

**Department of Mechanical Engineering
University of New Brunswick
P.O. Box 4400
Fredericton, N.B.
E3B 5A3 Canada**

**Research Activity Report
July 1, 2001 and June 30, 2003**

This Research Activity Report covers the period July 1, 2001 and June 30, 2003. It is a reflection of the Department's commitment to a strong research mandate. Our participation rate is 100%, in terms of research funding, publications and supervision of graduate students. The young faculty members have all succeeded in securing NSERC funding, while all senior faculty members are active in research. Our two Professors Emeritus are also involved. The Department is recognized nationally and internationally as is evident by the involvement of many of its members in research proposals and manuscript reviews. Our research funding has also been substantial, totalling \$3,428,149, within the covered period. We have a strong research culture that will continue to grow and flourish, given the calibre of the new faculty members we have recently hired.

**Esam Hussein, PhD, PEng
Professor and Chair**

Graduate Students:

Supervisor: **Edmund Norman Biden**

Name	Level
Chester, Victoria Louise	Ph.D
Oliver, Michele Lea	Ph.D
Pick, Jennifer Dawn	Masters Research Based
Ross, Martha Patricia	Masters Research Based

Supervisor: **David J. Bonham**

Name	Level
Rodriguez Balbuena, Jose Maria	Ph.D
Newaskar, Rohit	Masters Research Based
Wu, Rongliang	Masters Research Based

Supervisor: **Juan A. Carretero**

Name	Level
Rodriguez Balbuena, Jose Maria	Ph.D
Salah, Souraj	Ph.D
Pond, Geoffrey Tobin	Masters Research Based
Uppuluri, Raja	Masters Research Based

Supervisor: **Huw Davies**

Name	Level
Dorjee, Lam	Masters Research Based
Kyriakidis, Philotas	Masters Research Based
Richardson, Sean David	Masters Research Based

Supervisor: **Rickey Dubay**

Name	Level
Abu-Ayyad, Ma'moun Abdel-Ra'ouf	Ph.D
Pramujati, Bambang	Ph.D
Chinta Venkateswara Rao, Lakshminarayan	Masters Research Based
Han, Jianguo	Masters Research Based
Healy, Anna Lovisa	Masters Research Based
Lakhram, Rodney	Masters Research Based
Li, Leiming	Masters Research Based
Mansour, Samer	Masters Research Based
Wang, Ruogu	Masters Research Based

Supervisor: **Andrew Gustav Gerber**

Name	Level
Ji, Sangbong	Ph.D
El-Bittibssi, Rana Mohamed	Masters Research Based
Healy, Anna Lovisa	Masters Research Based
Ng, Chien Ee	Masters Research Based
Williams, Eric Michael	Masters Research Based

Supervisor: **Marwan A Hassan**

Name	Level
Hayder, Mir Mohammad Abu	Masters Research Based
Williams, Eric Michael	Masters Research Based
Zhang, Yuxiang	Masters Research Based

Supervisor: **Gordon Lawrence Holloway**

Name	Level
Bettle, Jason Robert	Masters Research Based
Ng, Chien Ee	Masters Research Based
Richardson, Sean David	Masters Research Based

Supervisor: **Esam M A Hussein**

Name	Level
Arsenault, Paul Jacob	Ph.D
Handbury, John Casnerton	Masters Research Based
Khan, Muzibur Rahman	Masters Research Based
Mercer, Jacqueline Aldine	Masters Research Based
Tang, Shuosheng	Masters Research Based
Van Wart, Jason Arthur	Masters Research Based

Supervisor: **Hossam Eldeen Kishawy**

Name	Level
Kannan, Sathish	Ph.D
Salah, Souraj	Ph.D
Haglund, Andrew John	Masters Research Based
Li, Leiming	Masters Research Based
Newaskar, Rohit	Masters Research Based
Zhang, Yuxiang	Masters Research Based
Zhu, Yaopeng	Masters Research Based

Supervisor: **Robert J Rogers**

Name	Level
Laplante, Gabriel	Ph.D
Oliver, Michele Lea	Ph.D
Balihodzic, Nihad	Masters Research Based
Dorjee, Lam	Masters Research Based
Garland, Philip Parnell	Masters Research Based
Haglund, Andrew John	Masters Research Based

Supervisor: **Antonio C.M. Sousa**

Name	Level
Ji, Sangbong	Ph.D

Supervisor: **Pearl P. Sullivan**

Name	Level
Laplante, Gabriel	Ph.D
Rogers, Angela Dawn	Ph.D
Djokic, Drazen	Masters Research Based

Supervisor: **James Venart**

Name	Level
Sun, Liqun	Ph.D
Bettle, Jason Robert	Masters Research Based

Memberships in national or international grant, scholarly / fellowship selection committees:

Edmund Norman Biden

Committee Type	Committee Name	Committee Level	Term Start Month	Term Start Year	End Date	Term Ended Month	Term Ended Year
Grant Committee	Collaborative Health Research Project, NSERC	National	July	2001	completed	March	2003

David J. Bonham

Committee Type	Committee Name	Committee Level	Term Start Month	Term Start Year	End Date	Term Ended Month	Term Ended Year
Grant Committee	NSERC Design Chair	National	February	2001	completed	February	2001
Grant Committee	CFI Expert Committee on Manufacturing - Chair	National	September	2002	completed	September	2002

Huw Davies

Committee Type	Committee Name	Committee Level	Term Start Month	Term Start Year	End Date	Term Ended Month	Term Ended Year
Grant Committee	NSERC, Creative Research Opportunities, Grant Selection Committee	National	July	2002	completed	December	2002
Grant Committee	NSERC, Appeals Consultant	National	May	2003	completed	June	2003

Esam M A Hussein

Committee Type	Committee Name	Committee Level	Term Start Month	Term Start Year	End Date	Term Ended Month	Term Ended Year
Grant Committee	Multidisciplinary Assessment Committees, Canada Foundation for Innovation	National	December	2001	completed	December	2001

Pearl P. Sullivan

Committee Type	Committee Name	Committee Level	Term Start Month	Term Start Year	End Date	Term Ended Month	Term Ended Year
Grant Committee	NSERC University Faculty Awards Selection Committee	National	July	2001	ongoing		

Adjudications of research grants or proposals for external granting agencies:

Edmund Norman Biden

Adjudication Type	Agency Name	Term	Year
Research Grant Adjudication	Ontario Neurotrauma Foundation	Summer	2001
Research Grant Adjudication	Bloorview MacMillan Foundation	Winter	2001
Research Grant Adjudication	CIHR	Winter	2002
Research Grant Adjudication	CIHR	Winter	2003

David J. Bonham

Adjudication Type	Agency Name	Term	Year
Research Grant Adjudication	AIF - two proposals	Winter	2003
Research Grant Adjudication	NSERC - several applications	Winter	2002

Rickey Dubay

Adjudication Type	Agency Name	Term	Year
Research Grant Adjudication	NSERC Research Proposal	Fall	2002

Andrew Gustav Gerber

Adjudication Type	Agency Name	Term	Year
Proposal Adjudication	NSERC	Spring	2003
Proposal Adjudication	NSERC	Summer	2002
Research Grant Adjudication	NSERC	Winter	2003

Esam M A Hussein

Adjudication Type	Agency Name	Term	Year
Proposal Adjudication	Kluwer Academic Publishers, Book proposal	Spring	2003
Research Grant Adjudication	Canada Foundation for Innovation, New Opportunities Fund (two proposals)	Spring	2003
Research Grant Adjudication	Chemical, Biological, Radiological/Nuclear Research & Technology Initiative (CRTI), Department of National Defence, Canada (5 full proposals)	Winter	2003
Research Grant Adjudication	Chemical, Biological, Radiological/Nuclear Research & Technology Initiative (CRTI), Department of National Defence, Canada (18 proposal synopses)	Winter	2003
Research Grant Adjudication	U.S. Civilian Research & Development Foundation (two proposals)	Winter	2002
Research Grant Adjudication	Collaborative Research and Development Grant Proposal, Natural Sciences and Research Council of Canada	Summer	2002
Research Grant Adjudication	National Research Foundation, South Africa, research proposal	Summer	2002
Research Grant Adjudication	Defence R&D Canada, DRDC Technology Investment Fund	Summer	2002
Proposal Adjudication	John Wiley & Sons (Book review)	Summer	2002
Research Grant Adjudication	Canada Foundation for Innovation, New Opportunities Fund	Winter	2002
Research Grant Adjudication	Canada Foundation for Innovation, New Opportunities Fund	Spring	2002

Robert J Rogers

Adjudication Type	Agency Name	Term	Year
Research Grant Adjudication	NSERC Individual	Winter	2003
Research Grant Adjudication	NSERC Individual	Winter	2002
Research Grant Adjudication	NSERC Individual	Winter	2002
Proposal Adjudication	NSERC Strategic	Summer	2002
Proposal Adjudication	NSERC Collaborative	Fall	2002
Research Grant Adjudication	NSERC Individual	Winter	2003

Antonio C.M. Sousa

Adjudication Type	Agency Name	Term	Year
Research Grant Adjudication	Italian Ministry of Research and Universities	Summer	2001
Research Grant Adjudication	Italian Ministry of Research and Universities	Fall	2002
Research Grant Adjudication	Foundation for Science and Technology (ADAI Evaluation)	Summer	2003

Pearl P. Sullivan

Adjudication Type	Agency Name	Term	Year
Research Grant Adjudication	Fonds de Recherche sur la Nature et les Technologies, Quebec	Spring	2003
Research Grant Adjudication	NSERC Strategic Grant	Fall	2002
Research Grant Adjudication	NSERC Collaborative R&D Grant	Winter	2002
Research Grant Adjudication	Academic Research Fund, Ministry of Education, Singapore	Fall	2001
Research Grant Adjudication	NSERC Individual Research Grant	Winter	2001

Editorships and active memberships of editorial boards of national / international journals or periodicals:

