



# TRVS 2019

Time Resolved Vibrational Spectroscopy Conference

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8 - 13 September 2019

#### VENUE WI-FI DETAILS

SELECT THE WIRELESS:	UOA-GUEST-WIFI
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## Sunday 8 September

<b>5:00PM</b>	Welcome Function
<b>7:00PM</b>	Location: Fale Pasfika

## Monday 9 September

<b>8:00AM</b>	Registration Opens (Level 0, Owen G. Glenn Building)
<b>8:45AM</b>	<p><b>Conference Welcome &amp; Mihi</b>          Anahera Morehu, Kaiārahi, <i>University of Auckland</i> &amp;          Professor Jim Metson &amp; Deputy Vice-Chancellor (Research),  <i>University of Auckland</i>.          Room: Lecture Theatre 051 (OGGB5)</p>
<b>9:00AM</b>	<p><b>Session 1:</b>  <b>Theme: 2D Approaches 1</b>          Chair: CATHER SIMPSON, <i>UNIVERSITY OF AUCKLAND (NZ)</i></p>
<b>9:00AM</b>	<p><b>INVITED SPEAKER:</b>  <b>Ultrafast Dynamics of Light Harvesting Chromophores and Model Systems</b>          JESSICA ANNA, <i>UNIVERSITY OF PENNSYLVANIA (USA)</i></p>
<b>9:30AM</b>	<p><b>CONTRIBUTED TALK 1:</b>  <b>Observing hydrogen bond making and breaking process of cyclic peptide using 2DIR spectroscopy</b>          KIRAN SANKAR MAITI, <i>MAX PLANCK INSTITUT FÜR QUANTENOPTIK (GERMANY)</i></p>
<b>9:50AM</b>	<p><b>CONTRIBUTED TALK 2:</b>  <b>Signatures of intra-/intermolecular vibrational coupling in halogenated liquids revealed by 2D Raman-THz spectroscopy</b>          ANDREY SHALIT, <i>UNIVERSITY OF ZURICH (SWITZERLAND)</i></p>
<b>10:10AM</b>	Morning Tea (Level 0 Foyer)

<b>10:45AM</b>	<b>Session 2:</b> <b>Theme: Materials 1</b> Chair: KEITH GORDON, <i>UNIVERSITY OF OTAGO (NZ)</i>
<b>10:45AM</b>	<b>INVITED SPEAKER:</b> <b>Ultrafast Time-Resolved Infrared Spectroscopy for Direct Analysis of Charge Carrier Dynamics in Hybrid Lead Bromide Perovskites</b> TERRY GUSTAFSON, <i>THE OHIO STATE UNIVERSITY (USA)</i>
<b>11:15AM</b>	<b>INVITED SPEAKER:</b> <b>Chemical Dynamics of Organic Battery Electrolyte Solutions – Additives Modulate Solvent Structures</b> AMBER KRUMMEL, <i>COLORADO STATE UNIVERSITY (USA)</i>
<b>11:45AM</b>	<b>CONTRIBUTED TALK 3:</b> <b>Vibrational Delocalization, Symmetry Breaking and Fano Resonances in a Model van der Waals Solid</b> JOHN HARRISON, <i>MASSEY UNIVERSITY (NZ)</i>
<b>12:05PM</b>	<b>CONTRIBUTED TALK 4:</b> <b>Structural Dynamics during Charge Transfer in Perylene Bisimide Probed by Time-Resolved Impulsive Stimulated Raman Spectroscopy</b> WOOJAE KIM, <i>YONSEI UNIVERSITY (KOREA)</i>
<b>12:30PM</b>	<b>Lunch (Level 0 Foyer)</b>
<b>2:00PM</b>	<b>Session 3:</b> <b>Theme: Methods 1</b> Chair: SUSAN QUINN, <i>UNIVERSITY COLLEGE DUBLIN (IRELAND)</i>
<b>2:00PM</b>	<b>INVITED SPEAKER:</b> <b>Nonlinear Terahertz Spectroscopy of Molecular Liquids</b> MOHSEN SAJADI, <i>FRITZ HABER INSTITUT DER MAX PLANCK GESELLSCHAFT (GERMANY)</i>
<b>2:30PM</b>	<b>CONTRIBUTED TALK 5:</b> <b>Inhomogeneity of terahertz vibrations in hydration shell of halide anions</b> MISCHA BONN, <i>MAX PLANCK INSTITUT FÜR POLYMERFORSCHUNG (GERMANY)</i>

