

POLLUTION RESEARCH GROUP PUBLICATIONS LIST
YEAR 2001

A. Post Graduate Students Currently Registered

1. Masters (MScEng) :

1. MS MONKA REINER - The Development of an Eco-efficiency Model of the Textile Industry - Registered 1997.
2. MR MANOGRAN GOVENDER - Investigation of a Proton Exchange Membrane Fuel Cells - Registered 1998.
3. MRS ELENA FRIEDRICH - The Use of Life Cycle Assessment in the Selection of Water Treatment Processes - Registered 1999.
4. MRS CHRISTINA MCLEOD - The Hydraulic Design of a Biological Reactor for Passive Treatment of Mine Drainage Water - Registered 1999.
5. MS NAMO THAMBIRAN - An Investigation of Waste Minimisation Clubs for the Metal Finishing Industry - Registered 1999.
6. MS KATHERINE FOXON (nee' Brouckaert) - The Characterisation of Municipal Waste Water Using Batch Kinetic Tests - Registered 1999.
7. MS PRIYAL DAMA - The Characterisation of Municipal Waste Water Using Batch Kinetic Tests- Registered 1999.
8. MR JANOS SCHNEIDER - The Development and Application of Water Pinch Analysis at a Chemical Complex - Registered 1999.
9. MR PAOLO GIANADDA - The Development and Application of Water Pinch Analysis at a Chemical Complex - Registered 1999.
10. MR DHIRAJ MAHARAJ - The Promotion of Waste Minimisation Clubs in the Hammarasdale Industrial Township - Registered 1999.
11. MRS GLADYS NAYLOR (nee Crampton) - The Application of Pinch Technology in a Paper Mill - Registered 1999.
12. MR CHRISTOPHER MACDONALD - Comparative evaluation of water consumption and effluent generation in the South African pulp and paper industry - Registered 1999.
13. MS BRINDHA S JOHN - A Gate to Gate Life Cycle Analysis to Measure the Environmental Impact of the Production of Pulp and Paper - Registered 2000.
14. MS NATASHA AVANASIGAN - The Use of an Electrochemical Cell for the Recovery and Purification of Sodium Hydroxide - Registered 2000.

15. MS MARYNA MANSFIELD - The Application of Water Pinch at a Liner Board, Fluting and Sack Kraft Pulp and Paper Mill - Registered 2000.
16. MR ERIC SLABBERT - The Application of Water Pinch at a Kraft Liner Board, Newsprint and Market - Registered 2000.
17. MS ANNELIE LOURENS - The Application of Water Pinch at a Petrochemical Industry - Registered 2000.
18. MS TZU-HUA HUANG - Computational Fluid Dynamics Modelling of an Ozone Contactor - Registered 2001.
19. MR SARUSHEN PILLAY - Life Cycle Assessment of a Tertiary Water Supply - Registered 2001.
20. MR DANIEL VORENBERG - Environmental Thermodynamic Fate Modeling of Oxygenate in Fuel - Registered 2001.
21. MS AMELIE PASTRE - Modelling and Control of Potable Water Chlorination - Registered 2001.
22. MR CEDRIC BISCOS - Optimal Operation of Potable Water Distribution Network - Registered 2001.
23. MR DHESEN RAMSAMY - Co-digestion of High Strength/toxic Organic Effluents in Anaerobic Digesters at a Wastewater Treatment Works - Registered 2001.

2. Doctoral (PhD) :

1. MR G SCHWIKKARD - An Investigation of Advanced Oxidation Process in Water Treatment
2. MR CHRISTOPHER J BROUCKAERT - Modelling of Pressure - driven Membrane Processes.
3. MS JOANNE BELL (nee Sacks) - Treatment of Dye Wastewaters in the Anaerobic Baffled Reactor and Characterisation of the Associated Microbial Populations.
4. MR MICHAEL KOEFOED - Technology for Clenaer Production in the Metal Finishing Industry.
5. MR NEIL MACLEOD - Attaining the Sustainable Provision of Potable Water to Urban Poor Communities - Registered 2001.

B. Thesis Passed :

1. MScEng :

- 1 MUDUNGE, R., 'Biological Treatment of Agro-industrial Effluent', Thesis *MScEng* , 2001.

2. PhD :

- 1 KIBATA, N., 'Development of a Water and Sanitation Information Server for Urban Communities', Thesis *PhD*, 2001. (check - UDW)

C) CONFERENCE PROCEEDING:

1. FRIEDRICH, E., BUCKLEY, C.A. and JACOBS, E.P., 'The Application of Life Cycle Assessment (LCA) for the Production of Potable Water - A Case Study of Membrane Technology', 4th WISA-MTD Symposium & Workshop 2001 on Membrane Science and Engineering, Fleurbaix, Stellenbosch, Western Cape, South Africa, 26-27 March 2001. (Talk)