Gordon Lawrence Holloway

Position Held	Journal / Periodical Name	Start Month	Start Year	End Date	End Month	End Year
Consulting Editor for Fluid Mechanics to McGraw-Hill	2004 Yearbook of Science and Technology	January	2003	ongoing		

Robert J Rogers

Position Held	Journal / Periodical Name	Start Month	Start Year	End Date	End Month	End Year
Editor of annual seminar proceedings (25 papers)	Canadian Machinery Vibration Association	March	2003	completed	October	2003

Antonio C.M. Sousa

Position Held	Journal / Periodical Name	Start Month	Start Year	End Date	End Month	End Year
Member, Editorial Board	Advances in Heat Transfer Series	July	2001	ongoing		

Referees for scholarly journals/publications:

Edmund Norman Biden

Journal / Publication / Conference Name	Number of Papers Refereed	Term	Year
Clinical Orthopaedics and Related Research	3	Winter	2002
Gait and Posture	1	Fall	2002

Juan A. Carretero

Journal / Publication / Conference Name	Number of Papers Refereed	Term	Year
IEEE Transactions on Robotics and Automation	1	Winter	2003
IEEE Transactions on Systems, Man, and Cybernetics - Part B	1	Spring	2003

Rickey Dubay

Journal / Publication / Conference Name	Number of Papers Refereed	Term	Year
Journal of Advances in Polymer Technology	2	Fall	2001
Journal of Control and Intelligent Systems	3	Winter	2001
IEEE Transactions: Journal of Control Systems Technology	2	Fall	2002
ISA Transactions: Journal of Science and Engineering of Measurement and Automation	2	Winter	2003

Andrew Gustav Gerber

Journal / Publication / Conference Name	Number of Papers Refereed	Term	Year
ASME INT. MECHANICAL ENG. CONGRESS	1	Spring	2002

Esam M A Hussein

Journal / Publication / Conference Name	Number of Papers Refereed	Term	Year
Applied Optics	1	Spring	2003
Optical Engineering	1	Winter	2003
Arabian Journal for Science and Engineering	1	Winter	2002
Arabian Journal for Science and Engineering	1	Fall	2001

Hossam Eldeen Kishawy

Journal / Publication / Conference Name	Number of Papers Refereed	Term	Year
Transactions of the ASME, Journal of Manufacturing Science and Engineering	7	Winter	2001
Journal of Materials Processing Technology	7	Spring	2002
Machining Science and Technology	3	Summer	2002
Transactions of the CSME	1	Fall	2002

Bale Viswanadha Reddy

Journal / Publication / Conference Name	Number of Papers Refereed	Term	Year
International Journal of Heat and Mass Transfer	1	Fall	2001
The Canadian Journal of Chemical Engineering	1	Spring	2003
African Environmental Review	1	Summer	2002
Numerical Heat Transfer	1	Winter	2002

Robert J Rogers

Journal / Publication / Conference Name	Number of Papers Refereed	Term	Year
Journal of Fluids and Structures	1	Summer	2001
Journal of Tribology	1	Fall	2001
CSME Transactions.	1	Fall	2001
Journal of Materials Processing Technology	1	Winter	2002
Journal of Materials Processing Technology	1	Spring	2002
Journal of Tribology	1	Spring	2002
ASME Flow-Induced Vibration Symposium, New Orleans	2	Spring	2002
Journal of Materials Processing Technology	1	Winter	2003
ASME Flow-Induced Vibration Symposium, Cleveland	2	Winter	2003
Journal of Fluids and Structures	1	Spring	2003
Journal of Tribology	1	Spring	2003

Antonio C.M. Sousa

Journal / Publication / Conference Name	Number of Papers Refereed	Term	Year
Heat Transfer Engineering	1	Summer	2002
Heat Transfer Engineering	1	Spring	2003
International Thermal Sciences Journal	1	Fall	2001
CIBEM6 (Coimbra Portugal)	7	Spring	2003

Pearl P. Sullivan

Journal / Publication / Conference Name	Number of Papers Refereed	Term	Year
International Journal of Adhesion and Adhesives	1	Summer	2003
Polymer Engineering and Science	1	Spring	2002
Polymer Engineering and Science	1	Fall	2002

James Venart

Journal / Publication / Conference Name	Number of Papers Refereed	Term	Year
Int J Experimental Mechanics	1	Fall	2002
AIChE Journal	1	Fall	2002
J Hazardous Materials	2	Summer	2003
Int J Thermophysics	2	Summer	2003

Conferences, symposia, etc. organized:

Huw Davies

Name of Conference / Symposia	Level	Conference Date Month	Conference Date Year	Position
Euromech Colloquium 425	International	August	2001	member
IV International Conference on Computational Stochastic Dynamics	International	June	2002	member

Esam M A Hussein

Name of Conference / Symposia	Level	Conference Date Month	Conference Date Year	Position
Threat Detection Technologies Conference, SPIE - The International Society for Optical Engineering	International	July	2002	member

Robert J Rogers

Name of Conference / Symposia	Level	Conference Date Month	Conference Date Year	Position
Canadian Machinery Vibration Association National Seminar, Halifax	National	October	2003	member

Antonio C.M. Sousa

Name of Conference / Symposia	Level	Conference Date Month	Conference Date Year	Position
39th European Two-Phase Flow Group Meeting	International	July	2001	chair

Invitations received and accepted to chair a session or to comment on a session at a conference or symposium:

Edmund Norman Biden

Conference / Symposium	Conference Date Month	Conference Date Year	Level	Session Title	Role
International Cerebral Palsy Conference	April	2003	International	Addressed final session of the conference on the role of CIHR in CP research	Commented on Session

Huw Davies

Conference / Symposium	Conference Date Month	Conference Date Year	Level	Session Title	Role
Euromech Colloquium 425, Aberdeen, Scotland	August	2001	International	Session 2-1, 23 August, 2001	Chaired Session
ASME International Design Engineering Conference, Pittsburg, USA	September	2001	International	VIB-74, Nonlinear Dynamics of Engineering Systems	Chaired Session
IV International Conference on Computational Stochastic Dynamics, Corfu, Greece	June	2002	International	Random Dynamical Systems	Chaired Session

Esam M A Hussein

Conference / Symposium	Conference Date Month	Conference Date Year	Level	Session Title	Role
Annual Conference, Canadian Nuclear Society	June	2003	National	Student Session	Chaired Session
Research Co-ordination Meeting, International	May	2003	International	on Application of Nuclear Techniques to Anti-Personnel Landmines	Chaired Session

Atomic Energy Agency				Identification	
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Hossam Eldeen Kishawy

Conference / Symposium	Conference Date Month	Conference Date Year	Level	Session Title	Role
Transactions of the North American Manufacturing Research Institution of SME	April	2003	International	Track 1B (Machining Models)	Chaired Session

Bale Viswanadha Reddy

Conference / Symposium	Conference Date Month	Conference Date Year	Level	Session Title	Role
APEGNB Annual Meeting & Conference	February	2003	Regional	Impact of Kyoto agreement and future of energy sector in New Brunswick and around the world	Commented on Session

Robert J Rogers

Conference / Symposium	Conference Date Month	Conference Date Year	Level	Session Title	Role
ASME Pressure Vessels & Piping Conf., Atlanta	July	2001	International	SYMPOSIUM ON FLOW-INDUCED VIBRATIONS - VIII: AXIAL FLOW	Chaired Session
Twentieth Machinery Dynamics Seminar, Quebec	October	2002	National	Session 2A	Chaired Session

Antonio C.M. Sousa

Conference / Symposium	Conference Date Month	Conference Date Year	Level	Session Title	Role
Seventh International Conference on Advanced Computational Methods in Heat Transfer, Halkidiki, Greece	April	2002	International	Session 9: Metal casting, welding, forging and other processes	Chaired Session
WSEAS Numerical Methods in Mechanical Engineering, Cancun, Mexico	May	2002	International	Control Systems	Chaired Session
Fifth Congress on Numerical Methods in Engineering, Madrid, Spain	June	2002	International	Application to thermal problems	Chaired Session
The 4th International Conference on Nonlinear Mechanics, Shanghai, China	August	2002	International	Session D1: Fluid Mechanics	Chaired Session
VII Congress of Applied and Computational Mechanics, Évora, Portugal	April	2003	International	Computational Fluid Mechanics II	Chaired Session
VII Congress of Applied and Computational Mechanics, Évora, Portugal	April	2003	International	Numerical Modelling II	Chaired Session

Pearl P. Sullivan

Conference / Symposium	Conference Date Month	Conference Date Year	Level	Session Title	Role
The International Conference of Materials for Advanced Technologies, ICMAT 2001	July	2001	International	Polymer Characterization Session	Chaired Session
CANCOM 2001, the Third Canadian International Composites Conference	August	2001	International	Material Properties/Characterization	Chaired Session

James Venart

Conference / Symposium	Conference Date Month	Conference Date Year	Level	Session Title	Role
Int Conf Chem Engineering	September	2001	International	Loss Prevention	Commented on Session

Papers or posters presented at conferences, symposia, congresses, colloquia, etc. :

Edmund Norman Biden

Type	Other	Event	Level	Location	Event Month	Event Year	Title of Paper	Co-Authors
Conference		FIE Conference	International	Boston	November	2002	A tradeshow for products developed in second year Mechanical Engineering	R. Rogers

David J. Bonham

Type	Other	Event	Level	Location	Event Month	Event Year	Title of Paper	Co-Authors
Conference		44th Annual Conference of the Canadian Operational Research Society (CORS)	National	Toronto, ON	June	2002	A Hybrid Meta-Heuristic Approach to the Quadratic Assignment Problem	Rodriguez, J.
Conference		Canadian Society for Mechanical Engineering (CSME) Forum 2002	National	Vancouver, BC	May	2002	A Hybrid Meta-Heuristic Solution for the Dynamic Facility Layout Problem	Rodriguez, J.
Conference		45th Annual Conference of the Canadian Operational Research Society (CORS)	National	Vancouver, BC	June	2003	A Dynamic Plant Layout Perspective to Capacity Expansion for Manufacturing Companies	Rodriguez, J.

