GENERAL AND REGISTRATION INFORMATION

2. HOLIDAY INN, 150 King St. East, Hamilton, Ontario, Canada L8N 1B2
   Telephone (416) 828-3400
   Special McMaster group rate: $41.00 Single
   $42.00 double
   Block reservations will be held until May 7th.

3. Residence Inn—Commons Blvd., McMaster University Campus,
   $14.00 per person Double occupancy
   $15.00 per person Single occupancy
   This fee includes parking, maid service, each day. These rooms will be reserved until 5:00 p.m.
   on the last day of the conference. A block of rooms has been reserved for all days of the conference.

For accommodation in Residence please write to:
Mrs. J. Gowland, Room 101B, Commons Blvd.,
McMaster University, L8S 4K1. State the name of the conference, and the length of stay desired, and
whether single or double and they will look after your request.

4. MOUNT VIEW MOTEL, 1870 Main St. W.,
   Hamilton, Ontario, Canada L8S 1H7.
   Telephone (416) 822-0007
   Special McMaster group rate: $22-24 per double.
   Rooms will be held until May 7th.
   Be sure to state you are attending the NAMRC-X Conference at McMaster University when making your reservation.

PLEASE MAKE YOUR OWN RESERVATION.

SHUTTLE BUS SERVICE

A bus service will be arranged to bring the partic-
ipants from the hotel to the conference. The pickup
point will be at the Contingent Hotel and the
Mountain View Motel for going out and going to
the Ewart Angus Centre.

8:00 a.m.—Monday, May 24th
9:00 a.m.—Afternoon sessions and an airborne service is
8:00 a.m.—Tuesday, May 25th
6:15 p.m.—Tuesday, May 25th
PARKING

For those who drive to campus, free parking is
available in Zone 3, Psychology Building and Engi-
neering West. Parking permits will be
mailed upon receipt of the advance registration form.
For those who are staying in the residence rooms on
campus, the parking permit will be distributed to you
upon registration at the Commons Building and you
will be reimbursed for parking paid when entering the
campus.

LADIES PROGRAM

A bus trip to the Gardiner Museum is available as well as a
shopping trip to Toronto. Visits to the various places
of interest in Hamilton including the Botanical
Gardens could also be arranged. The actual program
will be established depending on the number of ladies interested. Please
indicate your interest on the registration form.

PROCEEDINGS

All participants on the conference paying the registra-
tion fee will receive one hardcopy bound of the
NAMRC-X Proceedings. Those who wish additional
copies at $5.00 (Canadian) may order them in
advance or at the Conference. After May 25, 1982,
copies will be available by mail order through the
Society of Manufacturing Engineers. One SME Drive,
P.O. Box 900, Dearborn, Michigan 48128, U.S.A. at
$5.50 (U.S.) for NAMRI/SME and SME members and
$6.00 (U.S.) for nonmembers.

CONFERENCE ORGANIZATION

The North American Manufacturing Research Con-
ferences were created by a group of researchers
dedicated to further research, its dissemination and
application in the field of materials processing.
Presently the conference is part of the activities of the
North American Manufacturing Research Insti-
tution of SME.

The papers presented at this Conference have been
selected by the Scientific Committee of NAMRC and
from a large number of submitted abstracts. Conference
arrangements are the responsibility of NAMRC-X Organizing Committee, McMaster University, Hamil-
ton, Ontario.

CONFERENCE PROSPECTUS

The North American Manufacturing Research Confer-
ence (NAMRC-X) is designed to provide a
forum for the presentation and informed critical
discussion of results of basic and applied research in
metalworking and related manufacturing. The format
of the Conference is similar to that of NAMRC-I
(McMaster University, 1973), NAMRC-II (University of
Wisconsin, 1974), NAMRC-III (Carnegie-Mellon
University, 1975), NAMRC-IV (Bellefonte
Laboratories and Ohio State University, 1976),
NAMRC-V (University of Massachusetts, 1977),
NAMRC-VI (University of Florida, 1978), NAMRC-VII
(University of Michigan, 1979), NAMRC-VIII (Uni-
versity of Missouri, 1980), NAMRC-IX (The Pennsylvania
State University).

The papers presented at this conference will describe
work in the fields of metal forming, metal cutting,
machining tools, and manufacturing systems and
controls. All papers presented at the conference are
contained in the hardbound Conference Proceedings and
represent work conducted in many renowned metalworking research centers throughout the world.

REGISTRATION

Advance registration is important to the organization of
the conference, as adequate facilities and meeting
space will be arranged only when the size of the
group is known in advance. Please complete the
attached registration form and return it in group
by April 18, 1982. All registrations will be
acknowledged and further information will be sent
to registered attendees including campus maps, parking permits, travel
information, etc.

Final registration will be conducted:
Monday, May 14th (6:00 a.m.—
Ewart Angus Lobby Area
McMaster University Medical Centre

FEE

The registration fee of $200.00 Canadian per person
includes two lunches, the Monday banquet, coffee
breaks and a hardbound copy of the NAMRC-X
Proceedings. There will be no on-site registration.

The registration fee must be paid by cash or cheque.
Cheques should be payable to McMaster Univer-
sity. A refund will be made if notification of can-
celation is received two weeks prior to the start of the
conference. Substitutions will be accepted anytime.

LOCATION

The program sessions will be held in the McMaster
Medical Centre on the campus of McMaster Univer-
sity, Hamilton, Ontario, Canada. The McMaster
Campus is situated at the east end of the city.

Hamilton can be reached by air, road or rail. The pickup
point will be at the Contingent Hotel and the
Mountain View Motel for going out and going to
the Ewart Angus Centre.

