

Science program

Sunday 11 March

19:00-22:00 Reception and registration at the Crowne Plaza.

Monday 12 March

09:00-09:30 Welcome speeches and tribute to Jim Cohen

Session 1: maser theory

Chair: Phil Diamond

09:30-10:15 Prof Moshe Elitzur University of Kentucky USA
Review: Maser theory

10:15-10:40 Dr Malcolm Gray University of Manchester UK
Invited: Tracing pumping routes in OH

10:40-11:10 Morning tea

11:10-11:55 Dr Vladimir Strel'nitski Maria Mitchell Observatory USA
Review: Masers as probes of supersonic turbulence

Session 2: Polarisation and magnetic fields

Chair: Athol Kembell

11:55-12:40 Dr Wouter Vlemmings Jodrell Bank Observatory UK
Review: Polarisation and magnetic fields

12:40-14:00 Lunch provided at Convention Centre

14:00-14:25 Dr Richard Crutcher University of Illinois USA
Invited: Magnetic fields in the non-masing ISM

14:25-14:40 Dr Fabrice Herpin Laboratoire d'Astrophysique de Bordeaux France
Magnetic field in AGB stars and (proto-)planetary nebulae: results and perspectives

14:40-15:05 Prof JinLin Han National Astronomical Observatories China
Invited: Magnetic fields of our Galaxy on large and small scales

Session 3: Masers and star formation

Chair: Mark Wardle

15:05-15:30 Dr Michele Pestalozzi University of Herfordshire UK
Invited: Methanol masers as tools to study high-mass star formation.

15:30-16:00 Afternoon tea

16:00-16:45 Dr Vincent Fish NRAO, Socorro USA
Review: Masers and star formation.

16:45-17:00 Dr Sharmila Goedhart Hartebeesthoek Radio Astronomy Observatory South Africa
Periodic variations in 6.7GHz methanol masers

17:00-17:25 Dr James de Buizer Gemini Observatory Chile
Invited: The infrared environments of methanol and water masers associated with star formation

Tuesday 13 March

Chair: James Caswell

- 09:00-09:45 Mr Esteban Araya New Mexico Tech & National Radio Astronomy Observatory USA
Review: Formaldehyde masers in the Galaxy
- 09:45-10:00 Dr Tracey Hill Leiden Observatory the Netherlands
Profiling young massive stars
- 10:00-10:15 Mr Steven Longmore University of New South Wales Australia
The molecular environment of massive star forming cores associated with class II methanol maser emission
- 10:15-10:30 Dr Miller Goss NRAO USA
Intrinsic Short Term Variability in W3 (OH) and W49N Hydroxyl Masers
- 10:30-11:00 Morning tea

Chair: James de Buizer

- 11:00-11:25 Prof Andrej Sobolev Ural State University Russia
Invited: How do methanol masers manage to appear in the youngest star vicinities and isolated molecular clumps
- 11:25-11:40 Dr Luca Moscadelli INAF - Osservatorio Astrofisico di Arcetri Italy
Massive star-formation in G24.78+0.08 studied by means of maser VLBI and thermal interferometric observations
- 11:40-11:55 Dr Lynn Matthews Harvard-Smithsonian Center for Astrophysics USA
A documentary of high-mass star formation: Probing the dynamical evolution of Orion Source I on 10-100 AU scales using SiO masers
- 11:55-12:40 Poster session I**
- 12:40-14:00 Lunch provided at Convention Centre

Session 4: Galactic maser surveys

Chair: Jessica Chapman

- 14:00-14:25 Dr James Caswell Australia Telescope National Facility Australia
Invited: Recent maser surveys
- 14:25-14:50 Dr Shuji Deguchi Nobeyama Radio Observatory, NAOJ Japan
Invited: SiO maser survey of evolved stars in the Galaxy: various environments of maser sources
- 14:50-15:05 Dr Jagadheep Pandian Max Planck Institute for Radio Astronomy Germany
The Arecibo methanol maser Galactic plane survey
- 15:05-15:30 Dr Simon Ellingsen University of Tasmania Australia
Invited: Investigating high-mass star formation through maser surveys
- 15:30-16:00 Afternoon tea

Chair: Hiroshi Imai

- 16:00-16:15 Mr James Green Jodrell Bank Observatory UK
The Parkes methanol multibeam survey
- 16:15-16:30 Dr Jan Brand INAF-Istituto di Radioastronomia Italy
A 20-year water maser monitoring program with the Medicina telescope

Session 5: Stellar masers, circumstellar winds and supernova remnants

- 16:30-17:15 Dr Athol Kemball University of Illinois USA
Review: Stellar masers, circumstellar envelopes and supernova remnants
- 17:15-17:30 Dr Markus Wittkowski European Southern Observatory Germany
The Mira variable S Ori: SiO maser shells related to stellar photosphere and dust shell at three epochs
- 18:45pm Sounds of starlight dinner and show

Wednesday 14 March

Chair: Crystal Brogan

- 09:00-09:15 Dr Roberta Humphreys University of Minnesota USA
The hypergiant sources: episodic mass loss, convective activity and magnetic fields
- 09:15-09:30 Dr Terry Jones University of Minnesota USA
The 3D morphology of the powerful OH/IR source VY Canis Majoris
- 09:30-09:45 Dr Anita Richards Jodrell Bank Observatory UK
The story of red supergiant winds written in water
- 09:45-10:00 Dr Jun-ichi Nakashima ASIAA Taiwan
SiO maser observations of a wide dust-temperature range sample
- 10:00-10:25 Dr Valentin Bujarrabal Observatorio Astronómico Nacional Spain
Invited: The study of the close environments of evolved stars from SiO masers
- 10:25-10:45 Morning tea

