

T4SS

Structure

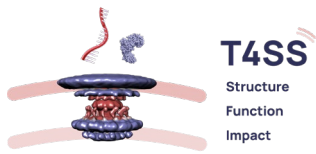
Function

Impact

PROGRAM



17/12/2024



We are delighted to share with you the program for the T4S conference, which will take place in Nancy from February 17 to 20, 2025.

PLACE OF THE CONFERENCE

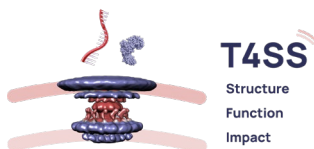
CAMPUS LETTRES ET SCIENCES HUMAINES – Nancy, France

The conference will take place at the Campus Lettres et Sciences Humaines, a 17-minute walk from the train station.

The **Campus Lettres et Sciences Humaines** is located in the heart of Nancy. Every year, it welcomes over 9,000 students in fields such as Arts, Literature and Languages as well as the Human and Social Sciences.

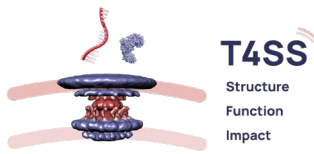
Address:

Campus Lettres et Sciences Humaines de Nancy – Université de Lorraine
23 Boulevard Albert 1^{er}
54000 Nancy
France



T4SS – Global Program

Monday 17 th february	Tuesday 18 th february	Wednesday 19 th february	Thursday 20 th february
	8:30-9:00 Welcome Participants 9:00-11:15 Session 2 – Host-Pathogen Interactions : Effectors diversity and function <hr/> 9:00 Keynote lecture Suzana SALCEDO <hr/> 11:15 Coffee Break <hr/> 11:15 -12:30 Poster Session 1	8:15-8:45 Welcome Participants 8:45-11:00 Session 4 – Bioinformatics, Genomics and Evolution : Detection and classification, Diversity and Evolution, Bioinformatic Tools <hr/> 8:45 Keynote lecture – Hélène CHIAPELLO <hr/> 11:00 Coffee Break <hr/> 11:20-12:30 Session 5 – T4SS Structure and Function : Non-Canonical Systems, Interbacterial Systems	8:15-8:45 Welcome Participants 8:45-10:05 Session 7 – T4SS Structure and Function : T4SS effectors recruitment <hr/> 10:05 Coffee Break <hr/> 10:25-13:00 Session 8 – Impact of Conjugative Transfer : Dissemination in the environment, Consequence on bacterial fitness, Mobilization <hr/> 10:25 Keynote lecture - Uli KLÜMPER
12:00-14:30 Registration & poster set-up	12:30 -14:00 Lunch	12:30-14:00 Lunch	13:00 Poster and talk prices
14:30 Opening of the conference	14:00-16:30 City Tour	14:00-18:25 Session 6 – Host-Pathogen Interactions : Targeting eucaryotic signaling pathways <hr/> 14:00 Keynote Lecture Sagar BHOGARAJU <hr/> 15:25-16:30 Coffee Break & Poster session 2	Concluding remarks Lunch Bag
14:45-18:20 Session 1 – T4SS Structure and Function : Structure and dynamics- Assembly mechanisms	16:30-18:45 Session 3 – T4SS Structure and Function : Conjugative systems - DNA import/export systems <hr/> 16:30 Keynote lecture – Peter CHRISTIE	20:00 Diner Gala	
18:30 Welcome Cocktail			



T4SS – Program per day
MONDAY 17TH FEBRUARY 2025

12:00-14:30 Registration and poster set-up

14:30 Opening of the conference

14:45-18:20 **Session 1 – T4SS Structure and Function**
Structure and dynamics- Assembly mechanisms

14:45 **Keynote lecture - Gabriel WAKSMAN**
"Progress in the structural and molecular biology of bacterial conjugation in Gram-negative bacteria"

