



Canadian Meteorological
and Oceanographic
Society

La Société Canadienne
de Météorologie et
d'Océanographie

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

DECEMBER/DÉCEMBRE 1989 VOL. 17 NO. 6

NEWS FROM CMOS HEADQUARTERS

There is important news concerning the re-organization of CMOS publications. The text of the decision made by the CMOS Council (October 30, 1989) is reproduced below.

I am also glad to announce that the Council has approved the appointment of Dr. Jim Young, our Past President, to fill the important position of Director of CMOS Publications.

Best wishes for the holiday season from your Executive Director.

Uri Schwarz

REORGANIZATION OF CMOS PUBLICATIONS

During the 1989 Annual General Meeting, a resolution was introduced authorizing the National Executive to reorganize CMOS publications in consultation with editors and the Council. In preparing this plan, the National Executive relied on R.E. Munn's report "Review of the Publications of the CMOS", prepared with a NSERC grant. The report was discussed during the Executive meetings held in August and September, 1989. In addition, these discussions were aided by input from all present and past editors (Bill Crawford, Howard Freeland, Gordon McBean, Alec Paul, Roger Daly and Hans Van Leeuwen).

From these discussions, a consensus view on the present state of CMOS publications has emerged:

- a) For its size, CMOS cannot successfully support its present array of publications, and these publications do not serve particularly well colleagues on the "operational" side of our profession.

NOUVELLES DU DIRECTEUR EXÉCUTIF

Il s'est passé d'importants développements concernant les publications de la SCMO. Le texte de la décision prise par le Conseil (le 30 octobre, 1989) est reproduit ici-bas.

Je suis également heureux d'annoncer que le Conseil a approuvé la nomination du docteur Jim Young, notre président sortant, pour remplir ce poste de directeur des publications de la SCMO.

Je profite de l'occasion pour vous souhaiter "Joyeux Noël et Bonne et Heureuse Année".

Votre directeur exécutif,
Uri Schwarz

RÉORGANIZATION DES PUBLICATIONS

À l'Assemblée générale annuelle de 1989, une résolution fut introduite autorisant l'Exécutif national à réorganiser les publications de la SCMO en consultation avec les éditeurs et le Conseil. En préparant le plan, l'Exécutif national s'est inspiré du rapport intitulé "Review of the Publications of the CMOS", préparé à l'aide d'une subvention du CRSNG. Le rapport fut discuté durant les réunions de l'Exécutif tenues en août et en septembre, 1989. Ces discussions ont été de plus enrichies par l'information fournie par tous les éditeurs présents et passés (Bill Crawford, Howard Freeland, Gordon McBean, Alec Paul, Roger Daly and Hans Van Leeuwen). De ces discussions s'est dégagé une constatation unanime de l'état des publications de la SCMO:

- a) À cause de sa dimension, la SCMO ne peut supporter le présent éventail de ses publications, et, de plus, ces publications ne rendent pas particulièrement service à nos collègues du côté opérationnel de notre profession.