Chair: Miller Goss

- 10:45-11:10 Dr Hiroshi Imai Kagoshima University Japan
Invited: Stellar molecular jets traced by maser emission
- 11:10-11:25 Dr Jessica Chapman Australia Telescope National Facility Australia
A search for water maser emission from post-AGB stars: Discovery of three high-velocity sources
- 11:25-11:50 Dr Yolanda Gomez Centro de Radioastronomía y Astrofísica Mexico
Invited: Maser emission in planetary nebulae
- 11:50-12:15 Dr Crystal Brogan National Radio Astronomy Observatory USA
Invited: OH (1720 MHz) Masers: Signposts of supernova remnant/molecular cloud interactions
- 12:15-12:30 Mr Jack Hewitt Northwestern University USA
OH 1720 MHz maser emission from supernova remnants
- 12:30 onwards Free afternoon and outings (note that lunch is NOT provided at the Convention Centre)

Thursday 15 March Session 6: Masers Galactic Structure and the Galactic Centre

Chair: Luis Rodriguez

- 09:00-09:45 Dr Mark Reid Harvard Smithsonian Center for Astrophysics USA
Review: Masers as probes of Galactic structure
- 09:45-10:10 Prof Harm Habing Leiden Observatory the Netherlands

- Invited: Maser stars in the Galactic bar
- 10:10-10:25 Dr Mareki Honma National Astronomical Observatory of Japan Japan
Galactic rotation measurements based on water maser astrometry with VERA
- 10:25-10:45 Morning tea
- 10:45-11:10 Dr Farhad Yusef-Zadeh Northwestern University USA
Invited: Masers as probes of interacting supernova remnants and massive star formation in the Galactic Center region

Session 7: Masers in AGN environments

Chair: Moshe Elitzur

- 11:10-11:55 Dr Lincoln Greenhill Harvard-Smithsonian Center for Astrophysics USA
Review: Masers in AGN environments
- 11:55-12:10 Dr Seiji Kamenoh Kagoshima University Japan
Scanning accreting matter in the active galaxy NGC 1052
- 12:10-12:25 Prof Jim Moran Harvard Smithsonian Center for Astrophysics USA
The Structure of the Accretion Disk in NGC4258 Derived from Observations of its Water Vapor Masers
- 12:25-12:40 Dr James Braatz National Radio Astronomy Observatory USA
Precision cosmology with H₂O megamasers: Measuring distances to NGC 6323 and UGC 3789
- 12:40-14:00 Lunch provided at Convention Centre

14:00-14:45 Poster session II

Session 8: Megamaser and starburst activity

Chair: Lincoln Greenhill

- 14:45-15:30 Prof Jeremy Darling University of Colorado USA
Review: Masers in starburst galaxies
- 15:30-16:00 Afternoon tea
- 16:00-16:15 Ms Megan Argo Jodrell Bank Observatory UK
Main line OH masers in the M82 starburst
- 16:15-16:30 Dr Colin Lonsdale MIT Haystack Observatory USA
OH emission and absorption associated with supernovae in Arp 220
- 16:30-16:55 Dr Willem Baan ASTRON the Netherlands
Invited: Understanding the Arp 220 system
- 16:55-17:20 Dr Christian Henkel Max-Planck-Institut fuer Radioastronomie Germany
Invited: OH and H₂O megamasers
- 18:45 - eve Banquet at Alice Springs Desert Park

Friday 16 March Session 9: Diagnostics and interpretation in extragalactic environments

Chair: Colin Lonsdale

- 09:00-09:25 Dr Ylva Pihlstrom University of New Mexico USA
Invited: OH megamasers as extragalactic diagnostics

- 09:25-09:40 Dr Willem Baan Kapteyn Institute, Groningen the Netherlands
Molecular diagnostics of ULIGs (given on behalf of Marco Spaans)
- 09:40-09:55 Mr Rodrigo Parra Onsala Space Observatory Sweden
Modelling of clumpy OH maser emission in starbursts
- 09:55-10:10 Mr Edo Loenen Kapteyn Astronomical Institute the Netherlands
Infrared and molecular properties of OH megamasers
- 10:10-10:25 Mr Tim Robishaw University of California, Berkeley USA
The discovery of extragalactic magnetic fields in OH megamasers

Session 10: New mm and sub-mm masers

Chair: Anne Green

- 11:00-11:45 Dr Liz Humphreys Harvard Center for Astrophysics USA
Review: Millimeter and submillimeter masers
- 11:45-12:10 Dr Todd Hunter NRAO USA
Invited: 658 GHz water masers with the submillimeter array
- 12:10-12:25 Dr Nimesh Patel Harvard-Smithsonian Center for Astrophysics USA
SMA observations of 321 GHz water maser emission in Cepheus-A
- 12:25-14:00 Lunch provided at Convention Centre

Session 11: Future facilities and conference summary

Chair: Liz Humphreys

- 14:00-14:45 Prof Karl Menten MPIFR, Bonn Germany
Review: Exciting maser science with new instruments in the near and the far future
- 14:45-15:10 Dr Anne Green University of Sydney Australia
Invited: Opportunities for maser studies with the Square Kilometre Array
- 15:10-15:35 Dr Alwyn Wootten National Radio Astronomy Observatory/ALMA USA
Invited: ALMA's view of maser emission
- 15:35-16:00 Afternoon tea

Chair: Karl Menten

- 16:00-16:15 Dr Yasuhiro Murata Japan Aerospace Exploration Agency (JAXA) Japan
Next generation space VLBI project: VSOP
- 16:15-17:00 Dr Mark Reid Harvard Center for Astrophysics USA
Conference summary