Robine MAFFO-WOULEFACK

15:30 "Elucidating assembly and function of VirB8 cell wall subunits refines the DNA translocation model in Gram-positive Type IV secretion system"

15:50 Kieran DEANE-ALDER
"Uncovering the molecular architecture of a Gram-positive Type IV secretion system"

16:10 **Main talk - Melanie OHI**
"Structural and functional analysis of the Legionella pneumophila Dot/Icm Type IV secretion system"

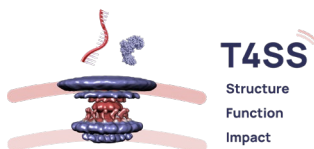
16:40-17:10 Coffee Break

17:10 **Main talk - Walter KELLER**
"Functional and Structural Characterization of essential and regulatory components of a Gram-positive Type IV secretion system"

17:40 Charline FOCANT
"The VirB type IV secretion system is localized at the growth pole in *Brucella abortus*"

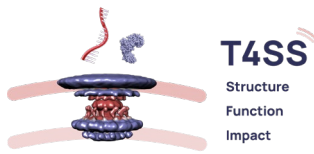
18:00 Chiamaka OKOYE
"Molecular interactions required for secretion of *Helicobacter pylori* CagA"

18:30 **Welcome Cocktail - Campus Lettres et Sciences Humaines**



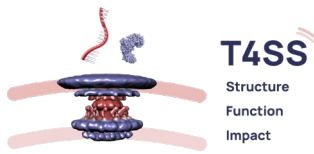
T4SS – Program per day
TUESDAY 18TH FEBRUARY 2025

8:30-9:00	Welcome participants
9:00-11:15	Session 2 – Host-Pathogen Interactions : Effectors diversity and function
9:00	Keynote lecture - Suzana SALCEDO "The Ins and Outs of Brucella: deciphering the role of effectors in pathogenesis"
9:45	Monica ROLANDO "Characterization of a new nucleomodulin of <i>Legionella pneumophila</i> "
10:05	Matteo BONAZZI "The multifunction Coxiella effector Vice stimulates macropinocytosis and interferes with the ESCRT machinery"
10:25	Gunnar SCHROEDER "Disruption of the nucleoli and translation by a Legionella Dot/Icm T4SS effector"
10:45	Main talk- Steffen BACKERT "Composition and function of the Helicobacter pylori cag pathogenicity island encoded type IV secretion system"
11:15-12:30	Coffee break and Poster Session 1
12:30-14:00	Lunch
14:00-16:30	City Tour
16:30-18:45	Session 3 – T4SS Structure and Function : Conjugative systems - DNA import/export systems
16:30	Keynote lecture – Peter CHRISTIE "Structural and Functional Plasticity of the T4SSs Exemplified Through Studies of the F system"
17:15	Shubha UDUPA "Visualizing the structure and dynamics of the horizontal gene transfer during bacterial conjugation"
17:35	Haifa LAROUSI "Exploration of DNA processing mediated by MOBT relaxases during bacterial conjugation"
17:55	Sunanda WILLIAMS "Cryo-EM structure of the F plasmid relaxosome provides a molecular basis for DNA recruitment and processing in bacterial conjugation"
18:15	Main talk - Aravindan ILANGO VAN "Molecular Mechanism For Loading Two Relaxases During Conjugation Initiation"



