



Rob Jury

Technical Director – Structural Engineering – Wellington Structural

Bachelor of Engineering (Hons)

Master of Engineering (Civil) University of Canterbury, New Zealand

Citizenship

New Zealand

Membership

- Fellow, Institution of Professional Engineers (NZ) (Civil & Structural)
- Fellow, NZ Society for Earthquake Engineering
- CPEng
- Member, Earthquake Engineering Research Institute (USA)
- Member of NZ Timber Design Society
- Chairman of the New Zealand Society of Earthquake Engineering Study Group on Earthquake Risk Buildings.
- Member of the New Zealand Society of Earthquake Engineering Study Group reviewing the Seismic Design of Storage Tanks.
- Committee Member of NZS/AS Joint Standard for Loadings on Buildings including NZS 1170.5 Earthquake Loadings Standard.
- Member of Research Board providing overview to Auckland and Canterbury Research programme on seismic resistance of existing buildings.

Special competence

Design and detailing of low and high rise industrial and commercial buildings and unusual structures. Seismic design of structures including strengthening of earthquake risk buildings. Preparation of seismic design codes. Assessment of damage and probable loss due to earthquakes. Seismic risk studies. Risk Studies.

Background

1978 – present Beca Carter Hollings & Ferner, Wellington, New Zealand

Relevant experience

Beca Carter Hollings & Ferner Ltd, Wellington, 1978-Present:

1999 – present - Technical Director with Beca Carter Hollings & Ferner Ltd

1996 -2007 & 2009 - Present - Manager – Wellington Structural – Beca Carter Hollings and Ferner Ltd

Investigation of Buildings for Royal Commission Investigation into Building Performance during Christchurch Earthquakes 2011 and ongoing

Responsible for investigations into two buildings that failed during the 22 February Christchurch Earthquake. Also member of Expert Panel overseeing the investigations of these buildings and two others.

Christchurch Earthquake Aftermath 2010 and ongoing

Responsible for the assessments of numerous buildings throughout New Zealand for various clients. IEP and detailed assessment processes employed.

Victoria University Seismic Assessment Project 2009 - 2010

Responsible for a project to complete IEP assessments for all buildings in the University property portfolio and to prepare strengthening schemes for buildings scoring below 65%NBS.

Whangarei Hospital Seismic Assessment Project 2009

Responsible for a project to assess hospital buildings using the IEP methodology.

Seismic Retrofit of School Buildings in Istanbul – 2008 and ongoing

Specialist seismic advisor for a project to assess and design seismic retrofit solutions for over 500 school and institutional buildings.

Review of Retrofitting Guidelines for Romania – 2007

Team Leader for a World Bank project to review guidelines on assessment and retrofit of existing buildings in Romania, prepared by a Romanian Code Committee.

Porirua City Council Consent Assessment – 2009 and ongoing

Advisor to the Porirua City Council and responsible for the Beca consent reviewers.

Wellington City Council Existing Building Assessment Project – 2007 and ongoing

Responsible for the assessment of approximately 1500 existing buildings in Wellington City using the IEP process contained with the NZSEE guidelines recommendations.

Wellington City Council Building Consent Assessment, 2004 and ongoing

Advisor to the Wellington City Council on Structural matters. Also responsible for the Beca assessment team.

Rail Bridges for ONTRACK – 2004-2007

Responsible for the preparation of designs, tender and contract documentation and site monitoring for general online replacements of rail bridges on the main trunk line.

Guidelines for the Assessment and Retrofit of Earthquake Risk Buildings - 2005

Responsible for various projects associated with this study group report for the New Zealand Society for Earthquake Engineering. Included revision of the Initial Evaluation Procedure, development of analysis procedures and preparation of worked examples using the guidelines.

Retrofit of Residential Buildings in Istanbul – 2005–2006

Structural Team Leader for a World Bank funded project to investigate the viability of seismic retrofitting for a sample group of residential buildings in Istanbul.

Plimmerton Footbridge – 2004

Responsible for the design of a 33 m span steel truss footbridge across SH1, Plimmerton.

Investigation into Standards for 500E Grade Reinforcing Steel in New Zealand – 2004

Completed an investigation into the existing Standards pertaining to 500E Grade Reinforcing Steel to determine whether these were likely to be adequate given some unexplained failures. Study carried out for NZ Building Industry Authority.

