

## R. Irrgang Research Publications List

1. Simon Kravis and Rosemary Irrgang, "A Case Based System for Oil and Gas Well Design with Risk Assessment", *Journal of Applied Intelligence*, 23, 39-53, April 10, 2005.
2. S. Kravis, R. Irrgang, A. Phatak, CSIRO CMIS, A. Martins, Petrobras S.A., E. Nakagawa, SPE 77358, "Drilling Parameter Selection for Well Quality Enhancement in Deepwater Environments", SPE Annual Technical Conference, San Antonio Texas, Oct 2002.
3. Rosemary Irrgang, Simon Kravis, Edson Nakagawa, "Drilling Knowledge Management, What is Missing and Can We Fix it?", IADC/SPE 77249, IADC/SPE Asia Pacific Drilling Technology, Jakarta, Indonesia, 9-11 September 2002.
4. Simon Kravis and Rosemary Irrgang, "A Case Based System for Oil and Gas Well Design", in 15<sup>th</sup> international conference on Industrial and Engineering applications of Artificial Intelligence and Expert Systems, Cairns June 17-21 2002.
5. Irrgang, R., Irrgang H., Kravis, S., Irrgang S., Thonhauser, G., Wrightstone A., Nakagawa, E., Agawani, M., Lollback, P., Gabler, T., Maidla, E.: "Assessment of Risk and Uncertainty for Field Developments: Integrating Reservoir and Drilling Expertise": SPE Annual Technical Conference and Exhibition, New Orleans, USA, SPE 71419, Oct, (2001)
6. R Irrgang, S Kravis, P Scott, T Gabler, E Maidla, G Thonhauser, "The Drilling Club: a Knowledge Exchange for Best Practice Operations":, *Petrotech New Delhi*, Jan 9-11, 2001
7. Irrgang, Rosemary "Knowledge Exchange In Distributed Groups", Thesis for CSIRO Project Leaders Program 10, completed June 2000.
8. Irrgang, R.; Maidla, E.E., Damski, C.; Millheim, K., "A Case Based System to Cut Drilling Costs", SPE Annual Technical Conference and Exhibition, October 1999.
9. Irrgang R. , Kravis S. P. , Agawani M. M. , Maidla, E. , "Automated Extraction of Drilling Experience: Capture and Reuse of Engineering Knowledge", *Petrotech Conference*, Jan 1999, New Delhi.
10. Jaffe L. , Maidla E. , Irrgang R. , Janisch W. , "Casing Design for Extended Reach Wells" in *SPE Annual Technical Conference San Antonio Texas*, October 1997, SPE 38617, PP 1-11.
11. Irrgang R. and Irrgang H. , "An Intelligent Snake Growing Algorithm for Fuzzy Shape Detection", in *Journal of Expert Systems with Applications*, Vol 11, no. 4 pp 531-536, 1996.
12. Irrgang, R. and Irrgang H. "Intelligent Snake Growing Algorithm for Fuzzy Shape Detection." *Proc of the 3rd World Congress on Expert Systems* 1996.  
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13. Irrgang R., "Automatic Shape Indexing and Rapid Multimedia Retrieval using Intelligent STIRS Signatures", in *Multimedia Modelling*, Eds. Tat Seng Chua, Hung Keng Pung, Tosiyasu L Kunii, World Scientific, Singapore, ISBN 981-02-2502-4 pp 99-114, Nov. 1995.
14. Moss C. J. , Irrgang R. , Stathers P. , Barbaro F. , Bowie G. , "Development of Software for Engineering Critical Analysis of Pipeline Girth Welds", WTIA/APIA Joint Research Seminar, *Welding of High Strength Thin Walled Pipelines*, Wollongong October 1995.
15. Moss C. J. , Irrgang R. , Stathers P. , Barbaro F. , Bowie G. , "Pipesafe, Engineering Critical Assessment Software for Pipeline Girth Welds", in *Asian Pacific Welding Congress*, Auckland New Zealand, 5-7 Feb. 1996

