# Programme

## Wednesday September 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1: Atmospheric Circulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30</td>
<td>Registration</td>
</tr>
<tr>
<td>9:20</td>
<td>Welcome</td>
</tr>
</tbody>
</table>

### Session 1: Atmospheric Circulation

**Chair:** Bob McDavitt

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:30</td>
<td>Kidson, J., Mullan, B., Renwick, J., Revell, M., &amp; Bhaskaran, B.</td>
</tr>
<tr>
<td>9:45</td>
<td>Bhaskaran, B. &amp; Mullan, B.</td>
</tr>
<tr>
<td>10:00</td>
<td>Ajtic, J., Connor, B., &amp; Lawrence, B.</td>
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</tbody>
</table>

**Session 2: Gravity Waves & Climate, and Temperature Trends**

**Chair:** Don Grainger

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>11:00</td>
<td>Lawrence, B.</td>
</tr>
<tr>
<td>11:15</td>
<td>Osprey, S.</td>
</tr>
<tr>
<td>11:30</td>
<td>Chattopadhyay, M.</td>
</tr>
<tr>
<td>Time</td>
<td>Speaker(s)</td>
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</tr>
<tr>
<td>11:45</td>
<td>Dean, S.</td>
</tr>
<tr>
<td>12:00</td>
<td>Zheng, X. &amp; Basher, R.</td>
</tr>
</tbody>
</table>

12:30-13:30 Lunch

**Session 3: Wind, and Poster Introduction**

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker(s)</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:30</td>
<td>Brenstrum, E.</td>
<td>Rivers of Wind and Puddles of Calm: Wind Patterns East of the North Island</td>
</tr>
<tr>
<td>13:45</td>
<td>Matheson, L.</td>
<td>Case Study Investigation of Mesoscale Storm Force Winds over the Tararua Ranges</td>
</tr>
<tr>
<td>14:00</td>
<td>Reid, S.</td>
<td>Local extreme winds - How Forecastable are they?</td>
</tr>
<tr>
<td>14:15</td>
<td>McGowan, H. &amp; Sturman, A.</td>
<td>Foehn Wind Onset in an Alpine Valley</td>
</tr>
<tr>
<td>14:30</td>
<td>Marsh, S.</td>
<td>Meteors as an Upper Atmosphere Wind Probe</td>
</tr>
<tr>
<td>14:45</td>
<td></td>
<td>Poster Introductions</td>
</tr>
</tbody>
</table>

15:00-15:30 Afternoon Tea

**Session 4: Weather Forecasting and Radar Meteorology**

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker(s)</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>15:30</td>
<td>Renwick, J. &amp; Thompson, C.</td>
<td>Southern Hemisphere Forecast Skill: A Comparison of Global Models</td>
</tr>
<tr>
<td>15:45</td>
<td>Gray, W. &amp; Thompson, C.</td>
<td>Issues Surrounding Nowcasting</td>
</tr>
<tr>
<td>16:00</td>
<td>Mann, M., Seed, A., &amp; Austin, G.</td>
<td>X-Band Radar Observations of Volcanic Eruptions: Mt Ruapehu, 1996</td>
</tr>
<tr>
<td>16:15</td>
<td>Nicol, J.</td>
<td>High Resolution Radar Measurements in Mahurangi Catchment</td>
</tr>
<tr>
<td>16:30</td>
<td>Carey-Smith, T.</td>
<td>The Canterbury VHF Radar Wind-Profiler</td>
</tr>
<tr>
<td>16:45</td>
<td>Galligan, D.</td>
<td>Using the Canterbury Meteor Radar to Measure Atmospheric Parameters</td>
</tr>
</tbody>
</table>
### Thursday September 2