Investigation into the Seismic Performance of Hollowcore, 2003

Team Leader of an investigation into the seismic performance of hollowcore in New Zealand. Carried out for the NZ Building Industry Authority. A statistical survey of hollowcore usage in Wellington and Christchurch was completed. The information obtained was analysed to characterize the expected performance of hollowcore and to establish the risk profile in these cities following the experience from university testing.

Singapore Bridge Assessments and Retrofits – 2003-2004

Responsible for bridge assessment and retrofit programmes for Land Transport Authority, Singapore. Twenty-one bridges inspected and assessed, full retrofits prepared for seven prestressed beam and reinforced concrete bridges.

Southern Resa Underpass, Wellington Airport – 2005-2007

Responsible for the structural design of a traffic (2 lane) underpass at the southern end of the main runway.

Seismic Assessments of Seven Bridges in Wellington & Nelson Regions, Transit NZ, 2003-2004

Team Leader and Job Director for a detailed assessment of 7 bridges located in Wellington and Nelson. Required a detailed structural assessment for seismic effects, assessment of seismic hazard and an economic analysis for each.

Seismic Hazard Analyses, 1999-2006

Responsible as verifier and Job Director for seismic hazard analyses for the following projects:

- Rodney Power Station – 2006
- Kopu Bridge, New Zealand - 2006
- Kupe Project, Taranaki, New Zealand – 2004
- Bridge Seismic Assessments – Wellington and Nelson (NZ) 2003
- North Shore Bus-way Auckland, New Zealand, Transit NZ – 2003
- Mt Maunganui, New Zealand, Mobil NZ, 2003
- Takatimu to Tasman Bridge and Approaches, New Zealand, Transit NZ – 2003
- Maui Platforms and Pohokura sites, Taranaki, Shell Todd Oil Services, 2003-2003
- Golden Bay Cement Kiln Upgrade, Whangarei, NZ, Fletcher Construction
- Newmarket Viaduct Upgrade, Auckland, NZ, Transit NZ, 2002-2003
- State Highway 2, Lower Hutt, NZ, Transit NZ, 2002-2003
- Alpurt Project, New Zealand – 2002
- Port Vila (Vanuatu), 2002 (Client: Mobil Oil Australia)
- Kings Wharf Rehabilitation, Fiji, Maritime and Ports Authority of Fiji, 2002
- University of Auckland, New Zealand – 2001
- Huntly e3p Project, New Zealand – 2001
- Queen Street Station, Auckland, New Zealand – 2001
- Marsden Point, New Zealand – 2000
- Project Waikato, New Zealand – 2000
- Bell Block Bypass, New Zealand – 2000
- Fiona Dam, 2000 (PT Inco)
- Ramu Nickel, Papua New Guinea, Highlands Pacific Australia Pty, 1999
- Lihir Gold Mine, Lihir Island, PNG, Lihir Management Company Pty Ltd, 1999

Transmission Gully Studies, 2003-2004

Earthquake engineer for team preparing an updated cost estimate including associated design concepts and risk analysis for a proposed new 27 km long four-lane motorway providing an alternative route out of Wellington.

Meridian Energy Ltd: Project Aqua, 2003-2004

Earthquake Design Specialist responsible for earthquake design philosophy and seismic design for a 60 km power scheme in the lower Waitaki Valley involving canals and six 90 mW power stations (project stopped during preliminary design phase).

Aratiatia Power Station Seismic Retrofit Peer Review – 2003-2004

Commissioned by Mighty River Power to carry out a peer review of proposed seismic upgrading works including potential for surge tank sliding and potential for damage to the gate support structures within the surge tank.

State Highway 2 Dowse to Petone Upgrade, Wellington, 2003-2010

Structural Team Leader for the structural design of 5 State Highway overbridges, interchange and retaining walls to be constructed at Petone, Lower Hutt. Includes alterations and retrofit of the Petone Pedestrian Overbridge. Value \$60M.

Wellington Bulk Water Supply, 2001

Seismic engineer, reviewer and job director for a study on a pipeline segment which included both a Wellington fault crossing and the Hutt River crossing, with a characteristic movement of 3.6-5 m in a 600 year return period.