2:50PM	<p><b>CONTRIBUTED TALK 6:</b> Time-resolved vibrational spectroscopy of dipyrido[3,2-a-2',3'-c]phenazine complexes with appended donor groups: the effect of driving force, effective conjugation and linker on photophysical properties KEITH GORDON, <i>University of Otago (New Zealand)</i></p>
3:10PM	Afternoon Tea (Level 0 Foyer)
3:45PM	<p><b>Session 4:</b> <b>Theme: 2D Approaches 2</b> Chair: TED HEILWEIL, <i>NIST (USA)</i></p>
3:45PM	<p><b>INVITED SPEAKER:</b> <b>Active Tuning of Phonons and Surface-Phonon Polariton Resonances</b> ADAM DUNKELBERGER, <i>NIST (USA)</i></p>
4:15PM	<p><b>CONTRIBUTED TALK 7:</b> <b>2D IR of Molecular Polaritons</b> WEI XIONG, <i>UNIVERSITY OF CALIFORNIA SAN DIEGO (USA)</i></p>
4:35PM	<p><b>CONTRIBUTED TALK 8:</b> <b>Mid-Infrared Monitoring of Rapid Curing Reactions with DCS (Dual—Comb Spectroscopy)</b> FLORIAN EIGENMANN, <i>IRSWEEP</i></p>
5:00PM	Poster Session 1 (Level 0 Foyer)
7:00PM	DAY 1 Formalities ENDS
7:00PM	<p><b>PUB NIGHT</b>  Location: <i>The Summer Pop-Up with Little Creatures</i>, 16 Fort Lane, Auckland City</p>

## Tuesday 10 September

8:00AM	Registration Opens (Level 0, Owen G. Glenn Building)
8:30AM	<b>Session 5:</b> <b>Theme: Biophys + Biomed 1</b> Chair: AMBER KUMMEL, COLORADO STATE UNIVERSITY (USA)
8:30AM	<b>INVITED SPEAKER:</b> <b>Site-specific biomolecular dynamics studied with laser-excited temperature jump IR-spectroscopy</b> KARIN HAUSER, UNIVERSITÄT KONSTANZ (GERMANY)
9:00AM	<b>CONTRIBUTED TALK 9:</b> <b>An Photo-controlling protein/ligand interactions</b> OLGA BOZOVIC, UNIVERSITY OF ZÜRICH (SWITZERLAND)
9:20AM	<b>CONTRIBUTED TALK 10:</b> <b>Vibrational Energy Transfer from Heme through Atomic Contacts in Proteins</b> YASUHISA MIZUTANI, OSAKA UNIVERSITY (JAPAN)
9:40AM	<b>CONTRIBUTED TALK 11:</b> <b>Femtosecond-to-nanosecond Dynamics of Flavin Mononucleotide by Combination of Theory and Femtosecond Stimulated Raman Spectroscopy</b> PROKOPIS ANDRIKOPOULOS, BIOCEV (CZECH REPUBLIC)
10:00AM	Morning Tea (Level 0 Foyer)
10:45AM	<b>Session 6:</b> <b>Theme: Photochem 1</b> Chair: YASUHISA MIZUTANI, OSAKA UNIVERSITY (JAPAN)
10:45AM	<b>INVITED SPEAKER:</b> <b>Laser spectroscopic and theoretical study on the electronic states, nonradiative decay and photoisomerization of cinnamates – Effect of substitution and H-bonding</b> TAKAYUKA EBATA, HIROSHIMA UNIVERSITY (JAPAN)