**Plenary Sessions: Natural Hazards and Climate Change**

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker(s)</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>9:55</td>
<td></td>
<td>Introduction</td>
</tr>
<tr>
<td>10:00</td>
<td>Hurst, T.</td>
<td>Volcanic Hazards: How changes below can lead to danger from above</td>
</tr>
<tr>
<td>10:20</td>
<td>Uddstrom, M., Renwick, J. &amp; Mullan, B.</td>
<td>Science Requirements for Weather and Climate Hazard Prediction</td>
</tr>
<tr>
<td>10:40</td>
<td>Turner, G.</td>
<td>The application of rock magnetic measurements to problems of palaeoclimatic and palaeoenvironment change.</td>
</tr>
<tr>
<td>11:20</td>
<td>Austin, G., Purdy, J. and Smith, K.</td>
<td>Nowcasting in Strongly Orographic Conditions</td>
</tr>
<tr>
<td>11:40</td>
<td>Stirling, M.</td>
<td>Seismic Hazard in New Zealand</td>
</tr>
</tbody>
</table>

**Plenary Session 2:**

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker(s)</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>13:00</td>
<td>Christopherson, A. and Smith, E.</td>
<td>Modelling Aftershock Sequences</td>
</tr>
<tr>
<td>13:15</td>
<td>Stock, C.</td>
<td>A Seismological Model for Earthquake Occurrence in New Zealand</td>
</tr>
<tr>
<td>13:30</td>
<td>Evison, F. and Rhoades, D.</td>
<td>Synoptic Earthquake Forecasting and the Meteorological Analogy</td>
</tr>
<tr>
<td>14:00</td>
<td>Laing, A. K.</td>
<td>Satellite Observations of Extreme Wave Conditions around New Zealand</td>
</tr>
<tr>
<td>14:15</td>
<td>Bromley, T., Clarkson, R., Turner, R. &amp; Wratt, D.</td>
<td>Emergency Response Capabilities: Disease, Insect and Virus Transport, Hazardous Releases and Volcanic Ash Plumes</td>
</tr>
</tbody>
</table>
14:30    Grainger, R.G.  Using HIRDLS to Monitor Volcanic Ash
14:45    Keys, H.   Climate Change and Natural Hazards on Ruapehu Volcano

15:00-15:30  Afternoon Tea  MacLaurin Complex

Plenary Session 3:  MacLaurin Lecture Theatre 3
Chair: Jim Renwick

15:30    Denys, P., Beavan, J., Pearson, C., & McSaveney, M.  Sea Level Change based on New Zealand's Long Term Tide Gauges
15:45    Pearson, C., Daw, G., Salinger J., & Wratt D.  NIWA's National Climate Centre and Risk Management
16:00    Fowler, A.  Potential for ENSO Reconstruction from Kauri Tree-Rings
16:15    McKenzie, R., Connor B., & Bodeker G.  Summertime UV Increases in Response to Ozone Depletion
16:30    Harte, D. & Vere-Jones, D.  Geographical Display and probabilistic interpretation of earthquake precursory information
16:45    Stern, T., Kleffmann, S., Bannister, S., Okaya, D., Davey, F., & Caldwell, G.  Geophysical signatures of high fluid pressures within the Alpine Fault zone: implications for fault zone strength and a countervailing view on the likelihood of Ms >= 8.0 earthquakes on the Alpine Fault.
17:00    Matheson, D., Beavan, J., & Cheer, D.  Evolution of strain across the Tararua Mountains, 1875-1999
17:15    Darby, D., Beavan, J., Amadottir, T.&Pollitz, F.  Evidence for subduction locking beneath the North Island, New Zealand, from GPS measurements

17:30  METEOROLOGICAL SOCIETY OF NZ  Annual General Meeting  MacLaurin Lecture Theatre 2

19:00    Symposium Dinner--Victoria University Staff Club
for 19:30  Wine, juice and water will be provided during dinner, pre dinner drinks will be available for purchase.
Friday September 3