Juan A. Carretero

Type	Other	Event	Level	Location	Event Month	Event Year	Title of Paper	Co-Authors
Conference		2002 ASME Design Engineering Technical Conference	International	Montreal, Quebec, Canada	September	2002	Using genetic algorithms with niche formation to solve the minimum distance problem amongst concave objects	Meyer. A. Nahon (McGill University)
Conference		2001 International Conference on Intelligent Robots and Systems	International	Maui, Hawaii, USA	October	2001	Solving distance problems with concave bodies using Simulated Annealing	Meyer A. Nahon (McGill University); Ou Ma (MDRobotics, Brampton, Ontario)

Huw Davies

Type	Other	Event	Level	Location	Event Month	Event Year	Title of Paper	Co-Authors
Conference		Euromech Colloquium 425	International	Aberdeen, Scotland	August	2001	Slow parametric variation through period-doubling cascades	
Conference		ASME International Design Engineering Conference	International	Pittsburg, USA	September	2001	Stabilisation of period-1 orbits of the Henon map	

Conference		IV International Conference on Computational Stochastic Dynamics	International	Corfu, Greece	June	2002	Noise controlled parametric bifurcations	
Symposium		IUTAM Symposium on nonlinear stochastic dynamics	International	Urbana-Champaign, Illinois, USA	August	2002	Stability within a period-doubling cascade	Philotas Kyriakidis
Conference		Pan-American/Iberian Meeting on Acoustics (Acoustical Society of America)	International	Cancun, Mexico	December	2002	Nonstationary bifurcations with additive noise	
Symposium		IUTAM Symposium on Chaotic Dynamics	International	Rome, Italy	June	2003	Two coupled modes with modulated excitation and additive noise	

Rickey Dubay

Type	Other	Event	Level	Location	Event Month	Event Year	Title of Paper	Co-Authors
Conference		ANTEC	Regional	n/a	May	2003	Process Identification of Barrel Temperature Control in Injection Molding: A MIMO Approach	Pramujati, B.
Conference		ANTEC	National	n/a	May	2002	A novel tuning method for predictive control of melt temperature and plastication screw speed in injection molding	Pramujati, B.
Conference		ANTEC	National	n/a	May	2002	Self-Optimizing MPC of Injection Velocity During Mold Fill	Lakhram, R.

Andrew Gustav Gerber

Type	Other	Event	Level	Location	Event Month	Event Year	Title of Paper	Co-Authors
Conference		ICNM-IV/IUTAM	International	Shanghai, P.R. China	August	2002	Particle Dispersion Modelling Using an Algebraic Slip Model With Moving Grids	Ji, S.; Sousa, A.C.M.
Conference		CFX North American Users Conference	National	Pittsburgh, PA	May	2002	A VOF Based Cavitation Model for Turbomachinery Applications	
Conference		ASME Fluids Engineering Division	National	Montreal, CQ	July	2002	Thermodynamic and Aerodynamic Loss Evaluation of Supersonic Nucleating Steam Flow with Shocks	Kermani, M.J.
Conference		CIM-COM 2002	National	Montreal, QC	August	2002	A Surface-Oriented Fluid and Thermal Macro-Model for the Melt/Substrate Contact Zone in Strip Casting	Gallerneault, M.
Conference		4th Conference of Iranian Aero Space Society	International	Amir Kabir University of Technology, Tehran, Iran	January	2003	Thermodynamically Based Moisture Prediction Using Roe's Scheme	Kermani, M.J.; Stockie, J.M.
Conference		ANTEC 2003, Society of Plastic Engineers	International	Nashville, TN	May	2003	Controlling Melt Temperature in Injection Molding Using an Adaptive	Healy, A.; Dubay, R.

							CFD Predictive Controller	
Conference		11th Annual Conference of the CFD Society of Canada	National	Vancouver, BC	May	2003	Condensation in the Cathode of a PEM Fuel Cell	Kermani, M.J.; Stockie, J.M.

Marwan A Hassan

Type	Other	Event	Level	Location	Event Month	Event Year	Title of Paper	Co-Authors
Conference		5th Symposium on Fluid-structure Interactions, Aeroelasticity, Flow-induced Vibration & Noise	International	New Orleans, Louisiana	November	2002	Parametric Studies of the Turbulence Response of Heat Exchanger Tubes in Loose Supports	Dokainish, M.

Esam M A Hussein

Type	Other	Event	Level	Location	Event Month	Event Year	Title of Paper	Co-Authors
Conference		Proc. Review in Quantitative NDE	National	Bowdoin College - Brunswick, Maine	August	2001	A Non-Rotating X-Ray 3-D Imaging System	Makky, W.H.

Bale Viswanadha Reddy

Type	Other	Event	Level	Location	Event	Event	Title of Paper	Co-Authors
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					Month	Year		
Conference		7th Atlantic Universities Teaching Showcase	Regional	UPEI, Charlottetown, PEI	October	2002	Research/Teaching Connection and its Impact on Research and on Teaching Methodology and Quality	

Robert J Rogers

Type	Other	Event	Level	Location	Event Month	Event Year	Title of Paper	Co-Authors
Symposium		19th Can. Machinery Vibration Association National Seminar	National	Edmonton, Alberta	August	2001	Dynamic Modelling of Hydraulic-Actuating Joysticks	Oliver, M.; Garland, P.; Gallant, T.
Congress		ASME International Mech. Engg. Congress & Exposition	International	New Orleans, Louisiana, USA	November	2002	An Analysis of the Machining Process Using a Thermo-Elastic-Viscoplastic Finite Element Model	Balihodzic, N.; Kishawy, H.A.

Antonio C.M. Sousa

Type	Other	Event	Level	Location	Event Month	Event Year	Title of Paper	Co-Authors
Conference		The 3rd International Conference on Computational Heat	International	Calgary, AB	May	2003	Numerical simulation of non-Darcian flows through spaces partially filled with a	Costa, V.A.F.; Oliveira, M.S.A.

		and Mass Transfer					porous medium	
Conference		11th Annual (International) Mechanical Engineering Conference	International	Meshhad, Iran	April	2003	Numerical and Physical Modeling of Polymer Composite Processing	
Conference		2002 ASME International Mechanical Engineering Congress and Exposition	International	New Orleans, Louisiana, USA	November	2002	An Efficient CFD Model for Air/Particle Saltating Flows	Ji, S.; Gerber, A.G.
Conference		4th International Conference on Nonlinear Mechanics	International	Shanghai, China	August	2002	Particle Dispersion Modelling Using an Algebraic Slip Model with Moving Grids	Gerber, A.G.; Ji, S. Ferreira, A.D.
Conference		Numerical Methods in Engineering V	International	Barcelona, Spain	June	2002	RNG Turbulence Model: Assessment of its performance	Ferreira, A.D.
Conference		Heat Transfer VII, Advanced Computational Methods in Heat Transfer	International	Halkidiki, Greece	April	2002	Modeling of air/water cooling of superalloys at high temperatures	Oliveira, M.S.A.

Pearl P. Sullivan

Type	Other	Event	Level	Location	Event Month	Event Year	Title of Paper	Co-Authors
Conference		The International	International	Singapore	July	2001	On the role of the β 2-	Dykeman, D.;

		Conference on Materials for Advanced Technologies					transition in the stress relaxation behavior of heat-aged polycarbonate	Shao, Q.
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James Venart

Type	Other	Event	Level	Location	Event Month	Event Year	Title of Paper	Co-Authors
Conference		Int Conf Chem Eng	International	Melbourne, Australia	September	2001	Flixborough-a reanalysis	
Conference		16th European Conference on Thermophysical Properties	International	Imperial College, London	September	2002	The Thermal Conductivity and thermal diffusivity of Argon and Nitrogen	Sun, L
Other	Invited lecture, Univ College London	Lecture UCL Chem Eng	Regional	UCL London	September	2002	Flixborough-the explosion and its aftermath	
Other	Invited lecture	UCL Chem Eng Dept Seminar	Regional	UCL Chem Eng Dept	January	2003	BLEVE-cause and consequences	
Conference		39th European Two-phase flow group Mtg	International	Aveiro Portugal	June	2001	Boiling Liquid Expanding Vapour Explosions (BLEVE)-two phase aspects of vessel failure	

Publications in books:

Esam M A Hussein

Pub. Year	Type	Book Title	Publisher	Place of Publication	Editor	Chp. Title	Chapter	Pagination	UNB Contrib.	Other Contrib.
2003	Refereed	Encyclopedia of Materials Science and Technology - Updates	Elsevier Science	2003	Cahn, R.W.	Nondestructive Detection of Explosives	200131	01-06	Hussein, E.M.A.	

