

# Academic Activities—Charlotte M. Jones-Todd

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## Invited Talks

<b>Where the whales sing</b> <i>Statistics Teacher's Day, University of Auckland, NZ</i> .....	December 3rd 2022
<b>Modelling spatiotemporal point patterns: a new era of point process models</b> <i>New Zealand Statistical Association Conference, Auckland, NZ</i> .....	November 22nd 2022
<b>Where the whales sing</b> <i>Guest lecture TFCSTATS, University of Auckland, NZ</i> .....	August 10th 2022
<b>The role of random fields in modelling spatiotemporal point patterns</b> <i>International Conference on Advances in Interdisciplinary Statistics and Combinatorics, The University of North Carolina at Greensboro (via Zoom)</i> .....	October 8th 2021
<b>Making sense of patterns and connecting the dots in Area <math>\Sigma</math>I</b> <i>Faculty of Science International Open Day, University of Auckland, NZ</i> .....	August 31st 2021
<b>Modelling latent phenomena in point referenced data</b> <i>Department of Mathematics &amp; Statistics, Australian National University (via Zoom)</i> .....	June 24th 2021
<b>Point patterns in a point pattern world</b> <i>Research Showcase, School of Biological Sciences, University of Auckland, NZ</i> .....	November 17th 2020
<b>Getting to the point of log-Gaussian Cox processes</b> <i>Department of Mathematics &amp; Statistics, University of Glasgow (via Zoom)</i> .....	October 24th 2020
<b>Me, myself, and R</b> <i>R-Ladies, Auckland, NZ</i> .....	July 21st 2020
<b>A time to kill: Great British serial killers</b> <i>Royal Statistical Society Conference, Glasgow, Scotland</i> .....	September 5th 2017
<b>Why spatial models are useful in ecology (understanding the mechanics of dots)</b> <i>Statistische Woche, Hamburg, Germany</i> .....	September 15th 2015
<b>Easy on the eyes: A spatio-temporal analysis of eye movement</b> <i>Royal Statistical Society Conference, Exeter, UK</i> .....	September 9th 2015
<b>INLA &amp; SPDEs: Using latent Gaussian models to infer the spatial structure inherent in point patterns</b> <i>University of Lisbon, Portugal</i> .....	April 1st 2015
<b>Using INLA to fit complex spatial models to ecological data</b> <i>University of Lisbon, Portugal</i>	April 1st 2015

## Other Conference Talks, Seminars, and Presentations

<b>A new era of point process models</b> <i>Department of Mathematics &amp; Statistics, University of Glasgow, Scotland</i> .....	August 4th 2023
<b>Self-exciting point process models</b> <i>CREEM, University of St Andrews, Scotland</i> .....	July 26th 2023
<b>The R package stelfi</b> <i>Spatial Statistics, Denver, USA</i> .....	July 19th 2023
<b>Self-exciting point process models and their use in ecology</b> <i>Spatial Statistics Group, University of Glasgow, Scotland</i> .....	July 4th 2023
<b>ChatGPT in the classroom</b> <i>School of Biological Science, University of Auckland, Auckland, NZ</i> .....	May 22nd 2023
<b>The R package stelfi</b> <i>International Statistical Ecology Conference (ISEC), South Africa</i> .....	June 27th 2022
<b>Modelling point referenced data</b> <i>virtual National Centre for Statistical Ecology (vNCSE)</i> .....	June 17th 2021
<b>Systematic effects and latent phenomena in point referenced data</b> <i>virtual Australia and New Zealand Statistical Conference (vANZSC)</i> .....	July 5th 2021
<b>Modelling point referenced data</b> <i>virtual National Centre for Statistical Ecology (vNCSE)</i> .....	June 17th 2021
<b>A discrete-space continuous-time model for marine mammal exposure to Navy sonar</b> <i>New Zealand Statistical Association (NZSA) conference, Auckland, NZ</i> .....	November 24th 2020
<b>Modelling systematic effects and latent phenomena in point referenced data</b> <i>Statistical ecology group, Department of Statistics, University of Auckland, NZ</i> .....	November 17th 2020
<b>Marine mammal exposure to Navy sonar: a continuous-time discrete-space model</b> <i>virtual International Statistical Ecology Conference (vISEC)</i> .....	June 26th 2020
<b>Animating statistical theory</b> <i>satRdays, Auckland, NZ</i> .....	February 22nd 2020
<b>Modelling systematic effects and latent phenomena in point referenced data</b> <i>School of Biological Sciences, University of Auckland, NZ</i> .....	December 6th 2019
<b>Marine mammal exposure to Navy sonar: a continuous-time discrete-space model</b> <i>Statistics in Ecology and Environmental Monitoring (SEEM) Conference, Wellington, NZ</i> .....	December 2nd 2019
<b>Shared latent fields for mark-dependence in a log-Gaussian Cox process</b> <i>Australasian Applied Statistics Conference (AASC), Rotorua, NZ</i> .....	December 4th 2018
<b>Shared latent fields for mark-dependence in a log-Gaussian Cox process</b> <i>International Statistical Ecology Conference (ISEC), St Andrews, Scotland</i> .....	July 4th 2018
<b>Spatial modelling (INLA and some other stuff)</b> <i>NIWA, Wellington, NZ</i>	March 16th 2018