- b) Atmosphere-Ocean (A-O) is now a well-established refereed journal. Efforts should be made to increase its readership and circulation. Publishing six issues a year and including articles on climate and climate change are a few possibilities.
- c) Climatological Bulletin (CB) publishes good papers but lacks sufficient focus, contributors and readers. Many of the papers published in CB are suitable for publication in A-O. Other papers of general interest cannot reach their potential readers because of the small number of subscribers. It is operating at a small deficit.
- d) Chinook (CH) is intended to serve the "general public." It is a well put-together publication, but it has only a small number of subscribers and has been losing subscribers steadily. It is operating at a substantial deficit. Similar publications in other countries (e.g., "Weather" published by the Royal Meteorological Society) are experiencing the same kind of problems. While there appears to be broad interest in atmosphere and ocean sciences, it seems unlikely that a dedicated publication would have much market penetration. CMOS is committed to the service of public interest, but other avenues must be explored to provide this service.
- e) The Newsletter serves a very useful and necessary role. It is the only publication reaching all members of the Society and should contain articles of general interest and of interest to operational members of the Society, perhaps somewhat similar to the AMS Bulletin or CAP's "Physics in Canada".
- It was therefore agreed:
- a) that Climatological Bulletin be discontinued after the completion of the 1990 Volume (Vol. 24). Research articles in the area of climate and climate change will be published in Atmosphere-Ocean instead;
- b) that Chinook be discontinued at the end of 1989 volume (Vol. 11);
- c) that the Newsletter be remodelled (new appearance and new title) during 1990 into a magazine containing technical articles and columns of general interest in addition to Society news. An editorial board will be established; and
- d) that a publication manager be appointed to lead and supervise the reorganization and to explore the possibility of publishing articles in newspapers, trade and sports journals, airline publications, etc. The position of publication manager will be reviewed by Council in two years' time.
- b) Atmosphère-Océan (A-O) est un journal bien établi. On doit faire des efforts pour augmenter le nombre de lecteurs et sa distribution. Parmi les possibilités étudiées, il y a la publication de six numéros par année et l'inclusion d'articles sur le climat et sur le changement de climat.
- c) Le Bulletin climatologique (BC) publie de bons articles mais manque de centre d'intérêt, de collaborateurs et de lecteurs. Plusieurs des articles publiés dans le BC pourraient l'être dans l'A-O. Plusieurs autres articles d'intérêt général ne peuvent rejoindre les lecteurs potentiels à cause du petit nombre d'abonnés. Le BC opère avec un léger déficit.
- d) Chinook (CH) est destiné au public en général. C'est une bonne publication mais elle a une nombre restreint d'abonnés et perd ceux-ci une façon constante. CH opère avec un déficit substantiel. D'autres publications dans d'autres pays (par exemple "Weather", publié par la Société royale de météorologie) vivent le même genre de problèmes. Bien qu'il semble y exister un grand intérêt pour les sciences de l'atmosphère et de l'océan, il semble peu probable qu'une telle publication aura un grande marché. Le but de la SCMO est de servir l'intérêt public, mais d'autres possibilités doivent être explorées pour offrir ce service.
- e) La publication Nouvelles rend un rôle très utile et essentiel. C'est la seule publication qui rejoint tous les membres de la Société et devrait contenir des articles d'intérêt général et d'intérêt aux membres du côté opérationnel de la Société, semblables à ceux de l'"AMS Bulletin", "Physics in Canada" de CAP's.

Il fut donc convenu:

- a) que le Bulletin climatologique serait discontinué après la dernière publication du volume 24, 1990. Les articles de recherche dans les domaines du climat et du changement de climat seront par contre publiés dans la publication Atmosphère-Océan;
- b) que Chinook serait discontinué à la fin de 1989 avec le volume 11;
- c) que la publication Nouvelles soit modifiée (son apparence et son titre seront changés) au cours de l'année 1990 en une revue contenant des articles techniques avec des colonnes d'intérêt général tout en publiant en plus les nouvelles de la Société. Un comité éditorial sera établi;
- d) qu'un gestionnaire des publications soit nommé pour mener et superviser la réorganisation et explorer la possibilité de publier des articles dans les journaux, les magazines de commerce et de sports, les publications des compagnies aériennes, etc. La position du gestionnaire des publications sera révisée par le Conseil dans deux ans.

HOMMAGE A ALCIDE OUELLET

Décédé du cancer le 29 octobre, à l'âge de 65 ans, le météorologue Alcide Ouellet a fait la pluie et le beau temps durant 25 ans à l'antenne montréalaise de Radio-Canada. Originaire de La Pocatière, au Québec, Alcide avait entrepris sa carrière au Bureau météorologique de Dorval, en 1951. Il était le Fernand Seguin de la météo. Son oeuvre de vulgarisateur a d'ailleurs été reconnue par la Société canadienne de météorologie et d'océanographie. Il avait quitté Environnement Canada en 1981.

Voici des témoignages provenant du personnel de la Direction générale régionale de la météo, à Saint-Laurent. Recueillis au lendemain de son décès, ils renforcent ce que les médias ont publié et diffusé à son sujet.

"Alcide Ouellet a été une figure de proue au Canada français. Nous lui rendons hommage pour son oeuvre de pionnier au plan de la francisation et de la vulgarisation de la météo." Les météorologistes du Centre météorologique du Québec.