Assessment and Improvement of the Structural Performance of Buildings in Earthquake, 2000-ongoing

Currently Chairman of this NZSEE Study Group to develop guidelines for the initial evaluation, detailed assessment and improvement measures for earthquake risk buildings. The guidelines document is intended to be cited in the NZBC. The work is being completed for the Department of Building and Housing.

Genesis Recreation Centre – Masterton District Council, 2000-2004

Principal Consultant for the feasibility study and design of a \$7.1M project to upgrade the existing recreation centre until the design team was novated to the Design Build Contractor. Project includes refurbishment of the original stadium, upgrading and rationalisation of the original outdoor and indoor pools and construction of a new indoor aquatic centre comprising leisure pool and 25 m training pool.

Otaki River Bridge, 2000

Team Leader and Job Director responsible for a seismic assessment of this bridge carried out as part of the highway bridge seismic screening project.

Melling Railway Line Extension Bridge Study, 1999

Team Leader and job Director for an investigation of an option to provide a railway crossing of the Hutt River at Melling. Included estimation of costs.

Loadings Standard Revision (AS/NZS 1170), 1995-2004

Member of the joint Australian/New Zealand Standards lead committee considering the development of a suite of loadings standards for permanent, imposed, wind, earthquake and snow design actions.

Earthquake Loadings Standard (NZS 1170.5) 1995-2004

Member of the New Zealand Standards committee which prepared NZS 1170.5.

Whitford Brown Intersection, 2000

Deputy Team Leader for the management of this project to upgrade this intersection of SH1 near Porirua. Concept included major interchange and extension of lanes, Transit NZ.

1989 – 1999**Associate with Beca Carter Hollings & Ferner Ltd working on projects which include:****Macau Tower, 1998**

Responsible as package leader for the seismic hazard assessment and structural design of the concrete shaft for this 338 m high tower currently under construction in Macau. Total expected project value US\$40M.

Peer Review, Seismic Design of the Jakarta Tower, 1997

Carried out a review of the seismic design aspects of this 550 m high communication and public viewing tower proposed for Jakarta.

Seismic Hazard Analyses, 1996-1999

Responsible as verifier for seismic hazard analyses for the following projects:

- Lake Toba, Indonesia - 1996

Thorndon Overbridge Seismic Retrofit, 1996 – 1999

Engineer to the Contract and coordinator for Partnering for this project to seismically retrofit this major bridge in Wellington. Total contract value \$15 million.

Lake Toba Seismic Assessment, 1996

Responsible for a seismic hazard assessment for a site near Lake Toba in northern Sumatra, Indonesia, carried out for Kohn-Crippen.

Auckland Harbour Bridge Seismic Assessment, 1995 – ongoing

Responsible for the estimation of earthquake hazard at the site to be used in evaluation retrofit options.

Sky Tower - Auckland, 1994 – 1999

Responsible, as structural team leader, for the structural design of the 336 m high Sky Tower (communication tower), being constructed as part of the Sky City Casino project in Auckland.

Otira Viaduct Seismic Assessment, 1994

Responsible for the estimation of the earthquake hazard for the Otira viaduct site.

Thorndon Overbridge Seismic Assessment, 1993 – 1994

Responsible for the estimation of the earthquake hazard at the site to be used in evaluating retrofit options.

Nepal Building Code Project, 1992 – 1993

Responsible for the preparation of the Nepal Earthquake Code including derivation of design earthquake loads and seismic zoning for the country.

Loadings Code Revision, 1988 – 1992

Member of the Standards Association Committee which prepared the revision of the loadings standard (including earthquakes), NZS4203:1992.

North Island Control Centre, 1991

Responsible for the structural design of a control centre for Trans Power. The structure is required to be resilient to sabotage and seismic activity.

Wellington Town Hall Strengthening, 1990 – 1992

Responsible for the design of an alternative strengthening proposal for the Wellington Town Hall which was accepted as part of the successful tender.

Telephone Exchange Strengthening – 1990

Responsible for the design and construction of the seismic strengthening works of three telephone exchanges in the Wellington Region.

Included were:

- Courtenay Place Exchange (\$1M)
- Lower Hutt Exchange (\$0.2M)
- Naenae Exchange (\$20,000)
- Miramar Exchange (\$40,000)

Telecom Risk Studies, 1990

Responsible for a seismic risk study of all Telecom Telephone Exchanges in the Wellington region. Investigation required a review of building performance and how this might affect Telecom operations. An assessment of equipment performance under earthquake shaking was also undertaken.