11:15AM	<b>INVITED SPEAKER:</b> <b>Femtosecond Stimulated Raman Spectroscopy of Functional Molecular Motors in Water and Protein Environment</b> CHONG FANG, OREGON STATE UNIVERSITY (USA)
11:45PM	<b>CONTRIBUTED TALK 12:</b> <b>Geminate Recombination versus Cage Escape - Quenching of a Re(I) Carbonyl Complex on Mesoporous ZrO<sub>2</sub></b> KERSTIN OPPELT, UNIVERSITY OF ZÜRICH (SWITZERLAND)
12:05PM	<b>CONTRIBUTED TALK 13:</b> <b>Time-Resolved Resonance Raman Spectroscopy Studies of Electronic Excited States and Reactive Intermediates in Solution</b> DAVID LEE PHILLIPS, UNIVERSITY OF HONG KONG (HONG KONG)
12:30PM	Lunch (Level 0 Foyer)
2:00PM	<b>Session 7:</b> <b>Theme: Topics 1</b> Chair: CHRIS HALL, UNIVERSITY OF MELBOURNE (AUSTRALIA)
2:00PM	<b>INVITED SPEAKER:</b> <b>Current-Driven Vibrations in Nanoelectronics. A Scattering Theory Applied to Three Bizarre Experiments</b> TAMAR SEIDEMAN, NORTHWESTERN UNIVERSITY (USA)
2:30PM	<b>CONTRIBUTED TALK 14:</b> <b>Using 2DIR to Find Polaritonic Signatures in Complex Spectra</b> JEFF OWRUTSKY, U.S. NAVAL RESEARCH LAB (USA)
2:50PM	<b>CONTRIBUTED TALK 15:</b> <b>Reorientation dynamics of water molecules in the presence of hydroxide ions</b> ROBERTO COTA, UNIVERSITY OF AMSTERDAM (NETHERLANDS)
3:10PM	Afternoon Tea (Level 0 Foyer)
3:45PM	<b>Session 8:</b> <b>Theme: Methods 2</b> Chair: KAI CHEN, VICTORIA UNIVERSITY WELLINGTON (NZ)

<b>3:45PM</b>	<b><u>INVITED SPEAKER:</u></b> <b>Echo in a Single Isolated Molecule</b> YEHIAM PRIOR, <i>WEIZMANN INSTITUTE OF SCIENCE (ISRAEL)</i>
<b>4:15PM</b>	<b><u>CONTRIBUTED TALK 16:</u></b> <b>Broadband Laser-Based Single-Shot Ellipsometer for Sensitive Time-Resolved Infrared Ellipsometric Studies</b> CHRISTOPH KRATZ, <i>LEIBNIZ INSTITUT FÜR ANALYTISCHE WISSENSCHAFTEN (GERMANY)</i>
<b>4:35PM</b>	<b><u>CONTRIBUTED TALK 17:</u></b> <b>Ultrafast Structural Optical Crystallography</b> JASPER VAN THOR, <i>IMPERIAL COLLEGE LONDON (UK)</i>
<b>5:00PM</b>	<b>Poster Session 2 (Level 0 Foyer)</b>
<b>7:00PM</b>	<b>DAY 2 ENDS</b>

## Wednesday 11 September

8:00AM	Registration Opens (Level 0, Owen G. Glenn Building)
8:30AM	<b>Session 9:</b> <b>Theme: Topics 2</b> Chair: KARIN HAUSER, <i>UNIVERSITÄT KONSTANZ (GERMANY)</i>
8:30AM	<b>INVITED SPEAKER:</b> <b>Ultrafast spectroscopy of solids and liquids under shock compression</b> DANA DLOTT, <i>UNIVERSITY OF ILLINOIS URBANA-CHAMPAGNE (USA)</i>
9:00AM	<b>CONTRIBUTED TALK 18:</b> <b>Dynamical Behavior of Intermolecular Charge Flux Related to the THz Spectra of Hydrogen-Bonded Liquids</b> HAJIME TORII, <i>SHIZUOKA UNIVERSITY (JAPAN)</i>
9:20AM	<b>CONTRIBUTED TALK 19:</b> <b>Photochemical Reaction at the Liquid Interface Tracked by Femtosecond Time-resolved HD-VSFG Spectroscopy</b> TAHEI TAHARA, <i>RIKEN (JAPAN)</i>
9:40AM	<b>CONTRIBUTED TALK 20:</b> <b>Using the full, complex refractive index in pump-probe spectroscopy; case study on a superconductor</b> BEN MALLET, <i>UNIVERSITY OF AUCKLAND</i>
10:00AM	Morning Tea (Level 0 Foyer)
10:45AM	<b>Session 10:</b> <b>Theme: Biophys + Biomed 2</b> Chair: TREVOR SMITH, <i>UNIVERSITY OF MELBOURNE (AUSTRALIA)</i>
10:45AM	<b>INVITED SPEAKER:</b> <b>Mechanism of Photoswitchable Fluorescent Proteins: Transient IR and Isotope Labeling Study</b> STEVE MEECH, <i>UNIVERSITY OF EAST ANGLIA (UK)</i>