16. Irrgang R. and Irrgang H. , "An Intelligent Snake Growing Algorithm for Fuzzy Shape Detection", *Proc. of the Third World Congress on Expert Systems*, Seoul, Korea, Feb. 5-9, 1996.
17. Irrgang R. , "A Case Based System for Adaptive Image Understanding", thesis submitted for *Doctorate of Philosophy, in the Faculty of Aeronautical Engineering*, University of Sydney, August 1994.
18. Irrgang R. and Irrgang H. , "A Case Based System for Adaptive Image Understanding", *The Second World Congress on Expert Systems*, Lisbon/Estoril Portugal, Jan. 1994, Published on CD-ROM, "Moving Toward Expert Systems Globally In The 21st Century", Macmillan New Media, Cambridge MA, USA.
19. Irrgang R.A., Venkatachalan K. , and Chung C. , "Intelligent Systems in Australian Industry; A Study of Current Status and Future Trends", *The Second World Congress on Expert Systems*, Lisbon/Estoril Portugal, Jan. 1994, Published on CD-ROM, "Moving Toward Expert Systems Globally In The 21st Century", Macmillan New Media, Cambridge MA, USA.
20. Lindley C.A , Kumar V.R , Irrgang R. and Robertson J.R. , "An Evaluation of Information Retrieval Methods and Semantic Network Processing for Automatic Link generation in Hypermedia Systems", in *The Second International Interactive Multimedia Symposium*, Perth, WA. January 1994 pp290-297.
21. Kumar V. R. , Irrgang R. A, Lee M. , Chung C.Y.C. and Alem L. , "Recent Trends in Artificial Intelligence for Enhancing Knowledge Based Systems", in *Artificial Intelligence Technology, Applications and Management*, editors E. Balagurusamy and B. Sushila, Tata McGraw-Hill pp 5-12, 1993.
22. Irrgang R. A. , "Machine Learning and Knowledge Based Techniques for the Automated Estimation of Turbulent Flow Vectors from Video Images", *Recent Advances in Experimental Fluid Mechanics*, Ed. F.G. Zhang, International Academic Publishers, 465-470, 1992.
23. Irrgang R. and McGowan C. , "Architecture of a Distributed Decision Support System", in *The Fifth Australian Software Engineering Conference*, Sydney, May 1990 pp 183-188.
24. Abulnaga B. , Irrgang R.A. and Hooper J.D., "An Experimental Investigation of Velocity and Pressure Profiles of Annular Swirling Flows in the Siros melt Lance", *Mineral Engineering Restricted Report*, June 1989, 43 pages
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26. Irrgang R. and Hooper J. , "Bath proximity and Jet Width Effects for the Floater Pad Jet Stripping System", *Mineral Engineering Restricted Report*, September 1987.
27. Hooper J.D. and Irrgang R., "Wall Shear Stress Measurement -A Comparison of the Directional Response of the Preston, Stanton and Wall Block Probes", in *Experimental Heat Transfer , Fluid Mechanics and Thermodynamics*, Ed. R.K.Shah, E.N.Ganic, and K.T. Yang. Elsevier Science Publishing Co. Inc. 1988.
28. Hooper J.D., Irrgang R. and Davies M.R., "Identification of the Primary Cyclone Circuit in a Coal Washery", *The Third International Conference on Control Engineering*, Sydney May 1986.
29. Irrgang R. and Hooper J. "Practical Experiences with Process Modelling and Control", in *Proc. of The Digital Equipment Computer User's Society*, 1985, pp 81-85.
30. Irrgang R., "Automation of a Seagoing Autoanalyser", *Proc. of The Digital Equipment Computer Users Society*, 1984, pp 79-84.

31. Irrgang R. A. , "DIMSIM, A Microprocessor-Based Logic Trainer", *Master of Engineering Science Thesis*, Faculty of Electrical Engineering, University of Sydney, Jan. 1982.