Enclosed Switchyard Buildings, Oteranga & Fighting Bays, 1989 - 1991

Responsible for the design of these two enclosed switchyard buildings constructed as part of the DC4 Hybrid Link Project for Trans Power New Zealand Ltd.

1987 – 1989

Specialist Engineer with Beca Carter Hollings & Ferner Ltd working on projects which include:

NZI Head Office Development - Auckland, 1988

Responsible for the design of steel work and one office tower for this three-tower \$700M project. Commissioned by NZI Corporation.

Telecom Microwave Towers, 1988

Responsible for the review of a study assessing probable lifetime costs, to Telecom, resulting from structural failure of typical microwave telecommunications towers due to wind loading. This study considered likely costs associated with initial capital cost of towers and equipment, probable cost of repairs and probable loss of revenue caused by service disruption. It was shown that it is possible to determine an optimum design wind speed for a given tower so that lifetime costs can be minimised.

Hunter Building Redevelopment, 1988

Responsible for the structural design of the strengthening works for the Hunter and Robert Stout Buildings. Also responsible as principal consultant for the design and construction of Stage II of the work (Total value \$15M) - Commissioned by Victoria University of Wellington.

Post-Earthquake Damage Inspection & Repair, 1987

After the 1987 Edgecumbe (NZ) earthquake, Mr Jury was part of a team who assessed damage to the Whakatane Board Mill Plant in Whakatane and directed repairs. He was a co-author of comprehensive reports recording all site damage and investigating reasons for it occurring on this site and the Tasman Pulp and Paper Mill site at Kawerau.

1982 – 1987

Senior Engineer with Beca Carter Hollings & Ferner Ltd working on projects which include:

Seismic Risk Studies

Responsibility for the preparation of reports estimating the risk and expected losses resulting from earthquakes for the following sites and structures:

- New Zealand Paper Mills - Maitua (total value at risk \$135M)
- Central North Island Assets of NZFP (total value at risk \$2,500M)
- Auckland Assets of NZFP (total value at risk \$285M)
- Some Assets of AHI (total value at risk \$320M)
- Recovery Boiler Structure - Kinleith (total value at risk \$200M)
- GTG Plant, Motunui (total value at risk \$1,200M)
- Lion Nathan Auckland Assets (total value at risk \$495M)
- Lion Nathan Australia Assets
- Lion Nathan China Assets

Derivation of Design Response Spectra - Maui Stage II Development, 1987 – 1989

Senior Engineer responsible for the preparation of a report setting out the derivation of design spectra for the proposed second offshore platform in the Maui Gas Field (off West Coast NZ). Investigation included derivation of basement rock risk spectra, propagation of motion matching these spectra up a soil column model using LASS computer programs and derivation of design spectra. Commissioned by Shell BP and Todd Oil Services Ltd.

Earthquake Risk Assessment of the Central North Island Assets of NZ Forest Products Ltd, 1986

Senior Engineer responsible for preparation of report estimating annual and maximum credible losses for four plants in the central North Island region belonging to NZ Forest Products Ltd.

Included were; the Kinleith Industries Complex, Kinleith; Whakatane Board Mills Complex, Whakatane; Hutt Timber and Hardware Complex, Tokoroa; Taupo Totara Timber Complex, Putaruru. Required assessment of seismicity and estimation of expected damage levels by site visual inspection. (Total value at risk \$2,500M). Commissioned by NZ Forest Products Ltd, Alexander Stenhouse Ltd and Sedgwicks Ltd.

Earthquake Risk Assessment of the Auckland Assets of NZ Forest Products Ltd, 1985

Senior Engineer responsible for preparation of report estimating average annual and maximum credible losses in five plants in the Auckland region belonging to NZ Forest Products Ltd. Required assessment of seismicity and estimation of expected damage after a visual site inspection. (Total value at risk \$285M). Commissioned by NZ Forest Products Ltd.

Earthquake Risk Assessment of Some Assets of Alex Harvey Industries Ltd, 1985

Senior Engineer responsible for preparation of report estimating expected losses resulting from earthquakes in AHI plants in Auckland, Hamilton, Wellington and Christchurch. Average annual losses were estimated as well as the maximum loss during the assessed maximum credible earthquake. (Total value at risk \$320M). Commissioned by Alex Harvey Industries Ltd.

