

C.M.O.S. NEWSLETTER/NOUVELLES S.C.M.O.



Canadian Meteorological
and Oceanographic
Society

La Société Canadienne
de Météorologie et
d'Océanographie

AUGUST/AOÛT 1990

VOL. 18 NO. 4

Call for Papers

Twenty-fifth Annual Congress

The Winnipeg Centre of the Canadian Meteorological and Oceanography Society (CMOS) will host the 25th Annual CMOS Congress in Winnipeg, Manitoba, June 4-7, 1991. CMOS Committee, Special Interest Group and Council meetings will be held June 3.

General Theme: Northern Meteorology and Oceanography

All papers related to physical, chemical and biological aspects of the above theme are especially welcome. Within the general theme, sessions will be held on physical, chemical and biological properties of the the Arctic Ocean, ice in the North, the climate and weather of the North, climatic change and northern impacts, Arctic air pollution and northern hydrology. Papers on any topic of interest to CMOS members will also be considered.

Special Sessions:

Besides the usual sessions in meteorology, oceanography, chemistry and biology, there will be special sessions on prairie storms and applications of chaos theory in meteorology and oceanography.

The Venue:

The Congress will be held at the Delta Hotel in downtown Winnipeg. The hotel is linked with restaurants, shopping and museums by an above-ground concourse.

Delta Winnipeg Hotel
288 Portage Avenue
Winnipeg, Manitoba
For reservations call: 1-800-268-1133

Invitation à présenter des communications

Le 25^e Congrès annuel

Le Centre de Winnipeg de la Société canadienne de météorologie et d'océanographie (SCMO) sera l'hôte du 25^e Congrès annuel, du 4 au 7 juin 1991, à Winnipeg, Manitoba. Les réunions des Comités de la SCMO, des Groupes d'intérêts spéciaux et du Conseil se tiendront le 3 juin.

Thème: Météorologie et océanographie nordiques

Toute communication traitant des aspects physiques, chimiques et biologiques de ce thème est particulièrement bienvenue. A l'intérieur de ce thème, on tiendra des sessions sur les aspects physiques, chimiques et biologiques de l'océan Arctique, le glacier du Nord, le climat et le temps nordiques, les changements climatiques et leurs impacts sur le Nord, la pollution de l'air arctique et l'hydrologie nordique. Toute communication d'intérêt pour les membres de la SCMO sera aussi considérée.

Sessions spéciales:

En plus des sessions ordinaires sur la météorologie, l'océanographie, la chimie et la biologie, on tiendra des sessions spéciales sur les tempêtes dans les Prairies et sur l'application de la théorie du chaos en météorologie et en océanographie.

Endroit:

Le Congrès se tiendra à l'hôtel Delta au centre-ville de Winnipeg. L'hôtel se trouve à proximité de restaurants, de musées et de magasins.

Delta Winnipeg Hotel
288 Portage Avenue
Winnipeg, Manitoba
Pour réservation : 1-800-268-1133

Contacts for Additional Information:

Location:

Mr. Bevan Lawson
Chair, Local Arrangements Committee
Prairie Weather Centre
266 Graham Avenue, Room 900
Winnipeg, Manitoba, R3C 3V4.
Tel: (204) 983-4513; Fax: (204) 983-0109.

Scientific Program:

Mr. Rick Lawford
Chair, Scientific Programme Committee
National Hydrology Research Centre
11 Innovation Boulevard
Saskatoon, Saskatchewan, S7N 3H5
Tel: (306) 975-5756; Fax: (306) 975-5143.

Deadline:

All abstracts should reach the Chair of the Scientific Programme Committee, at the above-mentioned address, before 1 February 1991. Papers received after this date may not be considered. When submitting an abstract, please indicate whether you wish to present your paper orally or have a poster presentation. The Scientific Committee reserves the right to transfer some papers to poster sessions if too many papers have been submitted for oral presentations.

Pour plus de renseignements:

Endroit:

M. Bevan Lawson
Président, Comité des arrangements locaux
Centre météorologique des Prairies
266 Graham Avenue, Room 900
Winnipeg, Manitoba R3C 3V4
Tél: (204) 983-4513; Fax: (204) 983-0109

Programme scientifique :

M. Rick Lawford
Président, Comité du programme scientifique
National Hydrology Research Centre
11 Innovation Boulevard
Saskatoon, Saskatchewan S7N 3H5
Tél: (306) 975-5756; Fax: (306) 975-5143

Date limite:

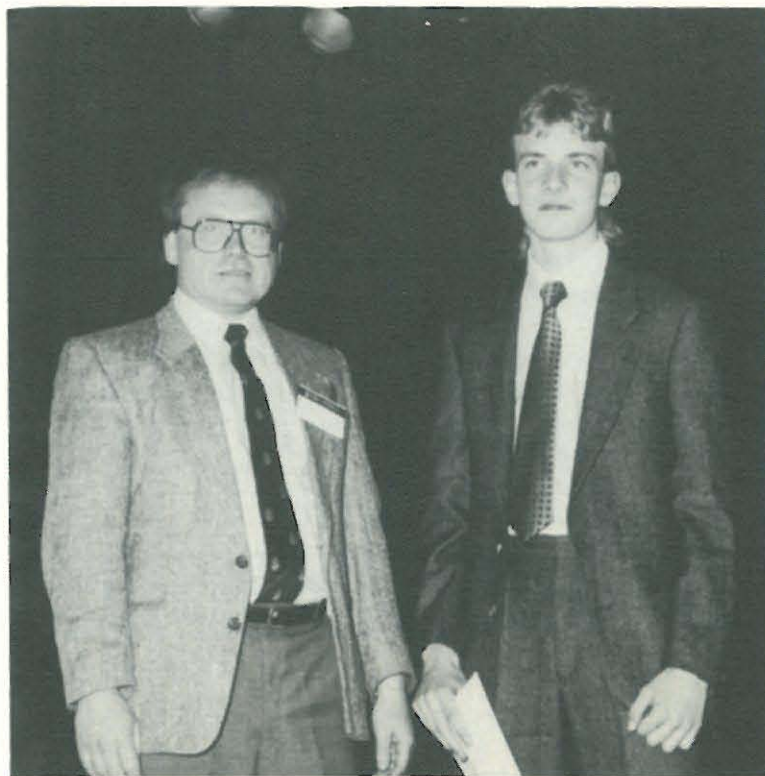
Les résumés devraient parvenir au président du Comité du programme scientifique, à l'adresse ci-dessus, avant le 1^{er} février 1991. Il est possible que les communications reçues après cette date ne soient pas considérées. Lors de la soumission de votre résumé, veuillez indiquer si vous désirez faire une présentation orale ou sous forme d'affichage. Le Comité du programme scientifique pourra transférer certaines présentations orales à l'affichage si trop de présentations orales ont été soumises.

1990 CANADA-WIDE SCIENCE FAIR

The 29th Annual Canada-Wide Science Fair organized by the Youth Science Foundation was held at the University of Windsor from May 13-19, 1990. The 400 exhibitors and 200 delegates, alternates and science fair officials enjoyed a busy week of activities culminating with the awards ceremony, banquet and dance. Dr. John Polanyi and IBM Canada were honoured by the Youth Science Foundation with the first lifetime honorary memberships in the Foundation.

Over \$100,000 was awarded in prizes by the corporate community, professional associations and institutes in recognizing the efforts of the young scientists. The Canadian Meteorological and Oceanographic Society awarded a prize of \$250.00 to Mark Alexander, a Grade 10 student from Sarnia, Ontario. The judging for this prize was undertaken by Dr. Roger Daley. Dr. Peter Taylor presented the prize to Mark at the awards ceremony.

Mark Alexander's entry was entitled "Blowing in the Wind" and described a computer simulation of a variety of smoke stack emissions that realistically emulate natural conditions. The simulation was programmed in ATARI Turbobasic and allowed the operator to test emission concentration, graphically and numerically by Gaussian equation, and local concentration at a distance.



Dr. Peter Taylor and Mark Alexander

SESQUICENTENNIAL CELEBRATION

September 5, 1990, marks the 150th anniversary of the establishment of the first Canadian operational weather observing station on the grounds of King's College, now the University of Toronto. Even though the site of the daily weather observations moved several times since 1840, it stayed within one kilometre of the original site; it is at present located in Trinity College.

To celebrate this special and important occasion, the Atmospheric Environment Service (AES), under the chairmanship of Mr. Dave Phillips, has planned a number of activities, such as the issuing of a special commemorative stamp by Post Canada, and the distributing of anniversary posters, weather observing pins, fact sheets, and news backgrounders. Various regional activities across Canada are also planned. The anniversary celebration will culminate with a grand ceremony and reception at Hart House, University of Toronto, at 12 noon on September 5.

In February of this year, a letter was written to Dr. Han-Ru Cho, then president of CMOS, by Mr. Dave Phillips, inviting the Canadian Meteorological and Oceanographic Society to participate in the 150th anniversary celebration. As a consequence, I was invited in early April by Dr. Cho to form a CMOS Working Group for the Sesquicentennial Celebration of Weather Observing in Canada. Subsequently, a Working Group composed of the following members was organized: Kaz Higuchi (Chair), Tom Agnew, John Knox, Gordon McKay, Amir Shabbar, Malcolm Still and Morley Thomas.

The first meeting of the Group was held May 4 with Dave Phillips acquainting the members on the background and purpose of the celebration, as well as activities already planned by the Anniversary Planning Committee (chaired by Dave Phillips). A number of suggestions were put forward as to how CMOS could participate in the celebration.