James Venart

Pub. Year	Type	Book Title	Publisher	Place of Publication	Editor	Chp. Title	Chapter	Pagination	UNB Contrib.	Other Contrib.
2001	Refereed	Handbook of Hazardous Materials Spills Technology	McGraw Hill	New York	Merv Fingas	BLEVES: Cause and Consequences	21	1-21		
2001	Refereed	Handbook of Hazardous Materials Spills Technology	McGraw Hill	New York	Merv Fingas	Flixborough; the disaster and its aftermath	42	1-31		

Publications of one or more papers in journals or in conference proceedings:

Edmund Norman Biden

Ref?	Type	Piece Title	Publication Name	Place of Publication		Pub. Year	Issue/ Volume	Pagination	UNB Contrib.	Other Contrib.
Refereed	Refereed Journal	An Index to Quantify Normality of Gait in Young Children	Gait and Posture	Elsevier	Winter	2002	Vol 16	149-158	Tingley, M; Knight, W Biden, E	Wilson, C.
Refereed	Referenced Conference Proceeding	Clinical Gait Analysis	ICWES	Ottawa	Summer	2002	2002 Proc.	1-5	Chester, V; Biden, E;	
Refereed	Referenced Conference Proceeding	Development of a Normative Gait Database	Proceeding CMBEC, Nov 2002	Ottawa	Fall	2002	N/A	35-38	Chester, V; Tingley, M; Biden, E;	
Refereed	Referenced Conference Proceeding	A tradeshow for Products Developed in Second Year Mechanical Engineering	Proceedings of the Frontiers in Education Conference, 2002	Boston	Fall	2002	2002 Section F2D	23-26	Biden, E; Rogers, R;	
Refereed	Referenced Conference Proceeding	Development and Validation of a Joystick Dynamics Model to Predict Operator Input Torque.	Proceedings of the IV World Congress on Biomechanics	Calgary	Summer	2002	IV	101	Rogers, R; Garland, P; Gallant, T; Biden, E;	Oliver, M;

Refereed	Referenced Conference Proceeding	Effect of Joystick Stiffness and Speed on Selected Dynamic Torque Characteristics	Proceedings of the IV World Congress on Biomechanics	Calgary	Summer	2002	IV	102	Biden, E; Rogers, R; Rickards, J;	Oliver, M;
Refereed	Referenced Conference Proceeding	Clinical Gait Analysis	Proceedings of the 12th International Conference of Women Engineers and Scientists	Ottawa	Spring	2002	12th	101-103	Chester, V; Biden, E;	

Juan A. Carretero

Ref?	Type	Piece Title	Publication Name	Place of Publication	Pub. Season	Pub. Year	Issue/Volume	Pagination	Other Contrib.
Refereed	Referenced Conference Proceeding	Using genetic algorithms with niche formation to solve the minimum	Proceedings of the 2002 ASME Design Engineering Technical	Montreal, QC	Fall	2002	CD-ROM	0-7918-3603-7	M.A. Nahon

		distance problem amongst concave objects	Conference						
Refereed	Referenced Conference Proceeding	Solving distance problems with concave bodies using Simulated Annealing	Proceedings of the 2001 IROS Conference	Maui, Hawaii	Fall	2001	CD-ROM 01CH37180C	0-7803-6614	M.A. Nahon; O. Ma

Huw Davies

Ref?	Type	Piece Title	Publication Name	Place of Publication		Pub. Year	Issue/Vol.	Pagination	UNB Contrib
Refereed	Referenced Conference Proceeding	Slow parametric variation through period-doubling cascades	Conference proceedings, Euromech Colloquium 425	Aberdeen, Scotland	Fall	2001	N/A	23	H.G.Davies
Refereed	Referenced Conference Proceeding	Stabilisation of period-1 orbits of the Henon map	ASME Conference Proceedings (electronic format)	New York	Fall	2001	N/A	1	H.G.Davies
Refereed	Referenced Conference Proceeding	Noise controlled parametric bifurcations	Conference Proceedings, IV International Conference on Computational Stochastic Dynamics	Houston, Texas, USA	Summer	2002	N/A	15	H.G.Davies
Refereed	Referenced Conference Proceeding	Stability within a period-doubling cascade	Conference Proceedings, IUTAM Symposium on Nonlinear Stochastic Dynamics	Urbana-Champaign, USA	Summer	2002	N/A	1	H.G.Davies; P.Kyriaki

Refereed	Referenced Conference Proceeding	Nonstationary bifurcations with additive noise	Journal of the Acoustical Society of America	New York, USA	Winter	2002	112 (5)	2219	H.G.Davies
Refereed	Referenced Conference Proceeding	Two coupled modes with modulated excitation and additive noise	Conference proceedings, IUTAM Symposium on Chaotic Dynamics	Rome, Italy	Spring	2003	N/A	119-120	H.G.Davies
Refereed	Refereed Journal	A period-doubling bifurcation with slow parametric variation and additive noise	Proceedings of the Royal Society	London, UK	Summer	2001	A457	2965-2982	H.G.Davies; K.Rangavajhula
Refereed	Refereed Journal	Noisy parametric sweep through a period-doubling bifurcation of the Henon map	Chaos, Solitons and Fractals	Holland	Spring	2002	14	293-299	H.G.Davies; K.Rangavajhula

Rickey Dubay

Ref?	Type	Piece Title	Publication Name	Place of Publication		Pub. Year	Issue/Volume	Pagination	UNB Contrib.	Other Contrib.
Refereed	Refereed Journal	A Novel Tuning Method in Predictive Control for Screw Speed and Melt Temperature	Journal of Injection Molding	n/a	Fall	2002	Vol. 4, No. 4	247-248	Pramujati, B.	
Refereed	Refereed Journal	Self-Optimizing MPC of melt temperature in injection molding	ISA Transactions: Journal of Science and Engineering of Measurement and Automation	n/a	Winter	2002	Vol. 41	81-94		
Refereed	Refereed Journal	Predictive Control of Cavity Pressure during Injection Filling	Journal of Injection Molding	n/a	Fall	2001	Vol. 5, No. 2	72-79		
Refereed	Referenced Conference Proceeding	Process Identification of Barrel Temperature	ANTEC Society of Plastic Engineers	n/a	Spring	2003	n/a	0-0	Pramujati, B.	

		Control in Injection Molding: A MIMO Approach								
Refereed	Referenced Conference Proceeding	A CFD Model Predictive Controller for Melt Temperature	ANTEC Society of Plastic Engineers	n/a	Spring	2003	n/a	0-0	Healy, A.; Gerber, A.	
Refereed	Referenced Conference Proceeding	A novel tuning method for predictive control of melt temperatures and plastication screw speed in injection molding	Proc. ANTEC	n/a	Spring	2002	Vol. III	3892-3896	Pramujati, B.	
Refereed	Referenced Conference Proceeding	Self-Optimizing MPC of Injection Velocity During Mold Fill	Proc. ANTEC	n/a	Spring	2002	Vol. III	3897-3900	Lakhram, R.	

Andrew Gustav Gerber

Ref?	Type	Piece Title	Publication Name	Place of Publication		Pub. Year	Issue/Volume	Pagination	UNB Contrib.	Other Contrib.
Refereed	Refereed Journal	Two-Phase Langrangian/Eulerian Model for Nucleating Steam Flow	Journal of Fluids Engineering	n/a	Summer	2002	Vol. 124, No. 2	45-48		
Refereed	Referenced Conference Proceeding	An Efficient CFD Model for Air/Particle Saltating Flows	ASME IMECE2002	New Orleans, LA	Fall	2002	CD Index 32090	0-0	Ji, S.; Sousa, A.C.M.	
Refereed	Referenced Conference Proceeding	A CFD Model for Devices Operating Under Extensive Cavitation Conditions	ASME IMECE2002	New Orleans, LA	Fall	2002	CD Index 39315	0-0		
Refereed	Referenced Conference Proceeding	A Model for the Tool Temperature During Machining With a Rotary Tool	Proceedings of ASME IMECE 2001	New York, NY	Fall	2001	CD-ROM MED-23313	0-0	Kishawy, H.A.	

Marwan A Hassan

Ref?	Type	Piece Title	Publication Name	Place of Publication		Pub. Year	Issue/Volume	Pagination	UNB Contrib.	Other Contrib.
Refereed	Refereed Journal	Sutural Complexity Does Not Reduce Strength: Finite Element Analysis of Simulated Ammonoid Septa (Cephalopods)	Journal of Paleobiology	n/a	Fall	2002	28(1)	113-126		Hewitt, R.; Westermann, G.; Dokainish, M
Refereed	Refereed Journal	Simulation of the Turbulence Response of Heat Exchanger Tubes in Lattice-bar Supports	Journal of Fluids and Structures	n/a	Winter	2002	Vol. 16(8)	1145-1176		Weaver, D.; Dokainish, M.

Gordon Lawrence Holloway

Ref?	Type	Piece Title	Publication Name	Place of Publication		Pub. Year	Issue/Volume	Pagination	UNB Contrib.	Other Contrib.
Refereed	Refereed Journal	A Computational Study of the Aerodynamic Forces Acting on a Tractor Trailer Vehicle in Cross-Winds	Journal of Wind Engineering and Industrial Aerodynamics	UK	Summer	2003	Vol. 91	573-592	Bettle, J.; Venart, J.E.S.	

Esam M A Hussein

Ref?	Type	Other	Piece Title	Publication Name	Place of Publication		Pub. Year	Issue/Vol.	Pagination	UNB Contrib.	Other Contrib.
Refereed	Refereed Journal		An inverse problem for three-dimensional x-ray scatter/transmission imaging	Inverse Problems	Institute of Physics, London, England	Spring	2003	19	447-495	El Khettabi, F.; Hussein, E. M. A.	
Non Refereed	Referenced Conf. Proc.		Multi-indicator Radiation-Based Identifier for Landmines	Proc. Conf. on Detection and Remediation Technologies for Mine and Minelike Targets VII	SPIE Society for Optical Engineering, Orlando, Florida	Spring	2002	4742	502-508	Hussein, E.M.A	

Refereed	Referenced Conf. Proc.		A Neutron Scatterometer for Void-Fraction Measurement in Rod-Bundle Channels: From a Concept to a Practicable On-Line System	Transactions American Nuclear Society,	Hollywood, FL	Winter	2002	862	380-381	Hussein, E.M.A.	Buell, J.R.; Byskal, D. P.; Ingham, P.J.; Swartz, R. S.
Non Refereed	Other	Educational Forum	A Self-Study and Entrepreneurial Approach for Teaching a University Course on Nondestructive Testing	Materials Evaluation	Columbus, Ohio	Summer	2002	8	959-961	Hussein, E.M.A.	