Mexico Earthquake Reconnaissance, 1985

Was a member of the New Zealand Reconnaissance Team which visited Mexico in the early days after the September 19 and 20 (1985) earthquakes. Reconnaissance included inspections of damaged and undamaged structures and also bridges both in Mexico City and in the Coastal Regions close to the epicentre.

Laluai Hydro Prefeasibility Study, 1985

Prepared seismic risk sections of the prefeasibility study for a hydroelectric scheme on Bougainville Island, Papua New Guinea.

Design of Rail Bridges for Ohakune, Horopito Railway Deviation, 1984 – 1985

Senior Engineer responsible for design of two rail bridges. One a 414m continuous, concrete curved bridge to replace the Hapuawhenua viaduct presented the designers with several problems related to achieving the seismic solution while still satisfying service load criteria including creep and shrinkage. The other is a 94 m long continuous concrete bridge across the Taonui Stream. The Hapuawhenua Bridge was the winner of the 1988 New Zealand Concrete Society Prestressed Concrete Award.

Seismic Upgrading of a Suspended Ceiling, Government Printing Office, Masterton, 1984

Senior Engineer responsible for the assessment of options and for the preparation of contract documents for the preferred alternative of the seismic upgrade of 10,000 m2 of suspended ceiling. (Approx value of upgrade \$0.5M). Commissioned by the Ministry of Works and Development.

The Effects of Earthquakes on Tunnels, 1984

Prepared report on the effects of earthquakes on tunnels. Commissioned by Reed Stenhouse.

Earthquake Engineering for Bridges in Papua New Guinea, 1984 - 1985

Senior Engineer responsible for a complete review of the manual prepared by BCHF in 1976. Review included incorporation of the zoning scheme originally derived in 1980 for building construction and further recommendations for the design and detailing of bridges to resist seismic motions. Commissioned by the Papua New Guinea Department of Works and Supply.

Seismic Risk Analysis for Recovery Boiler Structure – Kinleith New Zealand, 1984

Senior Engineer responsible for the preparation of a report deriving suitable input motions for use in a Time History Dynamic Design Procedure of the boiler support structure. Required a calculation of the expected occurrence of given levels of structural response at the site to give a basis for scaling the strong motion records and an evaluation of site dependent characteristics. (Approximate value \$100M). Commissioned by NZ Forest Products Ltd.

Design for a 21.5 Storey Building 'Wisma Sudirman MD', Jakarta Indonesia, 1983

Senior Engineer responsible for the design of the reinforced concrete shear walls and the reinforced concrete slab system to comply with the Indonesian Codes of Practice. Commissioned by Metropolitan Developments of Jakarta.

1978-1982

Design Engineer with Beca Carter Hollings & Ferner Ltd., working on projects which included:

- Design of Reinforced Concrete Columns for the Reformer Furnace Support Structure -GTG Project Motunui, 1981 (Florida, U.S.A.)
- Carried out design and supervised detailing for the 29 m high cantilevering columns supporting the reformer furnace and roof structures. For Davy McKee Corporation USA.

Seismic Risk Study for Motunui New Zealand, 1981 - (Revised 1983)

Engineer responsible for the derivation of the seismic risk for this major petrochemical complex for converting natural gas to gasoline (approx value \$1,200M). Required an assessment of the expected frequency of occurrence of ground shaking and also an assessment of the risk of liquefaction at the site caused by ground motions. Commissioned by Bechtel Pacific Corporation.

A Study of Risk from Major Natural Events - Proposed Newspring Expansion for Tasman Pulp & Paper Company Ltd, 1980

Engineer responsible for preparation of sections of the report relating to the evaluation of seismic risk at various sites within New Zealand.

Papua New Guinea Design Loadings Code, 1980

Prepared sections of this code which was commissioned by the Papua New Guinea Department of Works & Supply.

Papua New Guinea Earthquake Study - Seismic Risk Analysis, 1980

Carried out a seismic risk analysis of PNG to establish seismic zones and to evaluate seismic lateral loadings for earthquake resistant design of buildings in PNG. Commissioned by the Papua New Guinea Department of Works & Supply.