The second meeting was held May 18 to discuss these suggestions, and to select and crystalize into action those which were felt to be the most viable participatory activities to complement those which has already been planned by the Anniversary Planning Committee. These include:

- (1) CMOS Centres and Chapters to commission speakers to present relevant public lectures. A letter was sent to each Centre/Chapter for reaction to this idea, as well as for suggestions of any other suitable activities in the region represented by the respective Centre/Chapter.
- (2) the publication of a booklet (longer-term initiative) that gives recognition and makes known the nature of these historic contributions.

- (3) a display at Hart House, University of Toronto, as part of a joint celebration to be held there on September 5.

The Toronto Centre has agreed to organize a special lecture series at the Ontario Science Centre, on the past, present, and future meteorological activities in Canada. Other CMOS activities include the publication of the article "150 Years Ago: Founding the Toronto Observatory" by Morley Thomas in *Chinook*.

Kaz Higuchi

Chair, CMOS Working Group for the Sesquicentennial Celebration of Weather Observing in Canada

IN MEMORIAM

We were sad to learn recently of the passing of John Hall, an active member of the Ottawa CMOS chapter and well known to many CMOS members across the country. At the monthly meetings, John was always prepared to ask the difficult questions, ones that hit at the heart of the matter. His background in journalism and in the encyclopedic knowledge of oceanographic and hydrographic activities, both national and international, well qualified him for that role.

John developed his keen interest in ocean science and surveys in the late 70s as a private consultant for the Canada Centre for Inland Waters, where he instilled in all the scientific and technical staff a heightened awareness of the public's need to know the nature and purpose of the work undertaken at the Centre.

Moving to Ottawa in 1980, John first took up the post of Program Officer, Communications Branch for the Department of Fisheries and Oceans (DFO), Ocean Science and Surveys. After a year in Government, he returned to the private sector, revitalizing his communications consulting company, Jayhall Consultants. During this period, John co-authored many reports on the Canadian hydrographic and ocean surveying industries, and tried very hard to establish an independent newsletter - "Oceans of Canada".

In 1986, he assisted DFO with the Ocean Forum in Sidney, B.C., and, as a follow-up, wrote considerable material for DFO's Oceans Task Force. In June 1989, he helped organize a workshop which he entitled "Managing the Future of Canada's Oceans" and which saw representatives of industry, government and university achieve consensus on the marine science challenges for the next decade.

John was a visionary and he saw the critical role that information technology will play in the future economic development of this country. His creation of UPDATA, a database management company dealing primarily with information on the ocean and remote sensing industries capabilities, was a recognition of this vision. The work that John started at UPDATA will be continued by his wife Shireen, who has been very active in the company since its creation, and, in this way, John's vision will live on.

Nelson Freeman

Annual CMOS Congress

The 24th Annual CMOS Congress was held at the Royal Roads Military College, Victoria, May 29 - June 1, 1990. The theme of the Congress was "Climate Variability: Causes and Consequences." A total of 360 registrants participated in the Congress. Besides participants from Canada, there were representatives from China, Denmark, India, New Zealand, Norway, South Korea, U.K., U.S.A. and U.S.S.R. There were 225 oral presentations during 51 sessions and the large number of papers necessitated up to six concurrent sessions. In addition, 17 presentations were made in a poster session.

Dr. D.F.W. Pollard from the Pacific Forestry Centre in Victoria gave a public lecture at the Newcombe Auditorium. His talk was titled "Climate Change: Can the Forest Sector Respond" and was well attended with good response from the audience in terms of questions following the talk.

There were seven plenary speakers with all the registrants in attendance and seven invited speakers for individual sessions. There was increased participation from fisheries oceanographers, chemists and biologists. A breakdown of the number of sessions by discipline is given below (The three plenary sessions are not included in this list).

<u>Discipline</u>	<u>Number of Sessions</u>
Meteorology	15
Physical Oceanography	20
Fisheries Oceanography and Biology	6
Chemistry	4
Hydrology	3

T.S. Murty
Chair, Scientific Committee

NEWS FROM HEADQUARTERS

As this is the middle of summer, CMOS activities may be a bit slower but, as with the weather and the oceans, there is always something going on. Follow-up of decisions from the Victoria Annual General and Council Meetings will occupy much of the time of the first Executive Meeting of the National Executive due to take place this month. One of its tasks will be to set up the Ad-Hoc Committee called for by the Annual General Meeting to make recommendations on the future of the Climatological Bulletin. Members who have any views on this subject may send them to me (CMOS Executive Director, 903-151 Slater Street, Ottawa, Ontario, K1P 5H3). Among other items on the Executive's agenda will be plans for our 25th Annual Congress in Winnipeg for which a call for papers appears in this issue.

