rules: a systematic review. BJOG 2016; DOI: 10.1111/1471-0528.14029.

Moth , McLachlan , et. al. , Patients' preferred and perceived roles in making decisions about adjuvant chemotherapy for non-small-cell lung cancer. Lung Cancer , 2016

Leung , Wong , et. al. , Impact of improved glycemic control on cardiac function in type 2 diabetes mellitus. Circulation: Cardiovascular Imaging , 2016

Blinman , Moth , et. al. , Patients' preferred and perceived roles in making decisions about adjuvant chemotherapy for non-small-cell lung cancer. Elsevier Ireland Ltd , 2016

Lee , Hudson , et. al. , When do patient reported quality of life indicators become prognostic in breast cancer? Health and quality of life outcomes , 2018

Elmadahm , Lord , et. al. , Performance of four published risk models to predict sentinel lymph-node involvement in Australian women with early breast cancer. The Breast , 2018

Al-Rubaie , Askie , et. al. , Assessment of NICE and USPSTF guidelines for identifying women at high risk of pre-eclampsia. European Journal of Obstetrics, Gynecology and Reproductive Biology , 2018

Pham , Liney , et. al. , Rectal cancer: Multiparametric MRI assessment of tumour heterogeneity and chemoradiotherapy response. Radiotherapy and Oncology , 2018

Al-Rubaie , Askie , et. al. , The performance of risk prediction models for pre-eclampsia using routinely collected maternal characteristics and comparison with models that include specialised tests and ... BJOG-An International Journal of Obstetrics and Gynaecology, 2018

Hwang , Albalawi , et. al. , Disengagement from mental health treatment and re-offending in those with psychosis: A multi-state model of linked data. Social Psychiatry and Psychiatric Epidemiology , 2020

Al-Rubaie , Hudson , et. al. , The association between ethnicity and pre-eclampsia in australia: A multicentre retrospective cohort study , Australian and New Zealand Journal of Obstetrics and Gynaecology , 2020

Al-Rubaie , Hudson , et. al. , Prediction of pre-eclampsia in nulliparous women using routinely collected maternal characteristics: A model development and validation study. BMC Pregnancy and Childbirth , 2020

Tjokrowidjaja , Goldstein , et. al. , The impact of neutrophil-lymphocyte ratio on risk reclassification of patients with advanced renal cell cancer to guide risk-directed therapy. Acta Oncologica , 2020

Pham , Liney , et. al. , Multi-parametric magnetic resonance imaging assessment of whole tumour heterogeneity for chemoradiotherapy response prediction in rectal cancer. Physics and Imaging in Radiation Oncology , 2021

Gares, Hudson, et. al., Effect of a correlated competing risk on marginal survival estimation in an accelerated failure time model. Communications in Statistics - Simulation and Computation (to appear).

Refereed research texts (since 2016)

Jun Ma, Annabel Webb and Malcolm Hudson. Likelihood Methods in Survival Analysis; with R Examples, 2024 (in press).

Working papers

Comparz landmark analysis project. Hudson, Tjokrowidjaja and Lee, 2019.

Quality-of-life outcomes of Martin, et al, (2000): an analysis of patient preferences. Hudson & Soerensen, 2020.

LIPID study patient outcomes following revasc or CABG. Hudson, 2021

SOLO2 patient progression using CA-125 and RECIST criteria. Hudson, Tjokrowidjaja and Lee, 2023.

SOLO2 patient progression, following Olaparib treatment, using CA-125 and RECIST criteria. Hudson, Tjokrowidjaja and Lee, 2023.

Dynamic prediction time-dependent risk sets for ROCs. Hudson and Tjokrowidjaja, 2023.

Software

Hudson created and develops the R package bnc for analysis of correlated bivariate normal competing risks data. (Available at: https://bitbucket.org/malcolm_hudson/bnc/)