Papua New Guinea Earthquake Study - Material Code Development, 1980-1981

Prepared sections for special provisions for seismic design of materials codes for reinforced masonry, reinforced concrete and structural steel. Commissioned by the Papua New Guinea Department of Works & Supply.

Design for the Wool House Development for the New Zealand Wool Board, 1979

Engineer responsible for carrying out a computer analysis of this 14-storey shear tower structure and also responsible for the design and detailing of the braced shear towers and foundations.

Design Proof Check of the ANZ Multi-storey Development, Lambton Quay Wellington, 1978

Carried out a design proof check of this 18-storey reinforced concrete framed building. This involved checking the seismic lateral load carrying capability of the beams, columns and piles to ensure the capacity design requirements of the New Zealand Loadings code were satisfied.

Hydrological Investigation - Patea Hydro Project, 1978

Involved in a probabilistic hydrological study of the Patea River catchment to determine maximum possible flow rates in Patea River.

Canterbury University Study 1977

In partial fulfilment of the requirements for Masters Degree carried out research into the effect of earthquake motions on multi-storey reinforced concrete framed structures. In particular this involved the determination of seismic load demands on columns of reinforced concrete framed structures designed to the then proposed New Zealand building code requirements using time history techniques.

Awards

1988 New Zealand Concrete Society Prestressed Concrete Award Hapuawhenua Railway Bridge (with Hollings, Catley).

1999 ACENZ Gold Award of Excellence for the Thorndon Overbridge project.

1997 New Zealand Concrete Society Prestressed Concrete Award Sky Tower

1997 New Zealand Concrete Society Concrete Award Sky Tower.

1998 Sesoc Award for Structural Engineering Excellence for Sky Tower.

1998 ACENZ Gold Award of Excellence for Sky Tower

1999 NZIOB James Hardie Award for Excellence in the Building Profession in the category of Innovation for the Thorndon Overbridge Seismic Retrofit Project.

1999 ACENZ Gold Award of Excellence for Thorndon Overbridge Seismic Retrofit Project

2008 ACENZ Silver Award of Excellence for Istanbul Residential Buildings Seismic Retrofit Project

Publications

Over 38 papers and presentations to Learned Societies, Technical Conferences

"Seismic Load Demands on Columns of Reinforced Concrete Multistorey Frames" Dept. of Civil Engineering, University of Canterbury, Master of Engineering Report No 78/12, 1978.

"A Numerical Method for Seismic Risk Assessment" (co-author with J P Hollings). Proceedings Institution of Professional Engineers Conference – Christchurch, February 1982.

"The Development of Seismic Zones and the Evaluation of Lateral Loadings for Earthquake Resistant Design of Buildings in Papua New Guinea. Bulletin NZNSEE, Vol. 15, No. 3, Sept. 1982. (Co-author with I A N Fraser and J P Hollings).

"A Seismic Zoning Scheme for New Zealand including Lateral Load Derivation". (Co-author with J P Hollings). Proceedings 3rd South Pacific Conference in Earthquake Engineering, Wellington, May 1983.

"A Roofing Case Study": An example of the use of life cycle costing analysis for design and maintenance decisions". Proceedings IDEA 1985 Conference, 1985, (co author with I A N Fraser).

"The September 1985 Mexico Earthquakes: Preliminary Report of the New Zealand Reconnaissance Team" Bulletin NZNSEE, Vol. 18, No. 4, DOC 1985 (co-contributor with five others).

"The Design of a Curved 414m Long Continuous Concrete Railway Bridge to Resist Earthquake Motions." (co author with J P Hollings and T J Catley) Proceedings Earthquake Engineering Symposium 1986, Sydney.

"The Design of a Recovery Boiler Support Structure to Resist Earthquakes." (co author with J.P. Hollings and R D Sharpe) Proceedings Earthquake Engineering Symposium 1986, Sydney.

"Earthquake Performance of a Large Boiler (Co-author with J P Hollings and R D Sharpe). Proceedings 8th European Conference on Earthquake Engineering, Barcelona 1986 (Presented by Professor T Paulay)

"Design of a Curved 414m long Continuous Concrete Railway Bridge to Resist Earthquake Motions" (co-author with J P Hollings and T J Catley). Proceedings Pacific Concrete Conference, Auckland, 1988. Also published. Bulletin NZNSEE, Vol 22, No.1, March 1989.