Uri Schwarz
Executive Director

Congrès annuel de la SCMO

Le 24^e Congrès a eu lieu au Collège militaire Royal Roads, à Victoria, du 29 mai au 1^{er} juin 1990. Le thème en était: Les variations du climat: causes et conséquences. Un total de 360 personnes se sont enregistrées; en plus des Canadiens, il y avait des représentants de la Chine, du Danemark, de l'Inde, de la Nouvelle-Zélande, de la Norvège, de la Corée du Sud, du Royaume-Uni, des États-Unis et de l'URSS. On a assisté à 225 présentations orales au cours des 51 sessions; le grand nombre de contributions a nécessité la présentation de jusqu'à six sessions simultanées; en plus, 17 présentations furent faites sous forme d'affichage.

D.F.W. Pollard, du Centre forestier du Pacifique, a donné une conférence publique à l'auditorium Newcombe: Le changement climatique: Le secteur forestier peut-il y répondre? L'assistance était nombreuse et a bien réagi par ses questions à la suite de la conférence.

Il y a eu sept causeries principales, tous les participants étant présents et sept conférenciers invités à des sessions particulières. On a noté une plus grande participation des océanographes (pêche), des chimistes et des biologistes. Les détails des sessions se trouvent ci-dessous mais les trois sessions plénières n'y sont pas incluses.

<u>Discipline</u>	<u>Nombre de sessions</u>
Météorologie	15
Océanographie physique	20
Océanographie des pêches et Biologie	6
Chimie	4
Hydrologie	3

T.S. Murty,
Président du Comité scientifique

NOUVELLES DU QUARTIER GÉNÉRAL

Au milieu de l'été les activités de la Société peuvent être un peu plus lentes mais, comme le temps et les océans, il y a toujours de l'action. Le suivi des décisions prises lors de l'Assemblée générale annuelle de Victoria et des réunions du Conseil aura lieu ce mois-ci et sera le principal sujet des discussions à la première réunion du Bureau. L'une des tâches sera de mettre sur pieds le Comité ad-hoc, demandé par l'AGM, qui devra faire des recommandations quant au futur du Bulletin climatologique. Les membres qui auraient des opinions à ce sujet sont priés de me les faire parvenir: Directeur exécutif de la SCMO, 903-151 Slater Street, Ottawa, Ontario, K1P 5H3. Parmi les autres articles au programme du Bureau, on examinera les plans pour notre 25^e Congrès annuel à Winnipeg; une demande de contributions pour des articles fait parti de ce numéro.

Votre directeur exécutif
Uri Schwarz

EDITOR'S COLUMN

The Editor would like to see articles on meetings, global projects, special interest groups or any topic that may be of interest to our membership. Black and white photographs or diagrams are welcomed. Authors who wish to submit by computer disk, please contact the Editor to ascertain the wordprocessing packages that can be accepted.

Items for the Newsletter should be sent to Malcolm Still, Atmospheric Environment Service, 4905 Dufferin Street, Downsview, Ontario M3H 5T4 (Tel: (416) 739-4866). The deadline for next issue is October 1, 1990.

ADVERTISING RATES

Rates are based on black and white camera-ready copy. Sizes (inches) are full page (7.5x9.5), 1/2 page (3.5x9.5) and 1/4 page (3.5x4.5). Other charges apply where typesetting or artwork are required. Distribution per issue is nearly 1000.

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ATMOSPHERE-OCEAN

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CONFERENCES/CONFÉRENCES

United Nations Environmental Programme World Health Organization

The 4th International Conference on "Environmental Contamination" will be held in Barcelona, Spain, October 1-4, 1990, and will deal with the movement of environmental contaminants in air, soil and water. For information, contact Secretariat, CEP Consultants Ltd., 26-28 Albany Street, Edinburgh EH1 3QH, U.K., (Tel: 031-557 2478).

Shanghai Research Institute of Environment

The 3rd International Conference on Atmospheric Sciences and Application to Air Quality (ASAAQ) will be held in Shanghai, China, October 15-19, 1990. Main topic is urban air quality with particular attention to the Pacific Rim. For information: Mr. Yan-Yin Jiang, Secretary-General 3rd ASAAQ, c/o Deputy Director, Shanghai Research Institute of Environment, 508 Qin Zhou Rd., Shanghai, China.

U.S. Global Change Research Program

The conference "Earth Observations & Global Change Decision-Making" is to be held in Washington, D.C., October 23-24, 1990, and is intended to help build a national partnership by facilitating dialogue between scientific communities in global change research and policy. Contact Dr. Robert H. Rogers, Ann Arbor, MI 48107-8618, U.S.A. (Tel: (313) 994-1200, ext. 3382; Fax: (313) 994-0944).

Science and Technology Institute

The workshop "Reliability and Limitations of Greenhouse Effect Models" will be held in Boulder, Colorado, October 29-30, 1990. It will focus on the methodology and models used to predict "greenhouse effect" warming. Attendees will be provided with tools to evaluate these predictions. For information: D. McQuestion, Science and Technology Institute, Boulder, Colorado, (Tel: (804) 865-0332).