2. WYNNE, G.*, MAHARAJ, D. and BUCKLEY, C.A., 'Cleaner Production in the Textile Industry - Lessons from the Danish Experience', NATCON 2001, Holiday Inn Elangeni. Durban, South Africa, 29-30 March 2001. (Paper)
3. BROUCKAERT, C.J. HANEKOM, D.*, WOODHOUSE, C.* and BUCKLEY, C.A., 'Optimal Location of a Membrane Plant in a Power Station', Eskom International Conference on Power Plant Chemistry and Water Treatment, Eskom Conference Centre, Midrand, South Africa, 3-5 April 2001. (Paper)
4. BUCKLEY, C.A., BROUCKAERT, C.J. and GIANADDA, P., 'Water Pinch Analysis : Minimisation of Water and Wastewater in the Process Industry', European Commission COST 624 (European Cooperation in the Field of Scientific and Technical Research) "Optimal Management of Wastewater Systems", Working Group No. 5 Treatment Scenarios, Bologna, Italy, 26-27 April 2001. (Paper)
5. KOEFOED, M., 'Application of Cleaner Production Instruments in South Africa : A Case Study from Metal Finishing Industry', 3rd Annual Industrial Water Management & Treatment Symposium, Holiday Inn, Johannesburg, South Africa, pp 1-48, 23-24 May 2001. (Paper)
6. BUCKLEY, C.A., 'Case Study I', The International Water Association Conference on Water and Wastewater Management for Developing Countries, Kuala Lumpur, Malaysia, 27 October 2001. (Workshop)
7. BUCKLEY, C.A., 'Cleaner Production - Concept and Procedure', International Water Association Conference on Water and Wastewater Management for Developing Countries, Kuala Lumpur, Malaysia, 27 October 2001. (Workshop)

D) PUBLICATIONS:

1. ROZZI, A., REMIGI, E. and BUCKLEY, C.A., 'Methanogenic Activity Measurements by the Maia Biosensor : Instructions Guide', Water Science and Technology, 44(4), pp. 287-294, August 2001, ISBN 1843394014.
2. BARCLAY, S.J. And BUCKLEY, C.A., 'An Update on Waste Minimisation Clubs in South Africa - R18 m Saved', SA Water Bulletin, pp. 9-10, July/August 2001.
3. PLUMB, J.J.*, BELL J. And STUCKEY, D.C.*, 'Microbial Populations Associated with Treatment of an Industrial Dye Effluent in an Anaerobic Baffled Reactor', Applied and Environmental Microbiology, 67, pp. 3226-3235, 2001.

E) BOOK & BOOK CHAPTERS :

(3 books sent for accreditation to Faculty of Eng

RESEARCH OUTPUT :

CONFERENCE PROCEEDINGS

1. UNIVERSITY OF NATAL

Durban

2. Name of Conference :

The International Water Association Conference on Water and Waste Management for Developing Countries, Putra World Trade Centre, Kuala Lumpur, Malaysia, 29-31 October 2001

3. Title of Papers :

- 1 NAIDOO, V., DU PREEZ, M., RAKGOTHO, T., ODHAV, B.* and BUCKLEY, C.A., 'Toxicity and Biodegradability of High Strength/Toxic Organic Liquid Industrial Effluents and Hazardous Landfill Leachates', Proceedings Volume 1, The International Water Association Conference on Water and Wastewater Management for Developing Countries, Putra World Trade Centre, Kuala Lumpur, Malaysia, pp. 204-212, 29-31 October 2001.
- 2 HUANG, T-H., BROUCKAERT, C.J., DOCRAT, M.*, PRYOR, M.* and BUCKLEY, C.A., 'A Computational Fluid Dynamics and Experimental Study of an Ozone Contactor', Proceedings Volume 1, The International Water Association Conference on Water and Wastewater Management for Developing Countries, Putra World Trade Centre, Kuala Lumpur, Malaysia, pp. 498-507 29-31 October 2001.
- 3 FRIEDRICH, E. and BUCKLEY, CA., 'Life Cycle Assessment as an Environmental Management Tool in the Production of Potable Water', Proceedings Volume 2, The International Water Association Conference on Water and Wastewater Management for Developing Countries, Putra World Trade Centre, Kuala Lumpur, Malaysia, pp. 185-194, 29-31 October 2001.
- 4 GIANADDA, P., BROUCKAERT, C.J., SAYER, R.* and BUCKLEY, C.A., 'The Application of Pinch Analysis to Water, Regent and Effluent Management in a Chlor-Alkali Facility', Proceedings Volume 1, The International Water Association Conference on Water and Wastewater Management for Developing Countries, Putra World Trade Centre, Kuala Lumpur, Malaysia, pp. 743-753, 29-31 October 2001.
- 5 FOXON, K.M., BROUCKAERT, C.J., BUCKLEY, C.A. and ROZZI, A*, 'Denitrification Activity Measurements Using An Anoxic Titration (pHstat) Bioassay', Proceedings Volume 1, The International Water Association Conference on Water and Wastewater Management for Developing Countries, Putra World Trade Centre, Kuala Lumpur, Malaysia, pp. 277-285, 29-31 October 2001.
- 6 FOXON, K.M., DAMA, P., BROUCKAERT, C.J. and BUCKLEY, C.A., 'Design Considerations for the Implementation of an Anaerobic Baffled Reactor in Low-income Settlements in Kwa-Zulu Natal', Proceedings Volume 1, The International Water Association Conference on Water and Wastewater Management for Developing Countries, Putra World Trade Centre, Kuala Lumpur, Malaysia, pp. 644-655, 29-31 October 2001.