By Car: Hamilton is 40 miles southwest of Toronto—
accessible from QEW and 403 Highways.

By Air: Hamilton International Airport is served by
Air Canada. Toronto International Airport is served by all
major airlines. Hamilton City Bus and an airborne service is
available to downtown Hamilton.

VISIT TO LABORATORIES AND CIM

The laboratories of the Mechanical Engineering
Department and the Electron Microscopy Laboratory
for metalworking will be open for visits at times which will be published in the conference lobby.

LODGING

A block of rooms for the conference has been
reserved as follows:

1. THE ROYAL HOGARTH HOTEL, 112 King St.
   East, Hamilton, Ontario, L8N 1B8—Telephone
   (416) 527-5001.
   Special McMaster group rate $44.00 single or twin.
   Block reservations will be held until May 1, 1982.
MONDAY, MAY 24
8:00-10:00 a.m. REGISTRATION
Ewart Angus Centre Lobby, McMaster Medical Centre
9:00-9:00:30 a.m. OPENING SESSION
Welcoming Address: Dr. J.H.T. Wake, Chairman, Dept. of Mech. Engineering, McMaster University.
Opening Address: Dr. J. T. Stuntz, President, North American Manufacturing Research Association of SME.
Charles F. Carter, Jr., President, Society of Manufacturing Engineers.
10:00-10:30 a.m. COFFEE BREAK—Ewart Angus Centre Lobby
10:30-12:00 a.m. SESSION 1
12:00-1:30 p.m. LUNCHEON—Blue & Green Dining Rooms, McMaster Medical Centre
1:00-3:00 a.m. SESSION 2
B. "Fundamental Studies of Tool Wear Via Acoustic Emission Analyses", M.S. Lan and P.A. Dippold, University of California, Berkeley, California.
D. "Forming of Vessels from Sheet Metal Using Spinning-Extrusion Techniques", H.A. Ali-Ochreos, Instituto Tecnologico De Arquitetura, Brazil.
F. "Application of Stripwound Tools to Large Reduction Cold Forging Processes", J. Grabau, Technical University of Denmark, Lyngby, Denmark.
3:00-3:30 p.m. COFFEE BREAK—Ewart Angus Centre Lobby
3:30-5:00 p.m. SESSION 3
B. "Frequency Decomposition of Cutting Forces in End Milling", S.M. Park and A. Bailleux, Michigan Technological University, Houghton, Michigan.
D. "Theoretical Approach for Machining Tests (a) Machining Centres and Of Turning Centers", J. Trousseau, (b) E. Nordskog, M. Stede, and J. B. Kajto, Battelle Columbus Laboratories, Columbus, Ohio.
F. "The Relationship between the Behavior of the Steel Heatresistance and the Vibration Damping Capacity in a Contact Surface", J. Kubota, Tokyo Institute of Technology, Tokyo, Japan.
I. "A Refined Analytical Model for the Prediction of Side Spread in the Rolling of Flat Products", V. Kennedy and W.B.D. Wilson, Battelle Columbus Laboratories, Columbus, Ohio.
12:00-1:30 a.m. LUNCHEON—Blue & Green Dining Rooms, McMaster Medical Centre
1:30-3:00 p.m. SESSION 6
A. "A New Method to Increase Frequency Resolution in Shock Excitation", T. Marwil, and R. F. Redd, Kobe University, Kobe, Japan.
C. "Theoretical Background for Machining Tests (a) Machining Centres and Of Turning Centers", J. Trousseau, (b) E. Nordskog, M. Stede, and J. B. Kajto, Battelle Columbus Laboratories, Columbus, Ohio.
TUESDAY, MAY 25
9:30-10:00 a.m.
SESSION 4


F. "Microprocessor Control of E.D.M. Process", M.F. El-Mahasrey, University of Warwick, Coventry, U.K.

G. "Predictions of Metal Removal Rate and Surface Roughness in Electrical Discharge Machining", K.P. Rajurkar, S.M. Pandit, Michigan Technological University, Houghton, Michigan.

H. "An Investigation into EDM Fine Hole Drilling", S.J. Ebert, Air Shaq University, Cairo, Egypt.


M. "Warm Forging of Stainless Steels—Tests on Forward and Backward Extrusion"; J.L. O.R. Hinds, The Technical University of Denmark, Lyngby, Denmark.


O. "Automated Parts Layout Planning in Germany Industry by Using Group Technology", M. Rokajima, Kobe Industrial and Textile University, Saka-ku, Kobe, Japan.

P. "An Economic Analysis in Group Technology", R.M. Sundaram, Tennessee Technical University, Cookeville, Tennessee.


R. "Improved Wear Resistance by Ion Implantation", R.A. Klauser, E. He, University of Missouri-Rolla, Rolla, Missouri.

S. "An Investigation into Cutting Performance and Surface Quality of Multiple-Phase Coated Cutting Tools", R.G. Odrey and A.M. Zaman, West Virginia University, Morgantown, West Virginia.

2:03-2:30 p.m.
COFFEE BREAK

2:30-3:00 p.m.
SESSION 7


C. "Possibilities of Application and Limitations of Clashless Die Forging of Steel and Aluminum at Room Temperature (countered-die forging)", T.H. Hoang and K. Lange, University of Stuttgart, Stuttgart, Federal Republic of Germany.

D. "Flow and Fracture of Some Ductile Metals", E.G. Thompson, University of California, Berkeley, California.


3:30-4:00 p.m.
DINNER AND ANNUAL ASSEMBLY OF NAMRI/SME

Gree Dining Room, McMaster Medical Centre