

# Ian King

## Consulting Specialist

Ian is an internationally recognised expert in the application of state-of-the-art computer simulation



Consultant assisting Kuwait Institute for Scientific Research with modelling of power station outfalls in Kuwait Bay using RMA models.  
Application of the RMA models to Darwin Harbour (in cooperation with the Water Research Laboratory, UNSW, and the Northern Territory Government).  
Development of flood plain models for various locations in western New South Wales.  
Development of a morphological model for prediction of the evolution of bed level at the entrance to the Murray River in South Australia. This model incorporates interactive hydrodynamics, wave transport and sand transport models to predict changes in bed elevation.  
Consultant, specialising in assistance with application of the RMA Modelling Suite.  
Assistance to Lyonnaise Des Eaux with numerous applications of the RMA models to water supply problems.  
Development of new levee elements for RMA-2 to assist Patterson Britton Pty Ltd with modelling of floods in complex urban systems.

## Publications

- King, I.P., Clough, R.W. and Wilson, E.L. (1964) "Large Capacity Multistory Frame Analysis Programs" *Journal of the Structural Division, ASCE*, Vol. 89, No. ST4, August, pp. 179-204
- King, I.P. & Clough, R.W. (1964) "Analysis of Three-Dimensional Building Frames" *Publication of IABSE*, Vol. 24, pp.15-30
- King, I.P., Clough, R.W. and Wilson, E.L. (1964) "Structural Analysis of Multistory Buildings" *Journal of the Structural Division, ASCE*, Vol. 90, No. ST3, June, pp. 19-34
- King, I.P. (1965) "Finite Element Analysis of Two-Dimensional Time-Dependent Stress Problems" *Ph.D. Thesis*, University of California, Berkeley, January
- King, I.P. and Brown, C.B. (1966) "Automatic Embankment Analysis: Equilibrium and Instability Conditions" *Geotechnique*, September, pp. 209-219
- King, I.P. and Marcal, P.V. (1967) "Elastic-Plastic Analysis of Two-Dimensional Stress Systems by the Finite Element Method" *International Journal of Mechanical Sciences*, Vol. 9, March, pp. 143-154
- King, I.P., Zienkiewicz, O.C. and Valliappan, S. (1968) "Stress Analysis of Rock as No Tension Material" *Geotechnique*, March, pp. 56-66

King, I.P., Orlob, G.T. and Kibler, D.F. (1972) "Development of Mathematical Modelling Capabilities for the Vistula River Project, Poland" *Proceedings of First International Conference on Transfer of Water Resources Knowledge*, Ed. Evan Vlachos, Ft. Collins, CO, September

King, I.P., Orlob, G.T. and Evenson, D.E. (1972) "Optimal Allocation of Limited Water Resources" *International Symposium on the Planning of Water Resources*, International Association of Hydrologic Sciences in cooperation with Secretariat of Water Resources, Government of Mexico, Mexico City, 4-8 December

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King, I.P. and Roig, L.C. (1988) "Two-

## Research reports

- King, I.P., Orlob, G.T. and Kibler, D.F. (1971) "Mathematical Models for Planning the Future Development and Management of the Vistula River System, Poland" Prepared for United Nations Office of Technical Cooperation, New York
- King, I.P., Norton, W.R. and Orlob, G.T. (1973) "A Finite Element Model for Lower Granite Reservoir," Prepared for Walla Walla District, U.S. Army Corps of Engineers, Walla Walla, WA
- King, I.P., Norton, W.R. and Orlob, G.T. (1973) "A Finite Element Solution for Two-Dimensional Density Stratified Flow" Prepared for the U.S. Department of the Interior, Office of Water Resources Research
- King, I.P., Orlob, G.T. and Norton, W.R. (1975) "Mathematical Simulation of Thermal Discharges from Johnsonville Steam Plant" For Tennessee Valley Authority
- King, I.P. and Norton, W.R. (1979) "A Final Report on the Development of a Decay Chain Model for Analysis of Long Term Vadose Zone Radionuclide Storage Tank Leaks" For Rockwell Hanford Operations, Richland, WA
- King, I.P., McLaughlin, D.B., Norton, W.R., Baca, R.G. and Arnett, R.C. (1980) "Parametric and Sensitivity Analysis of Waste Isolation in a Basalt Medium" RHO-BWI-C-94, Rockwell Hanford Operations, Richland, Washington
- King, I.P. and McLaughlin, D.B. (1981) "Analysis of Release Rate Mechanics in a Near Field Repository Zone" Report to Rockwell Hanford Operations, Richland, Washington
- King, I.P. (1988) "A Finite Element Model for Three-Dimensional Hydrodynamic Systems" Report to Waterways Experiment Station, U.S. Army Corps of Engineers, Vicksburg, Mississippi