T4SS – Program per day
 WEDNESDAY 19TH FEBRUARY 2025 – MORNING

8:15-8:45	Welcome Participant
8:45-11:00	Session 4 – Bioinformatics, Genomics and Evolution : Detection and classification, Diversity and Evolution, Bioinformatic Tools
8:45	Keynote lecture - H��l��ne CHIAPELLO "Unveilling Integrative Conjugative Elements: detection and annotation in Bacillota genomes"
9:30	Toufik HAMADOUCHE "PO-CBR for delimiting integrated mobile elements transferred by conjugation"
9:50	Sophie PAYOT "Prevalence and diversity of Integrative and conjugative or mobilizable elements carrying antimicrobial resistance genes in <i>Streptococcus suis</i> "
10:10	Daniel GARCIA-LOPEZ "Conjugative sabotage: new fertility inhibitors against broad-host-range plasmids"
10:30	Main talk - Charles COLUZZI "Evolution of plasmid mobility: origin and fate of non-conjugative plasmids"
11:00-11:20	Coffee break
11:20-12:30	Session 5 – T4SS Structure and Function : Non-Canonical Systems, Interbacterial Systems
11:20	Main talk - Chuck FARAH "Substrate selection and fratricide avoidance by the bactericidal Type IV secretion system of Xanthomonadaceae"
11:50	Chlo�� PEDUZZI "Type IV secretion system drives interbacterial competition in the plant pathogen Xanthomonas"
12:10	Pauline GASCHT "The non-canonical TraB-dependent Actinomycete ICEs (AICEs) mediate large-scale chromosomal transfer in <i>Streptomyces</i> "
12:30-14:00	Lunch



T4SS – Program per day
WEDNESDAY 19TH FEBRUARY 2025 - AFTERNOON

14:00-17:20 Session 6 – Host-Pathogen Interactions : Targeting eucaryotic signaling pathways

14:00 Keynote lecture - Sagar BHOGARAJU
"Effectors of *Legionella pneumophila* and their interaction with the host ubiquitin system"

14:45 Maren KETTERER
"Revisiting effector functions: involvement of a putative T4SS effector in the envelope integrity of *Brucella*"

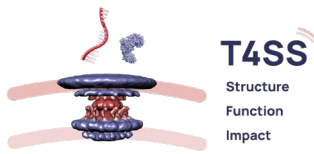
Felix METZ
15:05 "Exploring novel protein-protein interactions and functions of selected *Helicobacter pylori* Cag Type 4 secretion system (CagT4SS) outer proteins"

15:25-16:30 Coffee break & Poster Session 2

16:30 Main talk - Christoph DEHIO
"Translocation of YopJ family effector proteins through the VirB/VirD4 T4SS of *Bartonella*"

Carmen BUCHRIESER
17:00 "*Legionella pneumophila*: Assessment of effector secretion kinetics in real time in *Acanthamoeba*"

20:00 Diner Gala – Hôtel de ville



T4SS – Program per day
 THURSDAY 20TH FEBRUARY 2025

8:15-8:45	Welcome participants
8:45-10:05	Session 7 – T4SS Structure and Function : T4SS effectors recruitment
	Main talk - Samuel WAGNER
8:45	"The T4bSS of Legionella features a two-step secretion pathway with an inner membrane intermediate for secretion of transmembrane effectors"
	Chloé DUGELAY
9:15	"Exploring the structure and function of Brucella abortus virulence factor VirJ in T4SS effectors translocation"
9:35	Main talk - Carrie SHAFFER
	"Architectural asymmetry enables DNA transport through the Helicobacter pylori cag Type IV secretion system"
10:05-10:25	Coffee Break
10:25-13:00	Session 8 – Impact of Conjugative Transfer : Dissemination in the environment, Consequence on bacterial fitness, Mobilization
	Keynote lecture - Uli KLÜMPER
10:45	"Insights into the T4SS-mediated spread of plasmids and antimicrobial resistance"
	Matxalen LLOSA
11:10	"Bacterial conjugation – based tools for manipulating and exploring long-range horizontal gene transfer"
	Laurent TERRADOT
11:30	"Structural insights into a ParB-like protein of the F-plasmid that reprograms the gene expression profile of the recipient cell"
	Sarah BIGOT
11:50	"Competition between conjugative plasmids by fertility inhibition protein"
	Virginie LIBANTE
12:10	"Uncovering the role of IMEs in antimicrobial resistance and horizontal gene transfer"
12:30	Main Talk - Vincent BURRUS
	"Entry and surface exclusion of IncC plasmids and SGI1: an asymmetric interplay gene transfer"
13:00	Poster and talk prizes & Concluding remarks – Lunch bag (optional)