

**Measuring neutrino
interactions for
next-generation oscillation
experiments**

Report of Contributions

Contribution ID: 1

Type: **not specified**

Uncertainties in T2K analyses

Tuesday, October 22, 2024 9:00 AM (40 minutes)

Presenter: SKWARCZYNSKI, Kamil (Royal Holloway, University of London (GB))

Session Classification: Uncertainties in experiment and theory

Contribution ID: 2

Type: **not specified**

Uncertainties in NOvA analyses

Tuesday, October 22, 2024 9:40 AM (40 minutes)

Presenter: WOLCOTT, Jeremy (Tufts University)

Session Classification: Uncertainties in experiment and theory

Contribution ID: 3

Type: **not specified**

Uncertainties in SBN analyses

Tuesday, October 22, 2024 10:50 AM (40 minutes)

Presenter: PAPADOPOULOU, Afroditi

Session Classification: Uncertainties in experiment and theory

Contribution ID: 4

Type: **not specified**

Uncertainties developed for MINERvA analyses

Tuesday, October 22, 2024 11:30 AM (30 minutes)

Presenter: HARRIS, Deborah (York University)

Session Classification: Uncertainties in experiment and theory

Contribution ID: 5

Type: **not specified**

Uncertainties in SIS and hadronization

Tuesday, October 22, 2024 12:00 PM (30 minutes)

Presenter: TENA VIDAL, Julia (Tel Aviv University)

Session Classification: Uncertainties in experiment and theory

Contribution ID: 6

Type: **not specified**

Uncertainties in theory models 1

Tuesday, October 22, 2024 2:30 PM (30 minutes)

Presenter: GONZALEZ JIMENEZ, Raul (Universidad de Sevilla)

Session Classification: Uncertainties in experiment and theory

Contribution ID: 7

Type: **not specified**

Uncertainties in theory 2

Tuesday, October 22, 2024 2:00 PM (30 minutes)

Presenters: SOBCZYK, Joanna (JGU); SOBCZYK, Joanna (IFIC)

Session Classification: Uncertainties in experiment and theory

Contribution ID: 8

Type: **not specified**

Future uncertainties for oscillation experiments

Tuesday, October 22, 2024 3:00 PM (30 minutes)

Presenter: MUNTEANU, Laura (CERN)

Session Classification: Uncertainties in experiment and theory

Contribution ID: 9

Type: **not specified**

Panel discussion

Tuesday, October 22, 2024 4:00 PM (1 hour)

What uncertainties are we missing at the moment?

What is the roadmap for getting them?

What don't we have good prospects for that matters?

What are the real approximations in theory calculations vs what uncertainties can be provided?

Session Classification: Uncertainties in experiment and theory

Contribution ID: **10**

Type: **not specified**

QE on the nucleon: from bubble chambers to LQCD

Thursday, October 24, 2024 9:00 AM (40 minutes)

Presenter: MEYER, Aaron (Lawrence Livermore National Laboratory)

Session Classification: Free nucleon cross sections and neutron measurements

Contribution ID: 11

Type: **not specified**

What we don't know about Npi and nuclear effects in nu-D

Thursday, October 24, 2024 9:40 AM (40 minutes)

Presenter: KABIRNEZHAD, Minoo (Imperial College London)

Session Classification: Free nucleon cross sections and neutron measurements

Contribution ID: 12

Type: **not specified**

LQCD outlook and prospects

Thursday, October 24, 2024 10:50 AM (30 minutes)

Presenter: COLLINS, Sara (University of Regensburg)

Session Classification: Free nucleon cross sections and neutron measurements

Contribution ID: 13

Type: **not specified**

Discussion: next steps for bubble chamber and LQCD analysis

Thursday, October 24, 2024 11:20 AM (1 hour)

What is useful for theorists for LQCD?

Bubble Chambers: new data, new interpretations, use of more niche measurements

Session Classification: Free nucleon cross sections and neutron measurements

Contribution ID: 14

Type: **not specified**

Constraining free-nucleon measurements using kinematic separation

Thursday, October 24, 2024 1:50 PM (30 minutes)

Presenter: DOLAN, Stephen (LLR / CEA Saclay)

Session Classification: Free nucleon cross sections and neutron measurements

Contribution ID: 15

Type: **not specified**

MINERvA's free nucleon measurement and other neutron analyses

Thursday, October 24, 2024 2:20 PM (40 minutes)

Presenter: OLIVIER, Andrew (University of Notre Dame du Lac)

Session Classification: Free nucleon cross sections and neutron measurements

Contribution ID: 16

Type: **not specified**

Challenges and prospects for neutron detection

Thursday, October 24, 2024 4:00 PM (40 minutes)