"C'était un être très humain et très humble. S'il était toujours prêt à aider les jeunes à faire carrière en météo, il n'en oubliait pas les autres pour autant. Sa participation à Centraide en a largement témoigné." Jean-Guy Cantin, chef de la Formation des francophones.

"Il avait cette érudition classique qui donnait une couleur particulière à sa façon de présenter les prévisions et de parler du temps." Jacques Vanier, chef du Centre météorologique du Québec.

"Cet homme nous a fait faire des pas de géant quant à la promotion de la météo auprès du public. Il projetait également l'image d'un Québécois très fier de sa langue." Pierre Ducharme, chef des Services météorologiques.

"Alcide était honnête et fiable. Il était très réceptif aux idées et aux suggestions, quelle qu'en était la provenance. Jovial, toujours à l'étoute, Alcide était la bonté même." Roger Tremblay, chef des télécommunications.

Guy O'Bomsawin, Environnement Canada

EDITOR'S COLUMN

The Editor would like to see articles on meetings, global projects, special interest groups or any topic that would be of interest to our membership. Black and white photographs may be submitted along with the article. If you wish to submit items, please send to Malcolm Still, Atmospheric Environment Service, 4905 Dufferin Street, Downsview, Ontario. M3H 5T4 (Tel: (416) 739-4866). The deadline for the February issue is February 1, 1990.

NEW CMOS MEMBERS

<u>NAME</u>	<u>CENTRE</u>
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The following new members were approved October 30, 1989:

Dr. Ann K. Masse (Regular)	Toronto
Mr. Eric Taylor (Regular)	Vancouver
Dr. David M. Ludlum (Regular)	United States
Mr. Gordon J. Douglas (Student)	Toronto
Mr. M. Crowe (Student)	Toronto
Dr. Wanmin Gong (Regular)	Toronto
Dr. Ray Cranston (Regular)	Halifax
Mr. Mervyn Davies (Regular)	Edmonton
Mr. Brian D. Marshall (Student)	Toronto
Mr. Wade Sandilands (Student)	Toronto

The following new members were approved November 24, 1989:

Mr. Patrick B. Timko (Student)	Edmonton
Mr. Reid V. Dexter (Regular)	Halifax
M. Christian Blanchette (Student)	Toronto
Mr. Roy Hourston (Student)	Vancouver
M. Gordon Walsh (Regular)	Rimouski
M. Daniel Lavalee (Student)	Rimouski
Dr. Martin Castonguay (Regular)	Rimouski
M. Stephane Cote (Student)	Rimouski
Dr. Alain Vezina (Regular)	Rimouski

WORKSHOP

Nova Scotia Climate Advisory Committee
Agriculture Canada

Nova Scotia Dept. of Agriculture and Marketing
Atmospheric Environment Service

You are invited to attend a workshop entitled "The Application of Climate and Weather Information to the Farm" which will take place on the campus of the Nova Scotia Agricultural College on January 25, 1990. The workshop will focus on such topics as growing season enhancement, implications of climate change for agriculture in the Atlantic region, heat units for corn production in the maritimes, land rating for horticultural crops, weather variability on crop yields and future techniques in yield modelling.

The registration fee is \$5.00 before January 5, 1990, and \$15.00 thereafter. For more information, please contact:

Robert Gordon
Nova Scotia Dept. of Agriculture and Marketing
P.O. Box 550
Truro, Nova Scotia, B2N 5E3
(Tel: (902) 895-1571)

ARCHIVING OF SCIENTIFIC PERIODICALS

Many of us have accumulated, or are in the process of accumulating, quite a library of scientific periodicals. Meteorologists and oceanographers have four CMOS periodicals for reading and study needs. Many of us belong to other societies and receive more periodicals, and still others purchase more subscriptions and/or buy from newsstands. However advantageous and joyous to have so many periodicals around, their archiving and retrieval, when needed, can become a problem.

Many scientists avoid the problem of what to do with periodicals by not getting any, that is by not belonging to a society or by not purchasing any. A few meteorologists, I have observed with dismay, immediately trash an issue a few minutes after taking it out of its wrapper and examining it. But many of us end up with drawers full and/or with stacks to be read, near our favourite chairs. And, of course, when the inevitable cleanup comes they go to the garage or basement in boxes, perhaps never to see the light of day again. I have used both the drawer and pile methods. However, a number of years ago I discovered the best way of archiving periodicals was to obtain cardboard wrappers ("Magafiles") into which six to a dozen issues can be placed. These can be labelled on the spine and after storing on the shelves, in theory at least, you can find any specific issue in a few moments.