<b>How spatial modelling works</b> <i>NIWA, Hamilton, NZ</i>	February 20th 2018
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<b>Modelling spatio-temporal data</b> <i>CREEM, University of St Andrews, Scotland</i>	September 21st 2016
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<b>Modelling unusual spatial structures: An application to colorectal cancer data</b> <i>University of Cape Town, South Africa</i>	July 25th 2016
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<b>A spatio-temporal marked point process model</b> <i>International Statistical Ecology Conference (ISEC), Seattle, USA</i>	July 1st 2016
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<b>A spatio-temporal multi-species model</b> <i>NCSE summer meeting, Falmouth, UK</i>	June 29th 2015
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<b>Terrorism in space and time</b> <i>Spatial Statistics: Emerging Patterns, Avignon, France</i>	June 12th 2015
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<b>Spatio-temporal modelling</b> <i>Geo-Environmental Modelling Symposium, University of St Andrews, Scotland</i>	April 30th 2015
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<b>Spatial modelling: Its use in predictive policing</b> <i>Workshop on Crime Pattern Analysis and Predictive Policing, Dundee, Scotland</i>	April 28th 2015
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<b>INLA &amp; SPDEs: Using latent Gaussian models to infer the spatial structure inherent in point patterns</b> <i>University of Lisbon, Portugal</i>	April 1st 2015
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<b>Using latent Gaussian models to infer the spatial structure inherent in point patterns</b> <i>CREEM, University of St Andrews, Scotland</i>	January 1st 2015
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<b>Spatial / spatio-temporal modelling</b> <i>CREEM, University of St Andrews, Scotland</i>	August 29th 2014
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<b>The use of spatio-temporal models in intelligence-led policing</b> <i>37th Research Students' Conference in Probability and Statistics, Nottingham, UK</i>	April 30th 2014
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<b>Fitting a spatial model to Atlantic salmon fry abundance data, using integrated nested Laplace approximation</b> <i>CREEM, University of St Andrews, Scotland</i>	August 2013

## Posters

**A Bayesian approach to modelling fine-scale spatial dynamics of non-state terrorism: world study, 2002-2013**

June 13th 2016

*International Society for Bayesian Analysis (ISBA) conference*

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**Did “Operation Iraqi Freedom” work?**

**(A joint marked point process modelling approach)**

December 3rd 2015

*Challenges and Perspectives in Modelling the Spatial Dynamics of Conflict and Terrorism, University of St Andrews, Scotland*

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**Where did all the points go?**