<b>11:15AM</b>	<b><u>INVITED SPEAKER:</u></b> <b>Ultrafast UV/Visible Pump/IR Probe Spectroscopy of [FeFe]-Hydrogenase Model Compounds</b> <i>CHRIS STROMBERG, HOOD COLLEGE (USA)</i>
<b>11:45AM</b>	<b>Lunch (Level 0 Foyer)</b> <b>(PICK UP BOXED LUNCH TO TAKE ON EXCURSION)</b>
<b>12:00PM</b>	<b>Social Excursions</b> <b>Depart Outside OGGB: 12 Grafton Road</b>

## Thursday 12 September

8:00AM	Registration Opens (Level 0, Owen G. Glenn Building)
8:30AM	<p><b>Session 11:</b>  <b>Theme: Biophys + Biomed 3</b>            Chair: DAVID LEE PHILLIPS, <i>UNIVERSITY OF HONG KONG (HONG KONG)</i></p>
8:30AM	<p><b>INVITED SPEAKER:</b>  <b>Exploring Ultrafast Photoinduced Processes Between Ruthenium Polypyridyl Complexes and DNA</b>            SUSAN QUINN, <i>UNIVERSITY COLLEGE DUBLIN (IRELAND)</i></p>
9:00AM	<p><b>CONTRIBUTED TALK 21:</b>  <b>Monitoring Base Specific Dynamics during Melting of DNA-Ligand Complexes using Temperature-jump Time-resolved Infrared Spectroscopy</b>            NEIL HUNT, <i>UNIVERSITY OF YORK (UK)</i></p>
9:20AM	<p><b>CONTRIBUTED TALK 22:</b>  <b>Mapping Structure and Dynamics with Site-Specific Vibrational Probe Pairs via 2D IR Spectroscopy</b>            MATTHEW TUCKER, <i>UNIVERSITY OF NEVADA RENO (USA)</i></p>
9:40AM	<p><b>CONTRIBUTED TALK 23:</b>  <b>Ultrafast Methionine Rebinding in Cytochrome C</b>            PAUL CHAMPION, <i>NORTHWESTERN UNIVERSITY (USA)</i></p>
10:00AM	Morning Tea (Level 0 Foyer)
10:45AM	<p><b>Session 12:</b>  <b>Theme: Methods 3</b>            Chair: YUKI NOJIMA, <i>SAITAMA UNIVERSITY (JAPAN)</i></p>
10:45AM	<p><b>INVITED SPEAKER:</b>  <b>THz Spectroscopy: Studying Carrier Dynamics in Nanostructured Materials for Solar Energy Conversion</b>            CHARLES SCHMUTTENMAER <i>YALE UNIVERSITY (USA)</i></p>

11:15AM	<b><u>INVITED SPEAKER:</u></b> Linear and nonlinear vibrational spectroscopy with frequency combs MINHAENG CHO, KOREA UNIVERSITY (KOREA)
11:45AM	<b><u>CONTRIBUTED TALK 24:</u></b> Development of Theoretical Framework for Selective Suppression of Coherent Raman Scattering Signals in ThreeBeam Double Stimulated Raman Scattering Processes JAYACHANDER RAO, INSTITUTE FOR BASIC SCIENCE (KOREA)
12:05PM	<b><u>CONTRIBUTED TALK 25:</u></b> Complete FSRS Spectroscopy of Excited Rhenium Bipyridine from 100 to 4000 cm <sup>-1</sup> by Spectral Watermarking MIROSLAV KLOZ, CZECH ACADEMY OF SCIENCES - ELI BEAMLINES (CZECH REPUBLIC)
12:30PM	Lunch (Level 0 Foyer)
2:00PM	<b><u>Session 13:</u></b> Theme: Photochem 2 Chair: TAHEI TAHARA, RIKEN (JAPAN)
2:00PM	<b><u>INVITED SPEAKER:</u></b> Application of time-resolved vibrational spectroscopy in the study of multichromophoric donor-acceptor complexes GEORGINA SHILLITO, UNIVERSITY OF OTAGO (NZ)
2:30PM	<b><u>CONTRIBUTED TALK 26:</u></b> Vibrational coherences in evolving charge transfer character of Diketopyrrolopyrrole-pyrrolopyrrole Dimer TAEYON KIM, YONSEI UNIVERSITY (KOREA)
2:50PM	<b><u>CONTRIBUTED TALK 27:</u></b> An exceptional CO <sub>2</sub> - transition metal binding mode discovered by time-resolved vibrational spectroscopy PETER VÖHRINGER, UNIVERSITÄT BONN (GERMANY)
3:10PM	Afternoon Te (Level 0 Foyer)
3:45PM	<b><u>Session 14:</u></b> Theme: Emerging Scientists Session Chair: NINA NOVIKOVA, UNIVERSITY OF AUCKLAND (NZ)