And then comes the day that many of us have reached, especially if one lives near a library, when the question arises as to whether or not the collection should be maintained. If disposal is called for, too many have chosen the garbage man route. Others manage to abandon boxes of periodicals when moving. What to do with periodicals is not an uncommon subject of conversation amongst retired meteorologists!

I have been conducting "Operation Disposal" for a few years meeting with limited success. Sets of periodicals have been offered to nearby Ontario universities - three came back with requests, others declined the offer. One advantage in giving to universities is that some have the donation evaluated and offer charitable gift receipts. Does your office or local library need a set of periodicals you are disposing of? And then there are always young meteorologists who would like to augment their own private collections. Should anyone be reading this who might be interested in obtaining some of my remaining collection, please contact me at AES, Downsview (Tel: (416) 739-4829).

One collection I do not plan to dispose of, however, is my collection of CMOS periodicals. As Archivist I claim first right to donate my set to the Society archives. Sorry retired friends - I thought of it first.

Morley Thomas

YOUTH SCIENCE FOUNDATION

28th Annual Canada-Wide Science Fair

On page 4 of the last CMOS Newsletter (Vol. 17 No. 5) the winners of this Fair were mentioned. We now have more on their actual projects and excerpts are printed. The four students attend École Secondaire Algonquin in North Bay.

The Total Vertical Column Sampler

- Pierre Hotte and Joe Nimens

Existing vertical haul plankton nets suffer from the two disadvantages: a rope and bridle in front of the net mouth tends to scare off the various creatures before they enter the net ("avoidance"), and the net does not sample the bottom metre or two.

The fully telemetered "Total Vertical Column Sampler" is an attempt to counter these two problems. The net catches creatures on its way down thereby minimizing the "avoidance" problem. A sensor indicates when the bottom has been reached and an automatic mechanism releases the draw curtain once the weight is relieved from the tow line. A further sensor indicates successful curtain closure prior to hauling the net back up to the surface.

Preliminary testing through the ice proved very successful as many bottom dwellers (*Mysis relicta*) were captured. It will not be possible to test "avoidance" improvements until ice-out allows multiple samples at different locations.

Fine Tuning Water Quality Predictions using Zooplankton Populations

- Claude Martel and Richard Marleau

The purpose of this project was to find a method of differentiating the water quality between 4 major basins in Trout Lake and to collect a database for future reference. Each week water samples were taken for phosphorous and chlorophyll-A readings, and zooplankton samples were taken for herbivorous species population estimates.

The conclusions reached were:

1. Phosphorous readings should be taken at regular intervals to estimate better the water quality of Trout Lake.
2. Phosphorous and chlorophyll-A analyses were unable to be used to differentiate the basin-to-basin water quality in Trout Lake.
3. Diatomid populations were able to be used to differentiate the basin-to-basin water quality.

CALL FOR PAPERS

Special Climate/Hydrology Session

24th Annual CMOS Congress

The 24th Annual Congress of the Canadian Meteorological and Oceanographic Society (CMOS) will be held from May 28 to June 1, 1990, at the Royal Roads Military College, Victoria, B.C. The general theme of the Congress is Climate Variability: Causes and Consequences.

Climate/Hydrology Session:

On May 31st, the Special Interest Group in Hydrology (HYSIG) will be hosting a special session on climate and hydrology. Specific topics of interest include:

- interannual variability in precipitation, runoff and lake levels;
- variability in the hydrological cycle;
- climate change and its impact on hydrology and water resources;
- hydrometeorology and hydroclimatology; and
- effects of land surface processes on the climate

Deadline for Submissions:

Abstracts for papers to be included in the special climate/hydrology session must reach the chairman of the Scientific Committee, Dr. Tad Murty, no later than February 1, 1990. A copy of the abstract should also be forwarded to Rick Lawford. In accordance with the Program Committee requirements, there will be a \$25.00 penalty for late submissions.