"The September 1985 Mexico Earthquakes: Final Report of the New Zealand Reconnaissance Team" bulletin NZNSEE, Vol. 21, No. 1, March 1988 (co-contributor with five others).

"The Hapuawhenua Railway Bridge" Proceedings Bridge Design and Research Seminar 1990, RRU Bulletin 84.

"Strengthening of the Wellington Town Hall" Proceedings NZNSEE Conference, 1993 also published Bulletin NZNSEE Vol 26, N° 2, June 1993.

"NZS4203:1992 General Structural Design and Structural Loadings - An Outline Paper" (co-authored with A King) 1993 IPENZ Conference.

"Seismic Design Aspects of Sky Tower in Auckland, NZ", (co-authored with D Whittaker). Seminar on Tall Building, Singapore Institution of Engineers, 1995.

"Consideration of Earthquakes in the Design of Sky Tower", (co-authored with R D Sharpe). Proceedings NZNSEE Conference, 1996.

"Seismic Strengthening of the Odeon Theatre, Gisborne", (co-authored with S A Edmonds and J McGregor). Proceedings NZNSEE Conference, 1996.

"The Design of Sky Tower", presented at the IPENZ Conference, Dunedin, 1996.

"An Earthquake Hazard Model for the Central Southern Alps, South Island, NZ", (co-authored with A G Hull, K R Berryman). Proceedings NZNSEE Conference, 1996.

"Design of Sky Tower - New Zealand's Tallest Structure", (co-authored with D H Turkington), Proceedings NZ Concrete Conference, 1995. Also published in FIP Journal, 1995.

"The Top 100 m of Sky Tower", Proceedings of the 59th Annual Conference of the NZ Institute of Welding (Inc), 1997.

"Sky Tower Mast - Design Challenges", (co-authored with D H Turkington and H M Irvine), Proceedings ASEC Conference, 1998.

"Thorndon Overbridge Seismic Retrofit Design and Construction", (co-authored with A Powell and Z Rakovic), Proceedings ASEC Conference, 1998.

"Partnering Co-operatives - Do They Work?", IPENZ, Feb 1999, Vol 54/1.

"Consideration of Earthquakes in the design of the Macau Millennium Tower", (co-authored with D Novakov and M Spencer), Proceedings 12WCEE, Auckland 2000.

"Dealing with Buildings likely to be Unsafe in Earthquake" (co-authored with D Hopkins, D Brunsten, B Shephard), Proceedings 12WCEE, Auckland 2000.

"Seismic Design Loads for Storage Tanks" (co-authored with D Whittaker), Proceedings 12WCEE, Auckland 2000.

"Seismic Hazard Assessment, Practical Considerations" (co-authored with R Sharpe), Proceedings 12WCEE, Auckland 2000.

"Seismic Assessment for Industrial Facility in Dunedin" (co-authored with Michael O'Brien and Dejan Novakov), Proceedings of 7th Pacific Conference on Earthquake Engineering, Christchurch, New Zealand 2003.

"The Prediction of Building Performance during Earthquakes – An Art or a Science?" presented at the Symposium to celebrate the lifetime contributions of Professors Tom Paulay and Bob Park, 2003 (also published BNZSEE, Vol 37 N° 2, June 2004).

"Where is that New Earthquake Loadings Standard" (co-authored with other members of the committee). Proceedings of the Annual Conference NZSEE, 2004.

Presenter in the NZ Standards seminar series on AS/NZS 1170, 2005.

"Issues Associated with Making Buildings Safe", Wairarapa Earthquake Sesquicentennial Symposium, Te Papa, 2005.

"Developing Retrofit Solutions for the Residential Building Stock in Istanbul" (co authored with five others, also presenting author) 100th Anniversary Conference, San Francisco, 2006.

“Hollow Core Floors – a Regulators Perspective” (co authored with four others) Proceedings, New Zealand Society for Earthquake Engineering Conference, 2007.

“Performance Assessment of Existing Buildings in New Zealand” (co-authored with 2 others) Proceedings, New Zealand Society for Earthquake Engineering Conference, 2008.

“Observations and Musings of a Practicing Earthquake Engineer – a tribute to Tom Paulay”. Proceedings, New Zealand Society for Earthquake Engineering Conference, 2010.