3:45PM	<b>INVITED SPEAKER:</b> <b>Ultrafast Dynamics of Molecules in Higher-Lying Electronically Excited States</b> CHRIS ELLES, <i>UNIVERSITY OF KANSAS (USA)</i>
4:15PM	<b>CONTRIBUTED TALK 28:</b> <b>Following BLUF Domain Photoactivation by the Ultrafast Transient Infrared Response of Incorporated Unnatural Amino Acid Probes</b> CHRIS HALL, <i>UNIVERSITY OF MELBOURNE (AUSTRALIA)</i>
4:35PM	<b>CONTRIBUTED TALK 29:</b> <b>Efficient and tunable spectral compression using frequency-domain nonlinear optics</b> KAREN THORN, <i>VICTORIA UNIVERSITY WELLINGTON (NZ)</i>
5:00PM	<b>DAY 4 Formalities ENDS</b>
5:15PM	<b>Formal Conference Photo (Atrium Stairs)</b>
6:00PM - 9:00PM	<b>Conference Dinner (Level 1 Foyer)</b>

## Friday 13 September

8:00AM	Registration Opens (Level 0, Owen G. Glenn Building)
9:00AM	<b>Session 15:</b> <b>Theme: Topics 3</b> Chair: STEVE MEECH, <i>UNIVERSITY OF EAST ANGLIA (UK)</i>
9:00AM	<b>INVITED SPEAKER SESSION:</b> <b>Proton-ordered Ice Surface Investigated with Sum Frequency Generation Spectroscopy and Theoretical Modeling</b> YUKI NOJIMA, <i>SAITAMA UNIVERSITY (JAPAN)</i>
9:30AM	<b>CONTRIBUTED TALK 30:</b> <b>Probing Proton Transfer in the 7-Azaindole—Acetic Acid Heterodimer with Continuum-IR Spectroscopy</b> ASHLEY STINGEL, <i>RUHR-UNIVERSITÄT BOCHUM</i>
9:50AM	<b>CONTRIBUTED TALK 8:</b> <b>Observation of distinct carboxylic acid conformers in aqueous solution with femtosecond 2D-IT spectroscopy</b> HUIB BAKKER, <i>AMOLF (NETHERLANDS)</i>
10:10AM	Morning Tea (Level 0 Foyer)
10:45AM	<b>Session 16:</b> <b>Theme: Photochem 3</b> Chair: CATHER SIMPSON, <i>UNIVERSITY OF AUCKLAND (NZ)</i>
10:45AM	<b>INVITED SPEAKER:</b> <b>Mapping Ultrafast Chemical Reaction Dynamics with Femtosecond Time-Resolved Time-Domain Raman Spectroscopy using Few-Cycle Pulses</b> HIKARU KURAMOCHI, <i>RIKEN (JAPAN)</i>
11:15AM	<b>INVITED SPEAKER:</b> <b>Probing Charge Transfer States in Organic Materials using Time-resolved Raman Spectroscopy</b> JYOTISHMAN DASGUPTA, <i>TATA INSTITUTE OF FUNDAMENTAL RESEARCH (INDIA)</i>

**FRIDAY 13 SEPTEMBER**

<b>11:45AM</b>	<b>PRESENTATION - TRVS-2021 &amp; TRVS-2023</b>
<b>12:15PM</b>	<b>OFFICAL CONFERENCE CLOSE</b>
<b>12:30PM</b>	<b>Lunch (Level 0 Foyer)</b>

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8 - 13 September 2019



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