Contacts for additional information:

Regarding the special session on climate and hydrology:

Mr. Rick Lawford, Chief, Hydrometeorological Research Division, 11 Innovation Boulevard, Saskatoon, Saskatchewan, S7N 3H5 (Tel: (306) 975-5775)

Dr. Geoff Kite, Research Scientist, Hydrometeorological Research Division, 11 Innovation Boulevard, Saskatoon, Saskatchewan, S7N 3H5 (Tel: (306) 975-5687)

Regarding the CMOS Congress facilities:

Dr. Rick Marsden, Department of Physics, Royal Roads Military College, Victoria, British Columbia, V8S 1B0

Regarding the scientific program in general:

Dr. Tad Murty, Institute of Ocean Sciences, P.O. Box 6000, Sidney, British Columbia, V8L 4B2

DEMANDE DE COMMUNICATIONS

Séance spéciale sur le climat et l'hydrologie

24e Congrès annuel de la SCMO

Le 24e Congrès annuel de la Société canadienne de météorologie et d'océanographie (SCMO) aura lieu du 28 mai au 1 juin, 1990, au Royal Roads Military College, à Victoria (C-B). Le thème général du congrès est le suivant - Variabilité du climat: causes et conséquences.

Scéance sur le climat et l'hydrologie:

Le 31 mai, le Groupe d'intérêt spécial en hydrologie tiendra une scéance spéciale sur le climat et l'hydrologie. Parmi les sujets d'intérêt spécial, on peut citer:

- les variabilités interannuelles de précipitation, de ruissellement et de niveaux des lacs;
- les variabilités du cycle hydrologique;
- les changements climatiques et leur impact sur l'hydrologie et les ressources en eau;
- l'hydrométéorologie et l'hydroclimatologie;
- les effets sur le climat des processus survenant à la surface des terres.

Date limite de présentation des résumés:

Les résumés des communications devant être présentées au cours de la scéance spéciale sur le climat et l'hydrologie doivent être recus par le président du comité scientifique, M. Tad Murty, au plus tard le 1^e fevrier, 1990. Prière de faire parvenir un exemplaire du résumé à Rick Lawford. Conformément aux exigences du comité du programme, les soumissions tardives feront l'objet d'une pénalité de 25\$.

Pour plus de renseignements:

Au sujet de la scéance spéciale sur le climat et l'hydrologie:

M. Rick Lawford, chef, division de la recherche hydrométéorologique, 11, boulevard Innovation, Saskatoon (Saskatchewan) S7N 3H5 (Tél: (306) 975-5775)

M. Geoff Kite, chercheur scientifique, division de la recherche hydrométéorologique, 11, boulevard Innovation, Saskatoon (Saskatchewan) S7N 3H5 (Tél: (306) 975-5687)

Au sujet des installations du congrès de la SCMO:

M. Rick Marsden, département de physique, Royal Roads Military College, Victoria (C-B) V8S 1B0

Au sujet du programme scientifique en général:

M. Tad Murty, Institut des sciences de la mer, B.P. 6000, Sidney (C-B) V8L 4B2

POSITIONS AVAILABLE

Chemistry and Dynamics of the Troposphere
Atmospheric Modelling and Satellite Data Retrieval

A major initiative in the area of measuring and modelling the chemistry and dynamics of the troposphere (CDT) is beginning as a collaborative venture between groups at York University and the University of Toronto.

The purpose of this initiative is to increase our knowledge of the interaction of chemistry and dynamics in the atmosphere with a view to understanding anthropogenic influences on the atmosphere and biosphere. A second purpose is to train young scientists in this high priority field of research. An integral part of this project is numerical modelling and the assimilation of data, especially satellite data, into models.

Four major programs are included as part of this effort:

- o Three-Dimensional Global Chemical Modelling
- o Retrieval and Assimilation of Satellite Data into Models
- o Three-Dimensional Regional Modelling
- o Modelling of Small-Scale Processes

under the guidance of Professors G.P. Klaassen and J.C. McConnell at York University, and Professors H.-R. Cho and J.R. Drummond at the University of Toronto.

