

## PROGRAMME



# 33<sup>rd</sup> ANNUAL MEETING OF THE TREE PROTECTION CO-OPERATIVE PROGRAMME (TPCP) AND THE DSI-NRF CENTRE OF EXCELLENCE IN PLANT HEALTH BIOTECHNOLOGY (CPHB)



Venue: Future Africa Auditorium, University of Pretoria

TUESDAY, 10 MAY 2022

08:00-08:15 **Sign-in and systems check**

**Session 1: Partnerships for a competitive forestry sector**

08:15-08:20 Welcome and setting the scene for the day

**Prof. Emma Steenkamp**, Director of the CPHB, FABI, University of Pretoria

08:20-08:30 Reimagining public-private partnerships for impact at the University of Pretoria

**Prof. Tawana Kupe**, Vice-Chancellor, University of Pretoria

08:30-08:50 A current perspective on the state of Forestry in South Africa

**Mr Danny Knoesen**, General Manager, NCT Forestry Co-operative Ltd.

08:50-09:05 The TPCP in 2021

**Prof. Bernard Slippers**, Director of the TPCP

09:05-09:30 Panel discussion on Partnerships for Forest Biosecurity:

**Prof. Treena Burgess**, Murdoch University, Australia

**Dr Stuart Fraser**, Scion, New Zealand

**Dr Rodrigo Ahumada**, Bioforest SA, Chile

**Dr Jeff Garnas**, University of New Hampshire, USA

**Dr ShuaiFei Chen**, Chinese Academy of Forestry, China

09:30-10:00 **GROUP PHOTO & COMFORT BREAK**

**Session 2: Biosecurity and tree health management in a changing environment**

10:00-10:20 **Guest speaker:** Protecting our forests – reducing the spread of invasive plant pathogens from urban ecosystems

**Dr Brett Summerell**, Director Research & Chief Botanist at the Australian Institute of Botanical Science, Australia

10:20-10:35 The evolving picture of pine needle diseases around the world

**Prof. Irene Barnes**, University of Pretoria

10:35-10:55 **Five-minute speed talks**

**Dr Michelle Schroder:** Distribution and prevalence of parasitoids of the eucalypt wood borers, *Phoracantha* spp.

**Felipe Balocchi:** Climate change and emerging disease of *Araucaria* trees in Chile

**Nam Pham:** *Elsinoe necatrix*: An unexpected new threat to *Eucalyptus* around the world

**Dr Katrin Fitzta and Ms Firehiwot Eshetu:** Diversity matters in biological control systems: The *Sirex-Deladenus* story in Australasia

10:55-11:00 Questions and discussion

11:00-11:30 **TEA**

**Session 3: Data, 'omics' and the future of tree health management**

11:30-11:50 **Opening talk:** Data science to unlock the potential of phenomes and genomes for more productive farming and forestry