Hossam Eldeen Kishawy

Ref?	Type	Other	Piece Title	Publication Name	Place of Publication		Pub. Year	Issue/Volume	Pagination	UNB Contrib.
Refereed	Referenced Conference Proceeding		An Assessment of Carbide Self-Propelled Rotary Tools During Machining Hardened Steel	North American Manufacturing Research Conference	Transactions of the SME	Summer	2003	n/a	185-192	Zhang, Y.; Wilcox, J.
Refereed	Refereed Journal		Tool Wear and Chip Formation During Hard Turning with Self-propelled Rotary Tool	International Journal of Machine Tool and Manufacture	Elsevier		2003	Volume 43	433-439	Kishawy, H.A.; Wilcox, J.
Refereed	Refereed Journal		A Numerical Investigation of the Chip Tool Interface in Orthogonal Machining	International Journal of Machining Science and Technology	N/A		2002	Volume 5, No. 3	397-414	Kishawy, H.A.; Rogers, R.J.; Balihodzic, N.
Refereed	Refereed Journal		Experimental Evaluation of Cutting Temperature During High Speed Machining of Die Materials Using CBN	Journal of Machining Science and Technology	N/A		2002	Volume 6, No. 1	67-97	Kishawy, H.A.

			Tools							
Refereed	Refereed Journal		NC End Milling Optimization Using Evolutionary Computation	International Journal of Machine Tool and Manufacture	Elsevier		2002	Volume 42	595-605	Kishawy, H.A.
Refereed	Refereed Journal		Optimized CNC End Milling: A Practical Approach	International Journal of Computer Integrated Manufacturing	Elsevier		2002	Volume 15, No. 5	453-470	Kishawy, H.A.
Refereed	Refereed Journal		Characteristics of Heat Transfer During Machining with Rotary Tools	Transactions of the ASME	Journal of Manufacturing Science and Engineering		2002	N/A	0-0	Kishawy, H.A.; Gerber, A.G.
Refereed	Refereed Journal		Tool Wear and Surface Integrity During High Speed Machining of Hardened Steel with PCBN Tools	Proceedings of the Institution of Mechanical Engineers: Part B	Journal of Engineering Manufacture		2001	215(6)	755-767	Kishawy, H.A.
Refereed	Referenced Conference Proceeding		Ultra High Speed Machining of Aluminum Alloys: Machinability Aspects and	Transactions of the SME	North American Manufacturing Research Conference	Spring	2003	N/A	129-136	Kishawy, H.A.

			Attainable Accuracy							
Refereed	Referenced Conference Proceeding		An Integrate Approach for Optimized CNC End Milling	Proceedings of the Third Mechanical Engineering Advanced Technology for Industrial Production	METATIP3	Fall	2002	N/A	468-476	Kishawy, H.A.
Refereed	Referenced Conference Proceeding		New NC routines for quality in pocket machining	Proceedings of the Third Mechanical Engineering Advanced Technology for Industrial Production	METATIP3	Fall	2002	N/A	477-484	Kishawy, H.A.
Refereed	Referenced Conference Proceeding		An Analysis of the Machining Process Using a Thermo-Elasto-Viscoplastic Finite Element Model	International Mechanical Engineering Congress and Exposition, IMECE2002/MED	Symposium on Advances to Further the Automation of Metal Cutting	Fall	2002	Volume 3	17-22	Balihodzic, N.; Rogers, R.J.
Refereed	Referenced Conference Proceeding		A Numerical Investigation of the Chip Tool Interface in Orthogonal Machining	Proc. 5th International Workshop on Modeling of Machining Operations	International Journal of Machining Science and Technology		2002	Volume 5, No. 3	397-414	Rogers, R.J.; Balihodzic, N.
Refereed	Referenced Conference		Morphology of Chips Formed	Transactions of the NAMRI/SME	North American		2002	Volume XXX	183-190	

	Proceeding		During High Speed Milling of Die and Mold Tool Steel Using Ball End Mills		Manufacturers Research Institute					
Refereed	Referenced Conference Proceeding		An Analysis of the Chip Segmentation Under Adiabatic Shear During High Speed Machining of Difficult-to-Cut Materials	6th International Conference on Production Engineering and Design for Development	n/a		2002	n/a	213-221	

Bale Viswanadha Reddy

Ref?	Type	Other	Piece Title	Publication Name	Place of Publication		Pub. Year	Issue/Volume	Pagination	UNB Contrib.	Other Contrib.
Refereed	Refereed Journal		Fundamental heat transfer mechanism between bed to membrane water-walls circulating fluidized bed combustors	International Journal of Energy Research	n/a	Summer	2003	Vol. 27	813-824		
Refereed	Refereed Journal		Experimental investigations on heat transfer from suspension to impact separators in the riser column of a circulating fluidized bed combustor	International Journal of Heat and Mass Transfer	n/a	Winter	2003	Vol. 46	71-75		Winaya, N.S.; Basu, P.
Refereed	Refereed Journal		Second law analysis of a waste heat recovery steam generator	International Journal of Heat and Mass Transfer	n/a	Spring	2002	Vol. 45	1807-1814		Ramkiran, G.; Kumar, K. Ashok; Nag, P.K.
Refereed	Refereed Journal		Estimation of the effect of CO ₂ concentration on radiation heat transfer in a pressurized circulating fluidized bed combustor	Chemical Engineering Research and Design	n/a	Winter	2002	Vol. 80	178-182		Basu, P.

Refereed	Refereed Journal		Effect of operating parameters on sulphur capture and NOX emissions in a pressurized circulating fluidized bed combustor	International Journal of Energy Research	n/a	Winter	2002	Vol. 26	173-183		Boskovic, S.; Basu, P.
Refereed	Refereed Journal		Effect of pressure and temperature on cluster and particle heat transfer in a pressurized circulating fluidized bed	International Journal of Energy Research	n/a	Fall	2001	Vol. 25	1263-1274		Basu, P.
Refereed	Refereed Journal		A model for heat transfer in a pressurized circulating fluidized bed furnace	International Journal of Heat and Mass Transfer	n/a	Summer	2001	Vol. 44	2877-2887		Basu, P.

Robert J Rogers

Ref?	Type	Other	Piece Title	Publication Name	Place of Publication		Pub. Year	Issue/ Vol.	Pagination	UNB Contrib.	Other Cont
Refereed	Refereed Journal		Improved Dynamic Friction Models for Simulation of 1-D and 2-D Stick-Slip Motion	Journal of Tribology	New York, NY	Fall	2001	123	661-669	Rogers, R.J.	Tariku, F.A.
Refereed	Referenced Conference Proceeding		An Experimental Study of Friction during Planar Elastic Impact	Flow-Induced Vibration - 2001: Axial Flow, Piping Systems, Other Topics	New York, NY	Summer	2001	2001	11-19	Osakue, E.E.; Rogers, R.J.	
Refereed	Refereed Journal		An Experimental Study of Friction during Planar Elastic Impact	Journal of Pressure Vessel Technology	New York, NY	Fall	2001	123	493-500	Osakue, E.E.; Rogers, R.J.	
Refereed	Refereed Journal		A Numerical Investigation of the Chip Tool Interface in Orthogonal Machining	Machining Science and Technology	New York, NY		2002	6	395-412	Kishawy, H.A.; Rogers, R.J.; Balihodzic, N.	

Refereed	Referenced Conference Proceeding		Dynamic Modelling of Hydraulic-Actuating Joysticks	Proceedings of 19th Can. Machinery Vibration Association National Seminar, Edmonton, AB	Edmonton, AB	Summer	2001	19	10-1-10-10	Rogers, R.J.; Oliver, M.; Garland, P.; Gallant, T.	
Refereed	Referenced Conference Proceeding		Effect of Joystick Stiffness and Speed on Selected Dynamic Torque Characteristics	Fourth World Congress of Biomechanics, Calgary, AB	Calgary	Summer	2002	CD-Rom paper #	79	Oliver M.; Biden, E.; Rogers, R.; Rickards, J.	
Refereed	Referenced Conference Proceeding		Development and Validation of a Joystick Dynamics Model to Predict Operator Input Torque	Fourth World Congress of Biomechanics, Calgary, AB	Calgary	Summer	2002	CD-Rom paper #	78	Oliver, M.; Rogers, R.; Garland, P.; Gallant, T.; Biden, E.	
Refereed	Referenced Conference Proceeding		A Tradeshow for Products Developed in Second Year Mechanical Engineering	32nd ASEE/IEEE Frontiers in Education Conf., Boston	Boston	Fall	2002	FD	23-26	Biden, E.N.; Rogers, R.J.	
Refereed	Referenced Conference		An Analysis of the Machining	Proceedings of ASME	New York NY	Fall	2002	AMR 15	39109	Balihodzic, N.;	

	Proceeding		Process Using a Thermo-Elastic-Viscoplastic Finite Element Model	IMECE'02, New Orleans				CD-Rom paper #		Kishawy, H.A.; Rogers, R.J.	
Refereed	Referenced Conference Proceeding		Effects of Moisture on the Adhesive Stress Distribution in a Short Sandwich Beam in Bending	Sixth International Conf. on Sandwich Structures, Ft. Lauderdale, FL	CRC Press, Boca Raton, FL	Spring	2003	6	464-484	LaPlante, G.; Lee-Sullivan, P.; Rogers, R.J.	
Refereed	Referenced Conference Proceeding		Contact Pressures and Energies Beneath Soft Tires: Modeling the Effects of Central Tire Inflation-Equipped Heavy-Truck Traffic on Road Surfaces	Transportation Research Record, Journal of the Transportation Research Board	Washington, DC	Spring	2003	1819 V2	221-227	Rogers, R.J.	Douglas, R., Woodward, W.D.H.
Non Refereed	Other	Examination Question Data Base	Draft Vibration Technician Certification	N/A	Calgary	Fall	2001	N/A	16	Rogers, R.J.	