The CDT project is funded by a three-year grant from the Natural Sciences Engineering Research Council of Canada. The computing will be carried out on the CRAY X-MP at the Ontario Centre for Large-Scale Computing with support from local computers and graphics sub-systems on both campuses.

A number of positions are available for researchers and programmers to assist with this new initiative. Candidates for research positions should possess a Ph.D. degree in a relevant field and should be familiar with developing and running large codes on vector processors. Candidates for programming positions with lower qualifications and relevant experience are also required. Opportunities also exist for graduate students at all levels.

Candidates should apply to Professor J.C. McConnell, CDT Project, Department of Earth and Atmospheric Science, York University, 4700 Keele Street, North York, Ontario, Canada, M3J 1P3, from whom further details may be obtained (Tel: (416) 736-5245; Fax: (416) 736-5516). Candidates should enclose a CV, reprints of relevant published articles (if available) and a statement of salary expectations, and arrange for three letters of reference to be supplied. In accordance with Canadian Immigration requirements, preference will be given to Canadian citizens and permanent residents.

HYSIG NEWSLETTER

The Hydrology Special Interest Group (HYSIG) has issued a newsletter (November 1989) and, if you are a HYSIG member, you should receive your copy by the time you read this notice. If not, please contact:

Mr. Ron Hopkinson
Atmospheric Environment Service
P.O. Box 4800
Regina, Saskatchewan S4P 3Y4
Tel: (306) 780-5739

Even if you are not a HYSIG member but would like to receive a copy of this newsletter, a few extra copies are available on a first-come first-serve basis.

CMOS PUBLICATION

Volume 27 No 3 September 1989 Septembre

ATMOSPHERE-OCEAN

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ACCREDITED CONSULTANTS

The list of accredited consultants as of August 15, 1989, is:

Dr. Noel Boston	Mr. Michael F. Lepage
Dr. Anthony J. Bowen	Mr. John Letkeman
Dr. Alex Chisholm	Dr. Tom B. Low
Dr. Han-Ru Cho	Dr. Edward P. Lozowski
Mr. Robert B.B. Dickison	Dr. John Maybank
Dr. Bassen M. Eid	Dr. P.E. Merilees
Dr. Gloria L. Ellenton	Mr. Warren J. McCormick
Dr. Andrew Gillam	Mr. Ian J. Miller
Dr. Terry J. Gillespie	Dr. T.R. Oke
Mr. Keith C. Heidorn	Mr. George W. Robertson
Dr. James A. Helbig	Dr. James R. Salmon
Mr. Mory Hirt	Dr. Stanley R. Shewchuk
Dr. David R. Hudak	Dr. D.G. Steyn
Mr. Richard J. Kolomeychuk	Mr. Brian W. Wannamaker
Dr. Terence W. Krauss	Dr. Boris Weisman
Mrs. Susan K. Lally	

ADVERTISING RATES

Rates 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 1000.

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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 Executive Director. Individuals interested in applying for accreditation may contact the CMOS Executive Director at the Society's Ottawa 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
Downsview, Ontario M3J 2H5 Canada
Tel: (416) 736-0521

ACCREDITED CONSULTANTS

Susan K. Lally

CMOS Accredited Consultant

General Meteorology, Marine Meteorology

Oceanroutes Canada Inc.

Swire House, 271 Brownlow Avenue

Dartmouth, Nova Scotia B3B 1W6 Canada

Tel: (902) 468-3008

Fax: (902) 468-3009

Tom B. Low, Ph.D., P.Eng.

CMOS Accredited Consultant

Research and Development Meteorology

KelResearch Corporation

850-A Alness Street, Suite 9

Downsview, Ontario M3J 2H5 Canada

Tel: (416) 736-0521

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

1959 Upper Water Street

Halifax, Nova Scotia B3J 3N2 Canada

Tel: (902) 421-3200

Telex: 019-22718

Prof. T.R. Oke, B.Sc., M.A., Ph.D.

CMOS Accredited Consultant

Urban Meteorology & Climatology

Boundary-Layer, Applied Climatology

3776 West 39th Avenue

Vancouver, British Columbia V6N 3A7 Canada

Tel: (604) 228-2900

Res: (604) 263-7394

Douw G. Steyn, Ph.D.