### Session 5: Atmospheric Chemistry – Gases & Aerosols

**Chair:** Martin Manning  
**MacLaurin Lecture Theatre 2**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>9:00</td>
<td>Dirks, K., Johns, M., Hay, J., &amp; Sturman, A.</td>
<td>An Empirical Approach to Modelling Carbon Monoxide Concentrations Near Roads</td>
</tr>
<tr>
<td>9:15</td>
<td>Brailsford, G., Lassey, K., Gimson, N., Wratt, D., &amp; Bromley, A.</td>
<td>Regional Concentration Patterns of Agricultural Methane: Comparing Measurements with Mesoscale Modelling</td>
</tr>
<tr>
<td>9:30</td>
<td>Reisinger, A. &amp; Jones, N.</td>
<td>Determination of greenhouse gas fluxes using open-path FTIR spectroscopy</td>
</tr>
<tr>
<td>9:45</td>
<td>Raff, D.</td>
<td>Measurement of stratospheric trace gases with MIPAS-B -a contribution to the arctic ozone research</td>
</tr>
<tr>
<td>10:00</td>
<td>Wheaton, S.</td>
<td>Creating a History of Stratospheric Aerosol Loading</td>
</tr>
<tr>
<td>10:15</td>
<td>Thomas, G.</td>
<td>The Development of an Optical Particle Counter for Stratospheric Aerosol Measurement</td>
</tr>
<tr>
<td>10:30-11:00</td>
<td>Morning Tea</td>
<td>MacLaurin Complex</td>
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### Session 6: Water in the Atmosphere

**Chair:** Michael Uddstrom  
**MacLaurin Lecture Theatre 2**

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker(s)</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>11:00</td>
<td>Falvey, M. &amp; Beavan, J.</td>
<td>GPS Precipitable Water Measurements during the TARPEX Experiment</td>
</tr>
<tr>
<td>11:30</td>
<td>Bormann, N., Marks, C., McGregor, J., &amp; Renwick, J.</td>
<td>Towards assimilating GMS-5 moisture information into a mesoscale model configured for New Zealand</td>
</tr>
<tr>
<td>11:45</td>
<td>Smith, K., Menabde, M., &amp; Austin, G.</td>
<td>Spatial Interpolation of Highly Variable Rainfall Fields</td>
</tr>
<tr>
<td>12:00</td>
<td>Purdy, J. &amp; Austin, G.</td>
<td>Rainfall Mechanisms on the West Coast during “Nor-Westers”</td>
</tr>
<tr>
<td>12:15</td>
<td>Henson, W., Austin, G., Grey, R., &amp; George, K.</td>
<td>The New Auckland Uni. Disdrometer</td>
</tr>
<tr>
<td>12:30</td>
<td>Sansom, J. &amp; Thompson, C.</td>
<td>The Variation of Rainfall Rate over the Southern North Island</td>
</tr>
<tr>
<td>12:45</td>
<td>Oliphant, A.</td>
<td>Spatial and temporal controls on the surface energy budget in an alpine catchment, Southern Alps, New Zealand</td>
</tr>
<tr>
<td>Time</td>
<td>Session</td>
<td>Title</td>
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<tr>
<td>13:00</td>
<td>Lunch</td>
<td></td>
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<tr>
<td>13:00</td>
<td>Session 7: Climate Change</td>
<td>Transient Model Scenarios of Future Climate Changes for New Zealand</td>
</tr>
<tr>
<td>14:00</td>
<td></td>
<td>Modelling the Impacts of Climate Change on Water Resources</td>
</tr>
<tr>
<td>14:30</td>
<td></td>
<td>The Use of Sulfur Isotopes to Assess the Climatic Importance of Atmospheric Sulfur Species</td>
</tr>
<tr>
<td>14:45</td>
<td></td>
<td>Award for Best Student Paper</td>
</tr>
<tr>
<td>15:00</td>
<td></td>
<td>Closure</td>
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**Posters**

Posters will be on display at the Maclaurin Lecture Theatre Complex

**MET1** Henson, W. & Austin, G. Rain Event Classification from Raindrop Size Distribution Parameters

**MET2** Kjellberg, S. A Particle Splitting Strategy for Lagrangian Stochastic Modelling Applied to Dispersion from an Elevated Smoke Stack

**MET3** Larsen, H. Cloud Variability in the New Zealand Region

**MET4** McGowan, H., Sturman, A. & Zawar-Reza, P. Windfield characteristics of an alpine lake basin, Lake Tekapo, New Zealand

**MET5** Moss, R. Measurement of Carbon Monoxide Concentration and Isotopes in Clean Air Samples