Presenter: MANLY, Steve (University of Rochester)

Session Classification: Free nucleon cross sections and neutron measurements

Contribution ID: 17

Type: **not specified**

Neutron tagging in argon

Thursday, October 24, 2024 3:00 PM (30 minutes)

Presenter: PAPADOPOULOU, Afroditi

Session Classification: Free nucleon cross sections and neutron measurements

Contribution ID: 18

Type: **not specified**

Discussion: next steps for neutron measurements: H and beyond

Thursday, October 24, 2024 4:40 PM (50 minutes)

Session Classification: Free nucleon cross sections and neutron measurements

Contribution ID: **19**

Type: **not specified**

test

Session Classification: Free nucleon cross sections and neutron measurements

Contribution ID: 20

Type: **not specified**

Experiment introduction

Contribution ID: 21

Type: **not specified**

Overview of next-generation oscillation experiments

Monday, October 21, 2024 9:10 AM (40 minutes)

Presenter: WILKINSON, Callum (LBNL)

Session Classification: Experiment introduction

Contribution ID: 22

Type: **not specified**

T2K and NOvA's experience, with applications to future experiments

Monday, October 21, 2024 9:50 AM (40 minutes)

Presenter: WOLCOTT, Jeremy (Tufts University)

Session Classification: Experiment introduction

Contribution ID: 23

Type: **not specified**

Help from LAr-land (remote)

Monday, October 21, 2024 4:20 PM (40 minutes)

Presenter: FURMANSKI, Andrew (University of Minnesota)

Session Classification: Experiment introduction

Contribution ID: 24

Type: **not specified**

Help from CH-land

Monday, October 21, 2024 2:00 PM (40 minutes)

Presenter: MCFARLAND, Kevin (University of Rochester)

Session Classification: Experiment introduction

Contribution ID: 25

Type: **not specified**

Generator overview

Monday, October 21, 2024 11:00 AM (40 minutes)

Presenter: STOWELL, Patrick (University of Sheffield)

Session Classification: Generator introduction

Contribution ID: 26

Type: **not specified**

Tuning of generators

Monday, October 21, 2024 11:40 AM (40 minutes)

Presenter: TENA VIDAL, Julia (Tel Aviv University)

Session Classification: Generator introduction

Contribution ID: 27

Type: **not specified**

Overview of CC0pi modelling

Monday, October 21, 2024 2:40 PM (40 minutes)

Presenter: GONZALEZ JIMENEZ, Raul (Universidad de Sevilla)

Session Classification: Theory introduction

Contribution ID: 28

Type: **not specified**

Moving up into the 1pi region

Monday, October 21, 2024 3:40 PM (40 minutes)

Presenter: JACHOWICZ, Natalie (Gent University)

Session Classification: Theory introduction

Contribution ID: 29

Type: **not specified**

FSIs and The Inclusive Cross Sections

Wednesday, October 23, 2024 9:00 AM (30 minutes)

Presenter: Dr FRANCO PATIÑO, Juanma (IFIC, Valencia)

Session Classification: Final State Interactions

Contribution ID: **30**

Type: **not specified**

The Hadron Cascade

Wednesday, October 23, 2024 9:30 AM (30 minutes)

Presenter: NIEWCZAS, Kajetan (Ghent University, Belgium)

Session Classification: Final State Interactions

Contribution ID: **31**

Type: **not specified**

INCL for Neutrino Scattering

Wednesday, October 23, 2024 10:00 AM (30 minutes)

Presenter: ERSHOVA, Anna (LLR, École polytechnique)

Session Classification: Final State Interactions

Contribution ID: 32

Type: **not specified**

INCL in GEANT4 (remote)

Wednesday, October 23, 2024 11:00 AM (30 minutes)

Presenter: DAVID, Jean-Christophe (CEA)

Session Classification: Final State Interactions

Contribution ID: 33

Type: **not specified**

Neutrino Scattering in GEANT4 (remote)

Wednesday, October 23, 2024 11:30 AM (30 minutes)

Primary author: GRICHINE, Vladimir (LPI)

Presenter: GRICHINE, Vladimir (LPI)

Session Classification: Final State Interactions

Contribution ID: 34

Type: **not specified**

Discussion: Hadron Transport – In and Out of Medium

Wednesday, October 23, 2024 12:00 PM (20 minutes)

Session Classification: Final State Interactions

Contribution ID: 35

Type: **not specified**

Recent Multi-pion-production Measurements

Wednesday, October 23, 2024 4:00 PM (30 minutes)

Presenter: KLUSTOVA, Anezka (Imperial College London)