CONFERENCES/CONFÉRENCES

Ontario Ministry of the Environment

The 11th Annual Technology Transfer Conference "The Challenges of a New Decade" will be held in Toronto, Ontario, November 19-20, 1990. Progress made on ministry-funded research projects will be presented in five concurrent sessions. For information: 1990 Conference Secretariat (Jacqueline Tait), c/o Congress Canada, (Tel: (416) 860-1772; Fax: (416) 860-0380).

Okhotsk Sea and Cold Ocean Research Association

The 6th International Symposium on Okhotsk Sea and Sea Ice will be held in Mombetsu, Hokkaido, Japan, February 3-5, 1991. There will be an ice-breaking excursion on the ice-breaker "Garinko". The objectives of this annual symposium are to promote the advancement of all ice-related studies in oceanography, meteorology, biology and fisheries, to explore the common aspects between these fields, to review latest developments, and to outline future research directions. The symposium topics will focus on Oceanography and Meteorology of Ice-Covered Waters, Fisheries and Biology of Ice-Covered Waters, Sea Ice Properties and Dynamics, Sea Ice Engineering, and Remote Sensing. Abstracts (200-300 words in English or Japanese) are to be sent for review by November 15, 1990 to Prof. Masaaki Aota, Sea Ice Research Laboratory, Hokkaido University, Minamigaoka 6-4-10, Mombetsu, Hokkaido 094 Japan (Tel: (01582) 3-3722; Fax: (01582) 3-5319). Papers will be due December 20, 1990.

International Association for Wind Engineering

The 8th International Conference on Wind Engineering will be held in London, Ontario, July 8-12, 1991. The conference will focus on wind forces on structures; structure of wind in the boundary layer; climate of extreme winds; action of wind and waves on offshore structures; windstorm disaster reduction; codes/standards for wind loading; suppression of wind-induced vibration; wind tunnel techniques; computational fluid dynamics applications; air infiltration/energy conservation; atmospheric dispersion of pollutants; pedestrian level winds and effects on people; behaviour of glass under wind loading; and snow loading and drifting. Authors are invited to submit 2-page summary papers by October 1, 1990. Acceptance will be known prior to February 1, 1991, and full papers will be required by May 31, 1991. For information, please contact Dr. A.G. Davenport, Director, The Boundary Layer Wind Tunnel Laboratory, University of Western Ontario, London, Ontario, N6A 5B9, Canada (Tel: (519) 661-3338; Fax: (519) 661-3339).

Call for Papers

The 5th International Conference on Precipitation Scavenging and Atmosphere-Surface Exchange Processes will be held in Richland, Washington, July 15-19, 1991. To date, the Conference is being co-sponsored by the Electrical Power Research Institute, the U.S. Department of Energy, and the U.S. Environmental Protection Agency, is financially supported by the Atmospheric Environment Service (Environment Canada) and by Batelle Memorial Institute, and is professionally affiliated with the Canadian Meteorological and Oceanographic Society and the American Meteorological Society.

General areas of emphasis will be measurements and models of scavenging and air-surface exchange processes, and the adequacy of representations of these processes for current and future applications. Podium and poster sessions will be arranged by the conference co-chairs (C. Elderkin, S. Schwartz and G. Slinn) and by members of the Steering Committee: G. Ayers (Australia), D. Baldocchi, L. Barrie, P. Buat-Ménard (France), W. Chan (Canada), J. Dasch, C. Davidson (USA), A. Delaney, R.J. Delmas, J. Durham, D. Ehrlert, R. Gammon, J. Garland, D. Gatz, H.-W. Georgii (FRG), P. Grennfelt (Sweden), D. Gillette, D. Hansen, B. Hicks, R. Jaenicke (FRG), S. Lindberg, P. Liss (UK), D. Möller (DDR), M. Murakami, A. Neftel (Switzerland), J. Pankow, K. Paw U, F. Prodi, H. Pruppacher, L. Radke, R.V. Rama Rao, H. Rodhe, R. Semonin, J. Shinn, J. Shukla (India), J. Slanina (The Netherlands), E. Steinberger (Israel), P. Summers (Canada), X. Tang (PRC), T. Tavares (Brazil), V. Voloshchuk (USSR) and M. Wesely.

One-page abstracts must be received not later than October 15, 1990, by W.G.N. Slinn, MS K6-78, Earth & Environmental Sciences Center, Pacific Northwest Laboratory, P.O. Box 999, Richland, WA 99352 USA (Fax: (509) 376-5368; telex: 15-2874). Several review papers have been invited and a very limited number are solicited. On your abstract, indicate if you would prefer to present your paper in a poster session. Authors will be notified of selections before December 15, 1990; complete papers must be received before April 15, 1991; camera-ready copies of papers, with appended responses to questions and to comments from reviewers and attendees, will be due October 15, 1991.