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- 11:50-12:05 **Prof. Abdoulaye Diallo**, Université du Québec à Montréal (UQÀM)  
Chemical phenotypes of forest trees that guard against insect pests and fungal pathogens
- 12:05-12:20 **Prof. Almuth Hammerbacher**, University of Pretoria  
The genetics of tree-pathogen interactions
- 12:20-12:40 **Prof. Sanushka Naidoo**, University of Pretoria  
**Five-minute speed talks**  
**Mr Christoff Joubert**: Biochemistry of the *Gonipterus* sp. 2 - *Eucalyptus* interaction  
**Ms Myriam Solis**: Towards marker assisted breeding: the role of phenotyping *Teratosphaeria destructans* infection  
**Dr Tanay Bose**: Progress in the operationalizing of the forest pathogen screening facility  
**Dr Quentin Guignard**: New tools to study chemical ecology of forest pests
- 12:40-12:45 Questions and discussion
- 12:45-13:00 Live demonstration of the Information Hub data integration and diagnostic clinic
- 13:00-14:00 **LUNCH** (Future Africa Dining Hall)
- Session 4: Applied tree health management: Biological control, diagnostics and extension**
- 14:00-14:15 **Guest speaker**: The impact of 20 years of transferring knowledge on tree health management between Colombia and South Africa  
**Dr Carlos Rodas**, Forest Health Protection Programme, Smurfit-Kappa, Colombia
- 14:15-14:30 Biological control of forest pests  
**Prof. Brett Hurley**, University of Pretoria
- 14:30-14:45 Diagnostics, extension and new reports to keep trees healthy  
**Dr Trudy Paap**
- 14:45-15:00 Connecting the ICFR-FABI data points to support forest health management  
**Dr Ilaria Germishuizen** ICFR, University of KwaZulu-Natal
- 15:00-15:25 **5 minute speed talks**  
**Ms Caitlin Gevers**: Evolving insect communities in *Eucalyptus* galls  
**Mr Harmen Barten**: New biological control options for *Gonipterus* sp. 2  
**Privilege Makunde**: Current and future importance of psyllids for *Eucalyptus* forestry  
**Murilo Ribeiro**: Rearing *Gonipterus* sp. 2 for control: Connecting knowledge from Brazil and South Africa
- 15:25-15:30 Questions and discussion
- 15:30-16:00 **TEA & LAMP PCR machine demonstration**
- Session 5: Genome platforms for the development of plant health management tools**
- 16:00-16:20 **Guest speaker**: Modern diagnostics for forest pathogens  
**Prof. Caterina Villari**, Warnell School of Forestry & Natural Resources, University of Georgia
- 16:20-16:35 Developing genomics platforms to anchor forest pathology  
**Prof. Brenda Wingfield, Dr. Tuan Duong and Prof. Martin Coetzee**
- 16:35-16:50 Unlocking the potential of a global culture collection for local and regional plant health: HexagonBio and CMW-IA  
**Prof. Cobus Visagie**, University of Pretoria
- 16:50-17:10 **Six-minute speed talks**  
**Ms Benny Swalarsk-Parry**: Understanding virulence in *Fusarium circinatum*  
**Dr Janneke Aylward**: Towards marker assisted breeding: The role of pathogen genetics in *Teratosphaeria destructans* disease systems  
**Dr Gudrun Dittrich-Schröder**: Progress with developing gene editing tools for pest management
- 17:10-17:15 Questions and discussion
- 17:15 **Cocktails** (Future Africa gardens)
- 18:00-late **Dinner and evening activity** (Future Africa Dining Hall)

## WEDNESDAY 11 MAY 2022

- Session 1: Sensors, data and the future of plant health management**
- 08:15-08:35 **Guest speaker:** Engineering, robotics, sensors and agriculture/forestry: Options for collaborations
- 08:35-08:55 **Prof. Wynand Steyn**, Engineering 4.0, Head of the School of Engineering, University of Pretoria  
Panel discussion – Sensors and the future of plant health  
**Prof. Wynand Steyn**, University of Pretoria  
**Prof. Abdoulaye Diallo**, Université du Québec à Montréal (UQÀM)  
**Prof. Wouter Maes**, University of Ghent  
**Prof. Trudi Joubert**, University of Pretoria
- 08:55-09:15 **Five-minute speed talks**  
**Mr Hannes Strydom:** Connecting data, creating information – A live demonstration of the Information Hub Digital Twin  
**Mr Lihan Esterhuizen:** Early detection of root disease through hyperspectral sensing of root disease in leaves of *Eucalyptus*  
**Mr Phumlani Nzuza:** Remote sensing of *Gonipterus* sp. 2  
**Mr Tsepang Polaki:** Using AI to unlock weather data for forestry and agricultural plant health management
- 09:15-09:30 Questions and discussion
- 09:30-10:00 Closing of the meeting and final discussions
- 10:00-10:30 **TEA**
- 10:30-14:30 **TPCP Board meeting** (Future Africa Conference Room 2)
- 10:30-13:00 **FABI facilities tours**