			Examination							
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Antonio C.M. Sousa

Ref?	Type	Other	Piece Title	Publication Name	Place of Publication		Pub. Year	Issue/Volume	Pagination	UNB Contrib.	Other Cont
Refereed	Refereed Journal		Modeling of Flow and Thermo-Kinetics During the Cure of Thick Laminated Composites	International Journal of Thermal Sciences	n/a	Spring	2003	42(1)	15-22		Costa, V.A.F
Refereed	Refereed Journal		Prediction of building interference effects on pedestrian level comfort	Journal of Wind Engineering & Industrial Aerodynamics	n/a	Fall	2002	90 (4-5)	305-319		Ferreira, A.I Viegas, D.X.
Refereed	Refereed Journal		The RNG Turbulence Closure: Application and Revisited Performance Assessment	WSEAS Transactions on Systems	n/a	Spring	2002	1(2)	165-170		Ferreira, A.I
Refereed	Refereed Journal		Fire suppression using water	Journal of Mechanical Engineering	n/a	Fall	2001	47 (9), ISSN 0039-2480	424-434		Hadjisophocus, G.V.; An M.; Costa,

			mists - a numerical model								V.A.F.
Refereed	Refereed Journal		Neural network analysis of experimental data for air/water spray cooling	Journal of Materials Processing Technology	n/a	Fall	2001	113	439-445		Oliveira, M.S.A.
Refereed	Refereed Journal		GRID3D - A Numerical Code for the Generation of Three-dimensional Generalized Structured Grids	Ingenium	n/a	Summer	2001	Series 2, 56	75-80		Gameiro, Lopes; Vieg; D.X.
Refereed	Refereed Journal		Control of laminar natural convection in differentially heated square enclosures using solid inserts at the corners	International Journal of Heat Mass Transfer	n/a	Summer	2003	46 (18)	3529-3537		Costa, V.A.F Oliveira, M.S.A.
Refereed	Referenced Conference Proceeding		Numerical simulation of non-Darcian	Proceedings of the 3ICCHMT	The 3rd International Conference on	Spring	2003	n/a	135-143		Costa, V.A.F Oliveira, M.S.A.

			flows through spaces partially filled with a porous medium		Computational Heat and Mass Transfer						
Refereed	Referenced Conference Proceeding		Numerical and Physical Modeling of Polymer Composite Processing	Proceedings of the 11th Annual (International) Mechanical Engineering Conference	Ferdowsi University of Mashhad/Sokhan Gostar Pub., Meshhad, Iran	Spring	2003	n/a	1-9		
Refereed	Referenced Conference Proceeding		Control and optimisation of superalloys heat treatment at high temperatures with mixed sprays (air-water) using neural networks	Proceedings, VII National Congress of Applied and Computational Mechanics, Vol. III	APTMAC, Évora, Portugal	Summer	2003	972-778-058-X	1331-1340		Oliveira, M.S.A.; Costa V.A.F.
Refereed	Referenced Conference Proceeding		Numerical simulation of flows in porous and non-porous medium without using the Darcy Law	Proceedings, VII National Congress of Applied and Computational Mechanics, Vol. IV	APTMAC, Évora, Portugal	Summer	2003	972-778-058-X	2149-2158		Costa, V.A.F Oliveira, M.S.A.

Refereed	Referenced Conference Proceeding		A Neural Network Strategy for Improved Injection Moulding Quality	Conference Proceedings, ICIT2003, 4th International Conference on Industrial Tools	TECOS, Celje, Slovenia	Spring	2003	n/a	233-241		Oliveira, M.S.A.; Alve R.; Sousa, M
Refereed	Referenced Conference Proceeding		An Efficient CFD Model for Air/Particle Saltating Flows	Proceedings of the 2002 ASME International Mechanical Engineering Congress and Exposition, Volume 1	The American Society of Mechanical Engineers, New Orleans, Louisiana, USA	Fall	2002	2002 - 3209	1-8	Ji, S.; Gerber, A.G.	
Refereed	Referenced Conference Proceeding		Particle Dispersion Modelling Using an Algebraic Slip Model with Moving Grids	Proceedings of the 4th International Conference on Nonlinear Mechanics	Shanghai University Press, Shanghai, China	Fall	2002	n/a	778-783	Gerber, A.G.; Ji, S.	Ferreira, A.D
Refereed	Referenced Conference Proceeding		RNG Turbulence Model: Assessment of its performance	Numerical Methods in Engineering V	SEMNI (Sociedad Española de Métodos Numéricos en Ingeniería), Barcelona, Spain	Summer	2002	n/a	150-1-150-12		Ferreira, A.D
Refereed	Referenced Conference		Modeling of air/water	Heat Transfer VII, Advanced	WIT Press, Southampton,	Spring	2002	n/a	251-260		Oliveira, M.S.A.

	Proceeding		cooling of superalloys at high temperatures	Computational Methods in Heat Transfer	U.K.						
Refereed	Referenced Conference Proceeding		Full-scale measurements of coal dust release during train transportation	Proc. 3rd European and African Conference on Wind Engineering	Eindhoven University, Netherlands	Summer	2001	n/a	149-156		Ferreira, A.I Viegas, D.X.

Pearl P. Sullivan

Ref?	Type	Other	Piece Title	Publication Name	Place of Publication		Pub. Year	Issue/Volume	Pagination	UNB Contrib.	Other Contrib.
Refereed	Refereed Journal		An alternative cure kinetics model for a high temperature film adhesive	Polymer Engineering and Science	US		2003	Vol. 43(1)	14-25	Rogers, A.	
Refereed	Refereed Journal		Mechanical relaxations in heat-aged polycarbonate. Part I - Comparison between two molecular weights	Polymer Engineering and Science	US		2003	Vol. 43(2)	369-382	Dykeman, S.	Qing, S.
Refereed	Refereed		Mechanical	Polymer	US		2003	Vol. 43(1)	383-398	Dykeman,	

	Journal		relaxations in heat-aged polycarbonate. Part II - Statistical analysis of low molecular weight data	Engineering and Science						D.	
Refereed	Refereed Journal		Simultaneous strain and temperature monitoring of the composite cure with a Bragg scattering-based distributed sensor	Optical Engineering	US		2002	Vol. 41(7)	1496-1501	Bao, X.; Huang, C.; Zeng, X.; Arcand, A.	
Refereed	Refereed Journal		Residual stress development during the composite patch bonding process - Measurement and modelling	Composites A: Applied Science and Manufacturing	US		2001	Vol. 33(2)	277-288	Djokic, D.; Rogers, A.	Johnston, A.
Refereed	Refereed Journal		Finite element and experimental studies on balanced single lap joints in tension	International Journal of Adhesion and Adhesives	US		2001	Vol. 21	211-220	Li, G.	

Refereed	Refereed Journal		Stress relaxation profiles of molded and extruded thermoplastics using Dynamic Mechanical Analysis	Journal of Reinforced Plastics and Composites	US		2001	Vol. 20(13)	1100-1112	Dykeman, D.	
Refereed	Referenced Conference Proceeding		Effects of Moisture on the Adhesive Stress Distribution in a Short Sandwich Beam in Bending	Proceedings of the 6th International Conference on Sandwich Structures	CRC Press, Boca Raton	Spring	2003	n/a	464-484	LaPlante, G.	
Refereed	Referenced Conference Proceeding		A novel approach for reducing adhesive curing-induced stresses during composite patch repair	The Ninth International Conference for Composites Engineering, ICCE/9	San Diego, CA	Spring	2001	n/a	14	Djokic, D.	Johnston, A.
Refereed	Referenced Conference Proceeding		A cure kinetics model for FM-300 film adhesive	Canadian Thermal Analysis Annual Meeting	Toronto, ON	Summer	2002	n/a	12	Rogers, A.	
Refereed	Referenced Conference Proceeding		Process optimization for reduction of	The 33rd International SAMPE	Seattle, WA	Fall	2001	n/a	12	Djokic, D.	Hojjati, M.; Johnston,

			composite patch repair residual stress	Technical Conference							A.
Refereed	Referenced Conference Proceeding		On the role of the β_2 -transition in the stress relaxation behavior of heat-aged polycarbonate	The International Conference on Materials for Advanced Technologies, ICMAT 2001	Singapore	Summer	2001	n/a	12	Dykeman, D.; Shao, Q.	
Refereed	Referenced Conference Proceeding		Finite element analysis of pultruded composited-to-aluminum adhesively bonded lap joints in tension	The Third Canadian-International Composites Conference (CANCOM 2001)	Montreal, QC	Fall	2001	n/a	378	Li, G.	

James Venart

Ref?	Type	Other	Piece Title	Publication Name	Place of Publication		Pub. Year	Issue/Volume	Pagination	UNB Contrib.	Other Contrib.
Refereed	Refereed Journal		The thermal conductivity, thermal diffusivity and specific heat of Argon	Int J Thermophysics	UK	Fall	2002	23	357-389	L Sun; R Prasad	
Refereed	Refereed Journal		The Thermal conductivity	Int J Thermophysics	UK	Fall	2002	23	391-420	L Sun; R Prasad	

			and thermal diffusivity of n-pentane; thermal radiation effects								
Refereed	Refereed Journal		The thermal conductivity and thermal diffusivity of Toluene and argon; use of a coated wire	Int J Thermophysics	UK	Winter	2002	23	1487-1535	L Sun; R Prasad	
Refereed	Refereed Journal		A computational study of the aerodynamic forces acting on a tractor trailer vehicle in cross-winds	J Wind Engineering and Industrial Aerodynamics	UK	Summer	2003	91	573-592	J. Bettle, G. Holloway	
Refereed	Refereed Journal		Fire-induced failure of a propane tank; some lessons to be learned	J Process Mech Eng	IMech E UK	Summer	2003	E 217	79-91		D M Tan; J. Xu

Books:

Esam M A Hussein

Category	Title	Publisher	Place of Publication	Editor	Pub. Year	Issue/Volume	Pagination
Authored	Handbook on Radiation Probing, Gauging, Imaging and Analysis, Volume I: Basics and Techniques	Kluwer Academic Publishers	May 2003	None	2003	1	1-464
Authored	Handbook on Radiation Probing, Gauging, Imaging and Analysis, Volume II: Applications and Design	Kluwer Academic Publishers	May 2003	None	2003	2	526

Research reports resulting from university-administered research contracts and grants:

Edmund Norman Biden

Title	Month	Year	Agency
Developing A Biomedical Engineering Education Program in Cuba	July	2001	AUCC/CIDA
Developing a Biomedical Engineering Education Program in Cuba	January	2002	AUCC/CIDA
Developing a Biomedical Engineering Education Program in Cuba	January	2003	AUCC/CIDA
Accident Evaluation	June	2003	Point of Origin Consultants

Esam M A Hussein

Title	Month	Year	Agency
A Non-Rotating X-ray System for Composition and Density Imaging of Luggage	March	2003	US Federal Aviation Administration
Study on Prediction of Phase-Distribution in the Heated-Channels of the AECL's RD-14M Thermohydraulics Test Facility using the Neutron Scatterometer	June	2002	Atomic Energy of Canada Limited

Hossam Eldeen Kishawy

Title	Month	Year	Agency
Assessment of Self-propelled Rotary Tool During Machining Waspaloy and Titanium	March	2003	Pratt & Whitney, Inc.
High Speed Machining of Aluminum Alloys for Automotive Application	August	2002	Auto21
High Speed Machining of Aluminum Alloys for Automotive Application: Finite Element Modeling and Chip Morphology Analysis	April	2002	Auto21

Robert J Rogers

Title	Month	Year	Agency
Fiber Optic Vibration Testing Device	January	2003	Fiber Connections Inc., Summerside, PEI
Design and Manufacture of a Prototype Weighing and Sorting Device	June	2003	TI Solutions, Toronto

Film, television, theatre, multimedia and related scholarly or creative productions:**Edmund Norman Biden**

Type	Other	Name	Venue	Year
Other	Column in "The Standard"	Regular literature review in a twice yearly publication.	Oxford Metrics	2003

Grants and contracts:**Edmund Norman Biden**

Type	Agency	Principle Investigator	Other Investigators	Total	Individual Portion
Grant	NSERC	Ed Biden		49200	49200
Grant	CFI	Ed Biden	Hudgins, B; Englehart, K; Bush, G; Parker, P;	100000	50000
Contract	AUCC/CIDA	Ed Biden	Balcom, B; Lovely, D; Hudgins, B;	25000	25000
Grant	CHSRF/CIHR	Ed Biden after John Rowcroft left project in March 2003	Rathwell, T; Neville, D;	750000	60000

Contract	Point of Origin Consultants	E Biden		3500	3500
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David J. Bonham

Type	Agency	Principle Investigator	Other Investigators	Total	Individual Portion
Grant	Auto21	Bonham, D.J.		5000	5000
Grant	Auto21	Bonham, D.J.		5000	5000

Juan A. Carretero

Type	Agency	Principle Investigator	Other Investigators	Total	Individual Portion
Grant	University of New Brunswick (Startup fund)	Juan A. Carretero		5500	5500
Grant	University of New Brunswick (University Research Fund)	Juan A. Carretero		3000	3000
Grant	NSERC: Discovery Grant (individual)	Juan A. Carretero		18000	18000
Grant	Dept. of Mechanical Engineering (Startup fund)	Juan A. Carretero		17500	17500
Grant	Dept. of Training and Employment Development/SEED Coop	Juan A. Carretero		3770	3770
Grant	UNB Work Study Program	Juan A. Carretero		1680	1680

Huw Davies

Type	Agency	Principle Investigator	Other Investigators	Total	Individual Portion
Grant	NSERC	H.G.Davies		66000	66000

Rickey Dubay

Type	Agency	Principle Investigator	Other Investigators	Total	Individual Portion
Grant	Ropak Canada Inc.	Dubay, R.		12000	12000
Grant	MicroOptics Corporation	Dubay, R.		104000	104000
Grant	NSERC	Dubay, R.		43000	43000
Contract	TI Solutions	Dubay, R.	Rogers, R.J.	13000	6500
Grant	Engel Canada Inc.	Dubay, R.		20000	20000
Contract	Fiber Connections Inc.	Rogers, R.J.	Dubay, R.	15300	7650
Grant	Dept. of Training and Employment Development/SEED Coop	Dubay, R.		3800	3800
Grant	New Brunswick Innovation Fund - Research Assistantship's Initiative	Sullivan, P.	Dubay, R.	20000	10000
Grant	UNB Work Study Program	Dubay, R.		480	480

Andrew Gustav Gerber

Type	Agency	Principle Investigator	Other Investigators	Total	Individual Portion
Grant	NSERC Operating Grant	Gerber, A.G.		40000	40000
Grant	NSERC Industry Collaborative Research Grant in conjunction with Alcan International Ltd. (+ 20,000 in-kind)	Gerber, A.G.		80000	80000
Grant	Canada Foundations for Innovation New Faculty Grant (+ 433,556 in-kind)	Gerber, A.G.	Hassan, M.	631453	631453
Grant	UNB Work Study Program	Gerber, A.G.		480	480

Marwan A Hassan

Type	Agency	Principle Investigator	Other Investigators	Total	Individual Portion
Grant	UNB Start-up Fund	Hassan, M.		5500	5500
Grant	NSERC Research Grant	Hassan, M.		32000	32000
Grant	Canada Foundations for Innovation	Gerber, A.G.	Hassan, M.	631453	631453
Grant	Mechanical Engineering, UNB, Start-up Fund	Hassan, M.		17500	17500
Grant	New Brunswick Innovation Fund - Research Assistantship's Initiative	Hassan, M.		10000	10000
Grant	University Research Fund	Hassan, M.		2000	2000
Grant	Dept. of Training and Employment Development/SEED Coop	Hassan, M.	Sharaf, A.	2266	2266

Gordon Lawrence Holloway

Type	Agency	Principle Investigator	Other Investigators	Total	Individual Portion
Grant	NSERC Operating Grant	Holloway, A.G.L.		30900	30900
Grant	New Brunswick Innovation Fund - Research Assistantship's Initiative	Holloway, A.G.L.		5000	5000
Grant	Dept. of Training and Employment Development/SEED Coop	Holloway, A.G.L.		3625	3625
Contract	Nexfor (Fraser Papers)	Holloway, A.G.L.		5100	5100

Esam M A Hussein

Type	Agency	Principle Investigator	Other Investigators	Total	Individual Portion
Grant	Research Assistantship Initiative, NB Innovation Foundation and NB Department of Training and Employment	Hussein, E.M.A.		10000	10000
Grant	Natural Science and Engineering Research Council	Hussein, E.M.A.		58000	58000
Contract	SAIC Canada and Canada Customs and Revenue	Hussein, E.M.A.		30732	30732
Contract	Atomic Energy of Canada Limited	Hussein, E.M.A.		30000	30000
Grant	USA Federal Aviation Administration	Hussein, E.M.A.		1500000	435000

Hossam Eldeen Kishawy

Type	Agency	Principle Investigator	Other Investigators	Total	Individual Portion
Grant	NSERC Operating	Kishawy, H.		40000	40000
Grant	Auto21	Kishawy, H.		60000	60000
Grant	CFI	Kishawy, H.		104320	104320
Grant	AIF	Kishawy, H.		104320	104320
Grant	NSERC Equipment	Kishawy, H.		16019	16019
Grant	UNB Work Study Program	Kishawy, H.		1200	1200

Bale Viswanadha Reddy

Type	Agency	Principle Investigator	Other Investigators	Total	Individual Portion
Grant	UNB Research Fund (Internal Competition)	B.V. Reddy		3000	3000
Grant	NSERC Discovery Grant	B.V. Reddy		23000	23000
Grant	University of New Brunswick (Start-up fund)	B.V. Reddy		5500	5500
Grant	NBIF Research Assistantships Initiative	B.V. Reddy		25000	25000
Grant	Department of Mechanical Engineering, UNB (Start-up)	B.V. Reddy		17500	17500

Robert J Rogers

Type	Agency	Principle Investigator	Other Investigators	Total	Individual Portion
Grant	NSERC Research Grant	R.J. Rogers		64900	64900
Contract	Fiber Connections Inc.	R.J. Rogers	R. Dubay	15300	7650
Contract	TI Solutions Ltd.	R. Dubay	R.J. Rogers	13000	6500

Antonio C.M. Sousa

Type	Agency	Principle Investigator	Other Investigators	Total	Individual Portion
Grant	NSERC Discovery Grant	Sousa, A.C.M.		35450	35450
Grant	NSERC Operating Grant	Sousa, A.C.M.		30400	30400

Pearl P. Sullivan

Type	Agency	Principle Investigator	Other Investigators	Total	Individual Portion
Grant	New Brunswick Innovation Fund - Research Assistantship's Initiative	Sullivan, P	Dubay, R.	20000	10000
Contract	DREA, Department of National Defence	Sullivan, P.	Balcom, B.	181600	108960
Grant	Canada Foundation for Innovation	Balcom, B.	Sullivan, P.	2500000	25000
Grant	NSERC Discovery Grant	Sullivan, P.		26460	26460
Grant	Atlantic Canada Opportunities Agency (ACOA) Atlantic Innovation Fund	White, M.A.	Sullivan, P.	5000000	50000

Grant	Atlantic Canada Opportunities Agency (ACOA) Atlantic Innovation Fund	Balcom, B.	Sullivan, P.	2500000	25000
Contract	Testing Services	Sullivan, P.		12228	12228
Grant	HRDC/Summer Career Placement	Sullivan, P.		1080	1080
Grant	Dept. of Training and Employment Development/SEED Coop	Sullivan, P.		4053	4053

James Venart

Type	Agency	Principle Investigator	Other Investigators	Total	Individual Portion
Grant	NSERC	Venart		25000	25000
Grant	NATO	Krasnov	Drobheva; Latosevika; Venart	35000	7500
Contract	Orica USA Inc.	Venart, J.E.S.		6520	6520

Invited lectures:

David J. Bonham

Title	Venue	Month	Year
Auto21	APEGNB Annual General Meeting	June	2003

Rickey Dubay

Title	Venue	Month	Year
Model Predictive Control incorporating back pressure and zone interactions effects	Engel Canada Inc., Guelph, ON	May	2003
Model Predictive Control incorporating back pressure effects in injection molding	Engel Canada Inc., Guelph, ON	June	2002

Esam M A Hussein

Title	Venue	Month	Year
NDT and Imaging with Scattering	Department of Nuclear Engineering, Hanyang University, Seoul, Korea	June	2003
3-D Compton Scatter imaging: Physical and Mathematical Aspects	Innovative Technology Center for Radiation Safety, Hanyang University, Seoul, Korea	June	2003
3-D Compton Scatter imaging: Practical and Experimental Aspects	Innovative Technology Center for Radiation Safety, Hanyang University, Seoul, Korea	June	2003

Bale Viswanadha Reddy

Title	Venue	Month	Year
Heat transfer in advanced energy systems	Mechanical Engineering Department, IIT, Kharagpur, India	November	2001

Antonio C.M. Sousa

Title	Venue	Month	Year
Modeling of Manufacturing Processes for Polymeric Composites	U. Modena, Modena, Italy	May	2003
Eulerian-Lagrangian Numerical "Experiments" for Different Fire Scenarios	U. Macau, Macau, China	September	2002

Pearl P. Sullivan

Title	Venue	Month	Year
Residual Stress Formation during the Curing of a Composite-to-Metal Adhesive Bond	The 9th Annual Conference of the Institute of Materials, East Asia, Singapore	March	2001

James Venart

Title	Venue	Month	Year
BLEVEs: two-phase aspects of vessel failure	39th European two-phase flow group mtg	June	2001
BLEVE; cause and consequences	Univ College London	January	2003
Flixborough: a reanalysis	Univ College London	September	2002
Flixborough: a re-analysis	Kazakhstan Institute for the Ionsphere	April	2002

Keynote addresses:

Antonio C.M. Sousa

Title	Venue	Month	Year
Numerical and Physical Modeling of Polymer Composite Processing	11th Annual (International) Mechanical Engineering Conference	May	2003
Modeling of air/water cooling of superalloys at high temperatures	Heat Transfer VII, Advanced Computational Methods in Heat Transfer	April	2002

James Venart

Title	Venue	Month	Year
Flixborough; the disaster and its aftermath; a reanalysis	6th Int Congress Chem Eng., Melbourne	September	2001

Gordon Lawrence Holloway

Venue	Location	Faculty/Department	Month	Year
McMaster University	Hamilton, ON	Mechanical Engineering	Summer	2002
Memorial University	St. John's, NL	Mechanical Engineering	Winter	2002

Bale Viswanadha Reddy

Venue	Location	Faculty/Department	Month	Year
Birla Institute of Technology	Mesra, Ranchi, India	Mechanical Engineering	Spring	2003

Antonio C.M. Sousa

Venue	Location	Faculty/Department	Month	Year
U. Coimbra	Portugal	Mechanical Engineering	Winter	2001
U. Coimbra	Portugal	Mechanical Engineering	Spring	2003
Tech. U. Lisbon	Portugal	Mechanical Engineering	Summer	2003

Pearl P. Sullivan

Venue	Location	Faculty/Department	Month	Year
Nanyang Technological University	Singapore	School of Materials Engineering	Spring	2002

James Venart

Venue	Location	Faculty/Department	Month	Year
University College London	London, UK	Chemical Engineering	Spring	2003
University of Aveiro	Portugal	Mechanical Engineering	Summer	2002

Accreditation committees:

Faculty member or departmental appraisals, external to UNB:

Edmund Norman Biden

Level	Venue	Location	Department	Month	Year
Individual	UBC	Vancouver	Engineering	March	2003
Departmental	Queen's	Kingston	Mechanical Engineering	July	2001
Individual	Dalhousie	Halifax	Physical Therapy	August	2002

David J. Bonham

Level	Venue	Location	Department	Month	Year
Departmental	University of Ontario Institute of Technology	Oshawa, ON	Manufacturing Engineering	June	2002
Departmental	University of Ontario Institute of Technology	Oshawa, ON	Mechanical Engineering	June	2003

Huw Davies

Level	Venue	Location	Department	Month	Year
Individual	Calgary	Calgary	Mechanical Engineering	May	2002

Antonio C.M. Sousa

Level	Venue	Location	Department	Month	Year
Individual	University of Aveiro	Portugal	Mechanical Engineering	June	2002
Individual	University of Aveiro	Portugal	Mechanical Engineering	June	2002
Departmental	IST, Technical University of Lisbon (for Portuguese Universities Foundation)	Lisbon, Portugal	Mechanical Engineering	September	2001
Departmental	University Nova of Lisbon (for Portuguese Universities Foundation)	Lisbon, Portugal	Mechanical & Production Engineering	November	2001

James Venart

Level	Venue	Location	Department	Month	Year
Individual	University College London	London, UK	Chemical Engineering	June	2003

Positions held on regional, national or international boards, scholarly or professional organizations:

Edmund Norman Biden

Organization	Level	Position	Start Month	Start Year	Term	End Month	End Year
Institute of Musculoskeletal Health and Arthritis, CIHR	National	Board Member	March	2001	ongoing		

Juan A. Carretero

Organization	Level	Position	Start Month	Start Year	Term	End Month	End Year
Canadian Committee for the Theory of Machines and Mechanisms	National	Treasurer	May	2003	ongoing		

Robert J Rogers

Organization	Level	Position	Start Month	Start Year	Term	End Month	End Year
Canadian Machinery Vibration Association	National	Secretary and Member of Board of Directors	January	2001	completed	August	2001
CMVA Training & Certification Committee	National	Member	January	2001	ongoing		

Antonio C.M. Sousa

Organization	Level	Position	Start Month	Start Year	Term	End Month	End Year
Commission for the Parlimentary Inquiry of the Tragedy of Camarate	International	Member, Multidisciplinary Committee	May	2003	ongoing		

Other research activities:

Edmund Norman Biden

Additional Information
Was among those who developed the CIHR Development Grant for UNB and have been actively involved in activities in health research promotion over the period of this survey.
Since 2001, has been the NSERC Representative for UNB.

Juan A. Carretero

Additional Information
As the newest faculty member for the Department of Mechanical Engineering, has had the chance to start talks with a few faculty members in terms of collaborations. Two collaborative ventures are to start soon, one with Dr. Kishawy on the design of parallel manipulator-based machine tools. With the combined expertise of Dr. Kishawy and myself this project is sure to be successful. Secondly, has been approached by Dr. Reddy in regards of applying my expertise in the areas of local and global optimization to problems related to Energy Systems. Dr. Reddy will soon take a master student who will do work in this area. Additionally, collaborations with researchers from other Canadian and US universities are envisioned or already on their way. Collaborations with Dr. Bradley Buckham at the University of Victoria, in the area of applying distance determination algorithms to underwater tethered systems for the training of AUV pilots is well underway. Initial results are expected at the end of this year. Additionally, collaborations are envisioned for the very near future with Dr. Rogers (Université de Moncton) and with Dr. Clement Gosselin (Université Laval) in the area of design and optimization of parallel manipulators. Finally, Dr. Ou Ma (New Mexico State University) has expressed interest on using some of the methods. Has

developed in the recent years in regards of distance determination for the simulation of robotic systems. Collaboration with Dr. Ma is envisioned to start as early as January 2004.

Rickey Dubay

Additional Information

New controller methodology under patent review.

Esam M A Hussein

Additional Information

Member, Research Co-ordination program on Application of Nuclear Techniques to Anti-Personnel Landmines Identification, International Atomic Energy Agency, Vienna, Austria, 2000-2003.

Patent, E. M. A. Hussein and B. Achmad, Density Measurement at a Point Within an Object, United States Patent & Trademark Office, Patent No. 6,563,906, May 2003.

Patent: E. M. A. Hussein, Non-Rotating X-ray System for Three-Dimensional Three-Parameter Imaging, United States Patent & Trademark Office, Patent No: 6,556,653 B2, April 29, 2003.

Innovation Achievement Award, a Canadian Nuclear Achievement Award, Canadian Nuclear Society and Canadian Nuclear Association, June 2003.

Development of Neutron Scatterometer for Atomic Energy of Canada, won AECL Discovery Award for 2002.

Bale Viswanadha Reddy

Additional Information

Views on the Research/Teaching Connection, UNB Teaching Voices Magazine, pp. 19-20, January, 2003.

Dalhousie University Halifax, Carleton University, Ottawa: Research collaboration in the area of Experimental Investigations and Numerical Modeling of Circulating Fluidized Bed Combustors

NSERC Strategic Grant: Submitted a research proposal under novel next generation energy technologies to reduce greenhouse gas emissions. The proposal is in the field of Development of Advanced Combined Cycle Power Generation Systems to reduce Greenhouse Gas Emissions (Co-applicants: Dr. A.G.L. Holloway and Dr. Y. Zheng).

JNTU College of Engineering, Hyderabad, India: Research collaboration in the area of Advanced Combined Cycle Power Generation and Second Law Analysis of Power Plant Units.

Member of International Advisory Committee, 4th National Workshop on Circulating Fluidized Bed (CFB) Technology and Revamping of Boilers in India, Bengal Engineering College (Deemed University), Howrah, India, Jan. 3-4, 2003.

Antonio C.M. Sousa

Additional Information

Guest Member, European Two-Phase Flow Group, 2000 - on.

Chair, Steering Committee, TEMA R & D Unit, Aveiro, Portugal, 2001 - on.

Member, Evaluation Committee (Mechanical Engineering), Foundation of Portuguese Universities, 2000 - on.

Energy Expert, Portuguese Order of Engineers, 1990 - on.

Honorary Member, Italian Society for Thermo-fluid-dynamics, 2001 - on

Member, Advisory Board, Association for the Development of Industrial Aerodynamics, Coimbra, Portugal, 1999 - on

Fellow, Portuguese Order of Engineers, 2001 - on.