Information and application forms for travel support (generally unavailable for North American scientists and restricted to graduate students who receive partial support elsewhere) can be obtained from Dr. Slinn or from those members of the Steering Committee whose nations have indicated and who will coordinate requests for travel support within their nations. Requests must be received before October 15, 1990.



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ACCREDITED CONSULTANTS

Entries on the following pages are restricted to CMOS Accredited Consultants. The accreditation process commenced in December, 1986. A complete list of CMOS accredited consultants can be obtained from the CMOS Business Office. Individuals interested in applying for accreditation may contact the CMOS Business Office at the Society's Newmarket address for a copy of the Guidelines and an application form.

As set out in the document "CMOS Guidelines for Accreditation," the criteria are:

- (1) The applicant must possess an appropriate undergraduate degree from a recognized university.
- (2) The applicant must possess at least one of the following types of specialized training:

- (i) post-graduate degree from a recognized university in meteorology or oceanography;
 - (ii) post-graduate degree from a recognized university in the natural or applied sciences or mathematics, specializing in one or more branches of meteorology or oceanography; or
 - (iii) three years of on-the-job meteorological or oceanographic experience.
- (3) Upon completion of the above educational and training requirements, the applicant must have spent at least two years of satisfactory performance, at the working level, in the field of specialization included in this document. This should include at least some consulting experience.

Noel Boston, P.Eng., Ph.D.

CMOS Accredited Consultant

Physical Oceanography, Boundary Layer Meteorology,
Training

The Environment Centre
Suite 200 - 1130 West Pender Street
Vancouver, British Columbia V6E 4A4 Canada
Tel: (604) 681-8828 Fax: (604) 681-6825

David R. Hudak, Ph.D.

CMOS Accredited Consultant

Cloud Physics, Synoptic Meteorology,
Weather Modification

KelResearch Corporation
850-A Alness Street, Suite 9
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ACCREDITED CONSULTANTS

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Downsview, Ontario M3J 2H5 Canada
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Ian J. Miller, M.Sc.

CMOS Accredited Consultant
Marine Meteorology and Climatology, Applied Meteorology
and Climatology, Storms, Waves, Operational Meteorology

MacLaren Plansearch Limited
Suite 701, Purdy's Wharf Tower
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Prof. T.R. Oke, B.Sc., M.A., Ph.D.

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Douw G. Steyn, Ph.D.

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Meso-Scale Meteorology

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Vancouver, British Columbia V6L 3E4 Canada
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Brian Wannamaker

CMOS Accredited Consultant
Remote Sensing, Instrumentation (oceanography),
Physical Oceanography, Sea Ice/Icebergs

Sea Scan
R.R. 3,
Caledon East, Ontario LON 1E0 Canada
Tel: (416) 880-0528

Bassem M. Eid, P.Eng., Ph.D

CMOS Accredited Consultant
Coastal Circulation, Waves/Tides/Surges,
Air-Sea Interaction, Marine Meteorology

MacLaren Plansearch Limited
Suite 701, Purdy's Wharf Tower
1959 Upper Water Street
Halifax, Nova Scotia B3J 3N2 Canada
Tel: (902) 421-3200 Telex: 019-22718

Terry J. Gillespie, Ph.D.

CMOS Accredited Consultant
Agricultural Meteorology & Land Planning,
Agrometeorological Training

51 Applewood Crescent
Guelph, Ontario N1H 6B3 Canada
Tel: (519) 824-4210 Ext 2645 or (519) 824-9504

ACCREDITED CONSULTANTS

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CMOS Accredited Consultant

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Markham, Ontario L3R 4G8 Canada
Tel: (416) 477-4120 Telex: 06-966599(MEP MKHM)

T.W. (Terry) Krauss, Ph.D.

CMOS Accredited Consultant

Cloud Physics, Radar, Weather Modification,
Storms, Research & Development

INTERA Technologies Ltd.
2500, 101-6th Avenue S.W.
Calgary, Alberta T2P 3P4 Canada
Tel: (403) 266-0900

R.B.B. Dickison

CMOS Accredited Consultant

Boundary-Layer Meteorology, Synoptic Meteorology
Agrometeorology, Hydrometeorology, Forest Meteorology

Atlantic Weather & Environmental Consultants Ltd.
112 Bloor Street
Fredericton, New Brunswick E3A 2K4 Canada
Tel: (506) 450-8802

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Hydrometeorology

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Suite 1006, P.O. Box 2041, 20 Eglinton Ave. W.
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Tel: (416) 322-5701 Fax: (416) 322-5706

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Wind Engineering, Climatic Data Management,
Air Pollution Meteorology, Climate Research

Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West
Guelph, Ontario N1K 1B8 Canada
Tel: (519) 823-1311 Fax: (519) 823-1316

John E. Letkeman

CMOS Accredited Consultant

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8501 MoPac Blvd.
Austin, Texas, USA 78720-1088
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Warren McCormick, M.A.Sc., P.Eng

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Ministry of Environment
Plaza 400, 1011 Fourth Avenue
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Andrew H. Gillam, Ph.D.