Session Classification: SIS and Alternate Probes

Contribution ID: 36

Type: **not specified**

What can Electron Constraints do for Neutrino Interaction Uncertainties ($0\nu\beta\beta$, $1\nu\beta\beta$, $N\nu\beta\beta$) (remote)

Wednesday, October 23, 2024 2:30 PM (40 minutes)

Presenter: ASHKENAZI, adi (MIT)

Session Classification: SIS and Alternate Probes

Contribution ID: 37

Type: **not specified**

What do Theorists Want From Alternate-probe Measurements

Wednesday, October 23, 2024 1:50 PM (40 minutes)

Presenters: ANKOWSKI, Artur (SLAC National Accelerator Laboratory, Stanford University); ANKOWSKI, Artur (University of Wroclaw)

Session Classification: SIS and Alternate Probes

Contribution ID: **38**

Type: **not specified**

Hadron-Argon Scattering Measurements

Wednesday, October 23, 2024 4:30 PM (30 minutes)

Presenter: DIURBA, Richard (Bern)

Session Classification: SIS and Alternate Probes

Contribution ID: 39

Type: **not specified**

Discussion: Incorporating Data From non-Neutrino Probe Measurements

Wednesday, October 23, 2024 3:10 PM (20 minutes)

Session Classification: SIS and Alternate Probes

Contribution ID: 40

Type: **not specified**

Statistical methods in cross-section extraction

Friday, October 25, 2024 9:00 AM (30 minutes)

Presenter: KOCH, Lukas (JGU Mainz)

Session Classification: Model dependence and data utility

Contribution ID: 41

Type: **not specified**

New methods for cross-section extraction

Friday, October 25, 2024 9:30 AM (30 minutes)

Presenter: GARDINER, Steven (Fermi National Accelerator Laboratory)

Session Classification: Model dependence and data utility

Contribution ID: 42

Type: **not specified**

OmniFold

Friday, October 25, 2024 10:00 AM (30 minutes)

Presenter: CUDD, Andrew (University of Colorado)

Session Classification: Model dependence and data utility

Contribution ID: 43

Type: **not specified**

Data releases and preservation

Presenter: PICKERING, Luke (STFC)

Session Classification: Future planning

Contribution ID: 44

Type: **not specified**

Successes and challenges in using XSEC measurements: theoretical perspective

Presenter: Dr MEGIAS, Guillermo D. (DPhP, CEA-Irfu (France) and University of Seville (Spain))

Session Classification: Future planning

Contribution ID: 45

Type: **not specified**

Discussion: data presentation

Session Classification: Future planning

Contribution ID: 46

Type: **not specified**

Data releases and preservation

Friday, October 25, 2024 11:00 AM (30 minutes)

Presenter: PICKERING, Luke (STFC)

Session Classification: Model dependence and data utility

Contribution ID: 47

Type: **not specified**

Successes and challenges in using XSEC measurements: theoretical perspective

Friday, October 25, 2024 11:30 AM (30 minutes)

Presenter: Dr MEGIAS, Guillermo D. (DPhP, CEA-Irfu (France) and University of Seville (Spain))

Session Classification: Model dependence and data utility

Contribution ID: 48

Type: **not specified**

Discussion: data presentation

Friday, October 25, 2024 12:00 PM (30 minutes)

Session Classification: Model dependence and data utility

Contribution ID: 49

Type: **not specified**

New directions for XSEC measurements

Friday, October 25, 2024 2:00 PM (50 minutes)

Presenter: CHERDACK, Daniel (University of Houston)

Session Classification: Future planning

Contribution ID: 50

Type: **not specified**

Discussion: future directions

Friday, October 25, 2024 2:50 PM (40 minutes)

Session Classification: Future planning

Contribution ID: 51

Type: **not specified**

WORKSHOP REGISTRATION

Monday, October 21, 2024 8:30 AM (30 minutes)

Contribution ID: 52

Type: **not specified**

Workshop dinner Restaurant Antico Pozzo - Trento

Monday, October 21, 2024 8:00 PM (2 hours)

Contribution ID: 53

Type: **not specified**

Workshop Restaurant Orso Grigio - Trento

Thursday, October 24, 2024 8:00 PM (2 hours)

Contribution ID: 54

Type: **not specified**

Welcome Incoming ECT* Director Prof. U. van Kolck

Monday, October 21, 2024 5:00 PM (15 minutes)

Presenter: VAN KOLCK, Ubirajara

Contribution ID: 55

Type: **not specified**

Workshop introduction

Monday, October 21, 2024 9:00 AM (10 minutes)

Presenters: WILKINSON, Callum (LBNL); WRET, Clarence (University of Oxford); PICKERING, Luke (STFC); DOLAN, Stephen (CERN)