June 9th–12th 2015

*Spatial Statistics: Emerging Patterns, Avignon, France*

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**The use of spatio-temporal ecological models in predictive policing**

July 1st–4th 2014

*International Statistical Ecology Conference (ISEC), Montpellier, France*

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**Preventing crime through spatial modelling**

November 13th 2013

*Scottish Institute for Policing Research Meeting, Edinburgh, Scotland*

## Other Conferences/Workshops Attended

*The International Association for Statistical Education (IASE)*

*Virtual Satellite Conference*

August 30th–September 4th 2021

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*What Are The Odds?*

*An Interactive Workshop in Sports Modelling, Exeter, UK*

July 7th–8th 2016

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*Flexible Programming with BUGS Models (NIMBLE), Seattle, USA*

June 27th 2016

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*Ecological Survey Spatial Modelling (ESSMod), St Andrews, Scotland*

March 21st–22nd 2016

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*Software Carpentry, St Andrews, Scotland*

June 18th–19th 2015

## Teaching

### Teaching at the University of Auckland

**BIOSCI738** - Advanced Biological Data Analysis 2021–2022  
University of Auckland.

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**BIOSCI220** - Quantitative Biology 2020–2022  
University of Auckland.

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**STATS210** - Statistical Theory 2019  
Southwest University (SWU), Chongqing, China.

### Other teaching

**Spatial Statistics** - Australian Mathematical Sciences Institute (AMSI) 2023  
University of Melbourne.

### Tutoring at the University of St Andrews

Centre for Academic, Professional and Organisational Development  
(CAPOD) **Course tutor - using R for statistics** 2015–2016

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Centre for Academic, Professional and Organisational Development  
(CAPOD) **mathematics and statistics support** 2013–2016

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**MT1007** - Statistics in Practice 2014

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**MT2004** - Statistics 2014

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**MT1002** - Mathematics 2014

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**MT5753** - Statistical Modelling 2013

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**MT1001** - Introductory Mathematics 2013

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**MT1008** - Mathematical Information Technology 2013

## Workshops

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### Statistics and R

Instructor

*NIWA, Hamilton, NZ*

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November–December 2018

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### Keep going with Git

Instructor

*NIWA, Hamilton, NZ*

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September 6th 2018

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### Make your R code shiny

Instructor

*NIWA, Hamilton, NZ*

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May 10th 2018

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### Get going with Git

Instructor

*NIWA, Hamilton, NZ*

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March 15th 2018

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### Introductory statistics course

Tutor

*The Namibia University of Science and Technology, Namibia*

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August 2nd–5th 2016

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### Statistics for spatio-temporal data: INLA and SECR

Instructor & Demonstrator

*Stellenbosch University, South Africa*

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July 27th 2016

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### Challenges and perspectives in modelling the spatial dynamics of conflict and terrorism

Presenter

*University of St Andrews, Scotland*

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December 3rd 2015

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### Using INLA to fit complex spatial models to ecological data

Instructor

*University of Lisbon, Portugal*

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April 1st 2015

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### Minicourse: The SPDE approach flexible spatial modelling in practice

Instructor

*CREEM University of St Andrews, Scotland*

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Dec 3rd 2014

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### Using the integrated nested Laplace approximation approach to fit complex ecological models

Demonstrator

*International Statistical Ecology Conference (ISEC), Montpellier, France*

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June 28th 2014

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### Spatial modelling with INLA

Demonstrator

*CREEM University of St Andrews, Scotland*

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June 2nd–4th 2014

## Other

Centre for Academic, Professional and Organisational Development  
(CAPOD) **Dissertation support**

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2014–2015

Student Support worker **Note-taker and examination scribe/reader**

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2014–2016

Centre for Academic, Professional and Organisational Development  
(CAPOD) **Redesign of statistical support website**

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2013

School of Mathematics and Statistics

**Undergraduate module marking**

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2013–2016