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Marine Chemistry
Environmental Audit, Assessment and Monitoring

CBR International
Suite 101, 9865 W. Saanich Road
Sidney, British Columbia V8L 3S3 Canada
Tel: (604) 655-1944 Fax: (604) 655-7131

La Société Canadienne de Météorologie et d'Océanographie The Canadian Meteorological and Oceanographic Society

La Société Canadienne de Météorologie et d'Océanographie (SCMO) a pour but de stimuler tous les aspects de la météorologie et de l'océanographie au Canada. Sa constitution date de juin 1977, alors que la Société Canadienne de Météorologie, établie en janvier 1967, a reconnu la croissance et les contributions dues à l'activité de sa section d'océanographie et a changé son nom. Toute personne ou organisation intéressée à la météorologie et/ou à l'océanographie peut en devenir membre. Les treize centres locaux et sections de la Société fournissent aux membres autant de lieux pour discuter et recevoir des conférenciers invités. Les membres qui ont des intérêts particuliers à l'hydrologie, à la pollution de l'air, à l'agriculture, à la météorologie d'exploitation ou à la glace dérivante sont encouragés à joindre des groupes d'intérêts spéciaux au sein de la Société.

La Société organise un Congrès annuel au printemps d'une durée de trois jours où l'on présente et discute des exposés, où l'on distribue des récompenses et où l'on tient la réunion générale annuelle. L'emplacement choisit pour le congrès varie selon le centre qui en est l'hôte. La Société publie trois périodiques, comprenant le Bulletin de nouvelles de la SCMO. Le Bulletin publie des lettres, des avis, des revues de livres et d'autres communications d'intérêt pour les membres. ATMOSPHERE-OCEAN est le journal scientifique trimestriel qui renferme des articles sur tous les aspects de la météorologie et de l'océanographie, de même que des notes, lettres et revues de livres appropriées. Le Bulletin climatologique est un journal qui renferme des articles et des notes d'intérêt sur la climatologie. Il est publié trois fois par année. Le Bulletin de nouvelles de la SCMO est distribué sans frais additionnels à tous les membres.

Les demandes d'adhésion sont approuvées par le bureau d'administration à ses réunions mensuelles. Les demandes d'adhésion et d'abonnement reçues après le 1^{er} octobre sont pour l'année suivante.

Le Conseil de la SCMO pour 1989/90

Président	Mme Nancy Cutler
Vice-Président	Dr. Louis A. Hobson
Trésorier	M. Bruno De Lorenzis
Secrétaire correspondant	M. Howard Kagawa
Secrétaire d'assemblée	M. William Schertzer
Président sortant	Dr. Han-Ru Cho
Conseillers	M. Bevan Lawson M. Richard Leduc Dr. Kim-Tai Tee
Directeur exécutif	M. Uri Schwarz

(903-151 Slater Street, Ottawa, Ontario, K1P 5H3)
(Tél: (613) 990-0300)

The Canadian Meteorological and Oceanographic Society (CMOS) exists to advance all aspects of meteorology and oceanography in Canada. It assumed its present constitution in June 1977. This development recognized the growth and contributions of an active Oceanographic section within the parent Canadian Meteorological Society established in 1967. Membership in the Society is open to individuals and organizations with interests in the fields of meteorology and/or oceanography. Through its thirteen local Centres and Chapters, the Society provides a forum for members to participate in discussions and hear guest speakers. Members with special interests in the fields of hydrology, air pollution, agriculture, operational meteorology or floating ice are encouraged to join Special Interest Groups within the Society.

The Society sponsors an annual Congress each spring, usually lasting three days, where papers are presented and discussed, various awards are given, and the yearly business meeting is held. The location of the Congress varies, with the local Centres serving as hosts. The Society publishes three periodicals, including the CMOS Newsletter. The Newsletter carries correspondence, notices, book reviews and other items of general interest to members. ATMOSPHERE-OCEAN is a quarterly scientific journal containing articles on all aspects of meteorology and oceanography as well as relevant notes, correspondence, and book reviews. The Climatological Bulletin contains articles and notes of particular interest to the field of climatology and is published three times a year. The Newsletter is distributed free to all members.

New members are accepted into the Society by the National Executive at their monthly meetings. Applications and subscriptions received after October 1 are for the following year.

CMOS 1989/90 Council

President	Mrs. Nancy Cutler
Vice-President	Dr. Louis A. Hobson
Treasurer	Mr. Bruno De Lorenzis
Corresponding Secretary	Mr. Howard Kagawa
Recording Secretary	Mr. William Schertzer
Past President	Dr. Han-Ru Cho
Councillors-at-large	Mr. Bevan Lawson Mr. Richard Leduc Dr. Kim-Tai Tee
Executive Director	Mr. Uri Schwarz

(903-151 Slater Street, Ottawa, Ontario, K1P 5H3)
(Tel: (613) 990-0300)

1990 MEMBERSHIP APPLICATION FORM - DEMANDE D'ADHÉSION 1990

(Please print in block letters - Lettres moulées s.v.p.)