- 7 DAMA, P., BELL, J., FOXON, K.M., BROUCKAERT, C.J., HUANG, T., BUCKLEY, C.A., NAIDOO, V., and STUCKEY, D.*, 'Pilot-scale Study of an Anaerobic Baffled Reactor for the Treatment of Domestic Wastewater', Proceedings Volume 1, The International Water Association Conference on Water and Wastewater Management for Developing Countries, Putra World Trade Centre, Putra World Trade Centre, Kuala Lumpur, Malaysia, pp. 656-664, 29-31 October 2001.
- 8 BARCLAY, S.J. and BUCKLEY, C.A., 'Promoting Sustainable Industry Through Waste Minimization Club', Proceedings Volume 1, The International Water Association Conference on Water and Wastewater Management for Developing Countries, Putra World Trade Centre, Kuala Lumpur, Malaysia, pp. 93-103, 29-31 October 2001.
- 9 PILLAY, S.D., FRIEDRICH, E. and BUCKLEY, C.A., 'Life Cycle Assessment of an Industrial Water Recycling Plant', Proceedings Volume 1, The International Water Association Conference on Water and Wastewater Management for Developing Countries, Putra World Trade Centre, Kuala Lumpur, Malaysia, pp. 104-110, 29-31 October 2001.
- 10 BISCOS, C., MULHOLLAND, M., LE LANN, M-V.*, BUCKLEY, C.A., BROUCKAERT, C.J., BAILEY, R. and ROUSTAN, M.*, 'Optimal Operation of a Potable Water Distribution Network', Proceedings Volume 1, The International Water Association Conference on Water and Wastewater Management for Developing Countries, Putra World Trade Centre, Kuala Lumpur, Malaysia, pp. 72-83, 29-31 October 2001.
- 11 SOUKOP, M.B., PRESTON-WHYTE, R.A., BARCLAY S.J. and BUCKLEY, C.A., 'Pathways of Change in the Management of Waste Minimisation', Proceedings Volume 1, The International Water Association Conference on Water and Wastewater Management for Developing Countries, Putra World Trade Centre, Kuala Lumpur, Malaysia, pp. 736-742, 29-31 October 2001.
- 12 PASTRE, A., MULHOLLAND, M., BROUCKAERT, C.J., BUCKLEY, C.A., LE LANN, M.-V*, ROUSTAN, M.*, NAIDOO, D. And MABEER, V., 'Modelling and Control of Potable Water Chlorination', Proceedings Volume 1, The International Water Association Conference on Water and Wastewater Management for Developing Countries, Putra World Trade Centre, Kuala Lumpur, Malaysia, pp. 237-248, 29-31 October 2001.
- 13 BUCKLEY, C.A. and KOEFOED, M.*, 'Environmental Instruments in Technology Transfer : A Case Study from South African Metal Finishing Industry', Proceedings Volume 1, The International Water Association Conference on Water and Wastewater Management for Developing Countries, Putra World Trade Centre, Kuala Lumpur, Malaysia, pp. 1929, 29-31 October 2001.

5. Publisher : IAWQ

6. Authors : (see above)

7. Year of Publication : 2001

8. Editorial Staff : (see enclosure)

9. Refereeing Procedure : (see enclosure)

10. Number of pages in publication (see above)

**RESEARCH OUTPUT :
CONFERENCE PROCEEDINGS**

1. UNIVERSITY OF NATAL

Durban

2. Name of Conference :

International Association for Impact Assessment South African Affiliate National Conference, Greenway Woods Country Estate, White River, Mpumalanga, 8-10 October 2001

3. Title of Papers :

Life cycle assessment as an environmental assessment tool : A SA case study in the production of potable water

4. Number : B (To be complete by Res Office)

5. Publisher :

Int Assoc for Impact Assessment SA Affiliate

6. Authors :

E Friedrich and CA Buckley

7. Year of Publication :

2001

8. Editorial Staff :

None

Editor : Claudin Kruger (independent conf planner)

9. Refereeing Procedure :

1 referee (review included) + 1 program committee

10. Number of pages submitted for evaluation

10 (pp 131 to 140)

12. Addition information

None

BOOKS AND CHAPTERS OF BOOKS

1. ROZZI, A., REMIGI, E. and BUCKLEY, C.A., 'Methanogenic Activity Measurements by the Maia Biosensor : Instructions Guide', Water Science and Technology, 44(4), pp. 287-294, August 2001, ISBN 1843394014.
2. BARCLAY, S.J. And BUCKLEY, C.A., 'An Update on Waste Minimisation Clubs in South Africa - R18 m Saved', SA Water Bulletin, pp. 9-10, July/August 2001.
3. PLUMB, J.J.*, BELL J. And STUCKEY, D.C.*, 'Microbial Populations Associated with Treatment of an Industrial Dye Effluent in an Anaerobic Baffled Reactor', Applied and Environmental Microbiology, **67**, pp. 3226-3235, 2001.