CMOS Accredited Consultant

Air Pollution Meteorology, Boundary Layer Meteorology
Meso-Scale Meteorology

3650 Carnarvon Street

Vancouver, British Columbia V6L 3E4 Canada

Tel: (604) 228-6407

Home: (604) 733-1255

Brian Wannamaker

CMOS Accredited Consultant

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

Sea Scan

R.R. 3,

Caledon East, Ontario L0N 1E0 Canada

Tel: (416) 880-0528

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

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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

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Applied, Aviation & Operational Meteorology,
Research & Development, General Project Management

World Weatherwatch
7050 Woodbine Avenue, Suite 100
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

Richard J. Kolomeychuk, M.Sc.

CMOS Accredited Consultant

Applied Meteorology and Climatology
Hydrometeorology

The Environmental Applications Group Ltd.
Suite 1006, P.O. Box 2041, 20 Eglinton Ave. W.
Toronto, Ontario M4R 1K8
Tel: (416) 322-5701 Fax: (416) 322-5706

Mike Lepage, M.S.

CMOS Accredited Consultant

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 (ACM)

CMOS Accredited Consultant

Air Quality Meteorology

Suncor Inc.
Oil Sands Group
P.O. Box 4001
Fort McMurray, Alberta T9H 3E3 Canada

Warren McCormick, M.A.Sc., P.Eng.

CMOS Accredited Consultant

Air Pollution Modelling
Climatological Data Management

Concord Scientific Corporation
2 Tippet Road
Toronto, Ontario M3H 2V2 Canada
Tel: (416) 630-6331 Fax: (416) 630-0506

Andrew H. Gillam, Ph.D.

CMOS Accredited Consultant

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 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 choisi 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	Dr. Han-Ru Cho
Vice-Président	Mme Nancy Cutler
Trésorier	M. Bruno De Lorenzis
Secrétaire correspondant	M. Howard Kagawa
Secrétaire d'assemblée	M. William Schertzer
Président sortant	Dr. Jim Young
Conseillers	M. S.A. Akenhead M. W.D. Hume Dr. R.F. Marsden
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	Dr. Han-Ru Cho
Vice-President	Mrs. Nancy Cutler
Treasurer	Mr. Bruno De Lorenzis
Corresponding Secretary	Mr. Howard Kagawa
Recording Secretary	Mr. William Schertzer
Past President	Dr. Jim Young
Councillors-at-large	Mr. S.A. Akenhead Mr. W.D. Hume Dr. R.F. Marsden
Executive Director	Mr. Uri Schwarz
(903-151 Slater Street, Ottawa, Ontario, K1P 5H3)	
(Tel: (613) 990-0300)	

1990 MEMBERSHIP APPLICATION FORM - DEMANDE D'ADHESION 1990

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

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

Name/Nom _____

Address/Adresse _____

MEMBERSHIP CATEGORY - CATÉGORIE DE MEMBRE
ANNUAL FEES - COTISATION ANNUELLES
(Please check one - Cochez un s.v.p.)

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

Occupation/Emploi _____
(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)

Regular Régulier	<input type="checkbox"/>	\$30.00
Student Étudiant	<input type="checkbox"/>	\$20.00
Corporate Corporation	<input type="checkbox"/>	\$150.00 (minimum)
Sustaining Soutien	<input type="checkbox"/>	\$125.00 (minimum)

**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
\$12.00	\$15.00	\$20.00	Climatological Bulletin	<input type="checkbox"/>	Bulletin climatologique	\$12.00	\$15.00
\$ 0.00	\$15.00	\$15.00	Annual Congress Program & Abstracts	<input type="checkbox"/>	Congrès Annuel Programme et Résumés	\$ 0.00	\$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 <input type="checkbox"/>	Air Pollution Pollution de l'air <input type="checkbox"/>	Agriculture & Forest Agricole et Forêt <input type="checkbox"/>
Operational Meteorology Météorologie d'exploitation <input type="checkbox"/>	Floating Ice Glace dérivante <input type="checkbox"/>	Other (specify) _____ Autre (stipulez) _____ <input type="checkbox"/>

DECEMBER/DÉCEMBRE Vol 17 No.6

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)

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)

Date

Signature

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

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

Date

Signature

Mail completed form to CMOS at the address above.

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