Title/Titre Dr _____ Mr _____ Mrs _____ Miss _____ Ms _____
M _____ Mme _____ Mlle _____

MEMBERSHIP CATEGORY - CATÉGORIE DE MEMBRE

ANNUAL FEES - COTISATION ANNUELLES

(Please check one - Cochez un s.v.p.)

Name/Nom _____

Address/Adresse _____

Regular ☐ \$30.00
Régulier

Student ☐ \$20.00
Étudiant

Telephone/Téléphone res./maison _____ bus./travail _____

Occupation/Emploi _____

Corporate ☐ \$150.00 (minimum)
Corporation

(for records only: if student, indicate institution and year studies will be completed)

(pour dossiers seulement: l'étudiant doit inscrire le nom de son institution et l'année où il finira ses études)

Sustaining ☐ \$125.00 (minimum)
Soutien

PUBLICATION SUBSCRIPTIONS - ABONNEMENT AUX PERIODIQUES ANNUAL RATES -ABONNEMENTS ANNUELS

Members Non-Members Institutions

Members Non-Members Institutions

\$20.00	\$30.00	\$55.00	ATMOSPHERE-OCEAN <input type="checkbox"/>	ATMOSPHERE-OCEAN	\$20.00	\$30.00	\$55.00
\$12.00	\$15.00	\$20.00	Climatological Bulletin <input type="checkbox"/>	Bulletin climatologique	\$12.00	\$15.00	\$20.00
\$ 0.00	\$15.00	\$15.00	Annual Congress Program & Abstracts <input type="checkbox"/>	Congrès Annuel Programme et Résumés	\$ 0.00	\$15.00	\$15.00

Note: Students receive one Society publication in their Annual Fee and must indicate free publication desired. All regular Society publications are sent to Corporate and Sustaining Members.

Note: Les membres étudiants reçoivent une des publications SCMO et doivent indiquer la publication gratuite désirée. Tous les périodiques sont envoyés aux membres corporatifs et soutiens.

PRIMARY FIELD OF INTEREST - SPHERE D'INTÉRÊT PRINCIPAL

Meteorology ☐
Météorologie

Oceanography ☐
Océanographie

SPECIAL INTEREST GROUP - GROUPE D'INTÉRÊT SPÉCIAL

(Indicate group if interested - Indiquez si vous avez des intérêts dans une groupe)

Hydrology ☐
Hydrologie

Air Pollution ☐
Pollution de l'air

Agriculture & Forest ☐
Agricole et Forêt

Operational Meteorology ☐
Météorologie d'exploitation

Floating Ice ☐
Glace dérivante

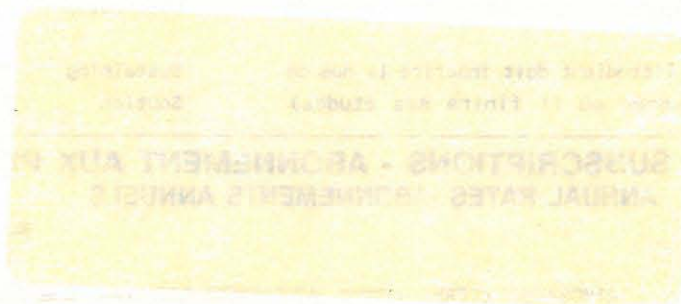
Other (specify) _____ ☐
Autre (stipulez) _____

AUGUST/AOÛT

Vol 18 No.4

See over/au verso

CMOS-SCMO
P.O. Box/C.P. 334
Newmarket, Ontario.
L3Y 4X7
Canada



Please enroll me as a member of the Society. I attach a cheque for \$ _____ payable to the Canadian Meteorological and Oceanographic Society for the membership fee and/or publication subscriptions. I also include a tax-deductible donation of \$ _____ for (check one):

☐

The Society's Development Fund

☐

Other (specify) _____

Date

If applying for student membership, please obtain signature of one of your professors.

Date

Mail completed form to CMOS at the address above.

Je désire devenir membre de la Société. J'inclus un chèque au montant de \$ _____ payable à la Société Canadienne de Météorologie et d'Océanographie pour la cotisation de membre et/ou des abonnements aux périodiques. J'inclus aussi un don déductible d'impôts de \$ _____ pour (indiquez):

☐

Le fonds de développement de la Société

☐

Autre (stipulez) _____

Signature

Si vous désirez devenir membre-étudiant, veuillez obtenir la signature d'un de vos professeurs.

Signature

Faire parvenir à la SCMO la demande d'adhésion complétée à l'adresse au dessus.