

12th International Particle Accelerator Conference

Virtual Edition | May 24th - 28th, 2021 | Brazil



Experience and Advice for Future Organizers of JACoW Events,
IPAC'21 As An Example of a Virtual JACoW Event
JTM 2021 - Trieste

December 2021



12th International Particle Accelerator Conference

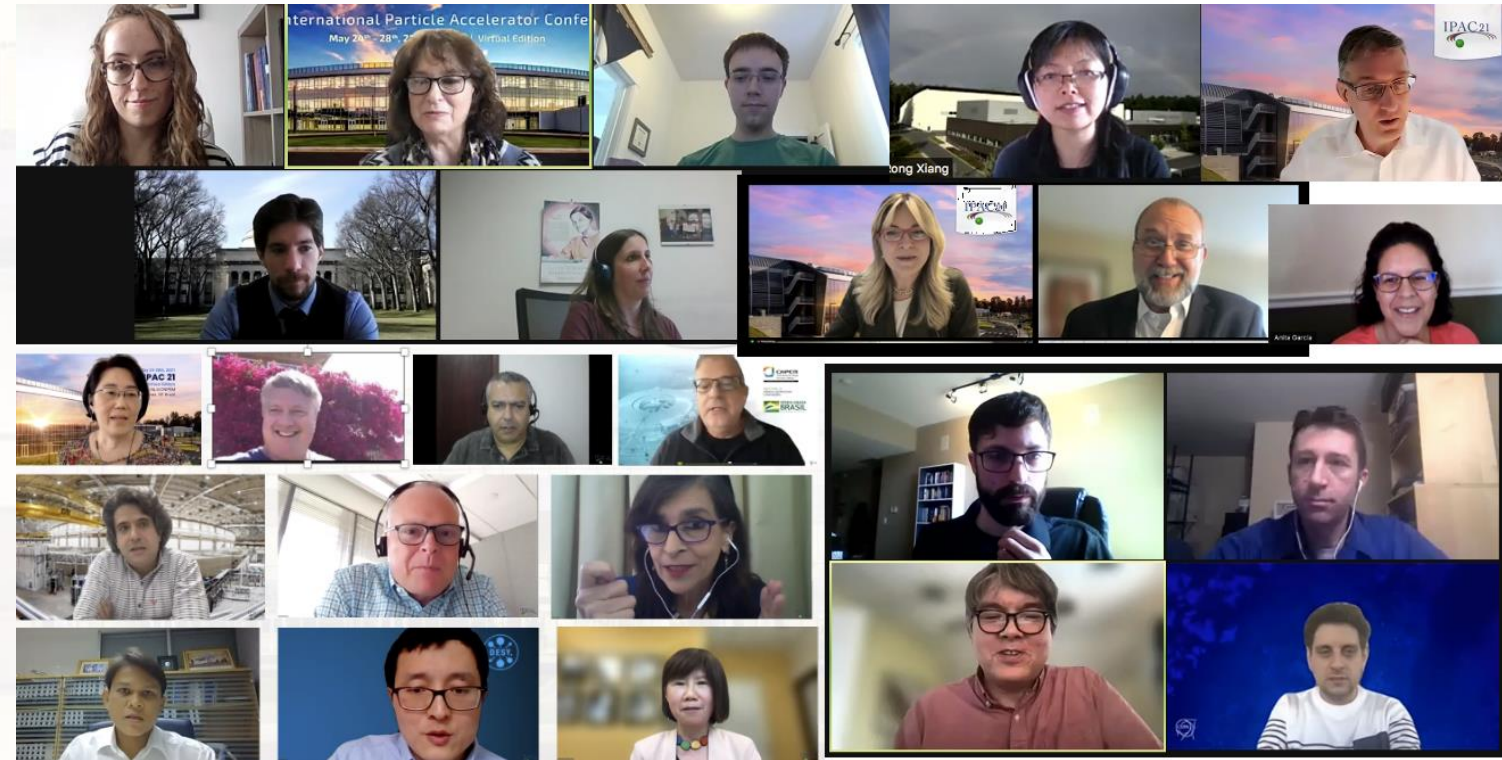
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In-person OC1/SPC1 in Jan. 2020



Virtual SPC2, SPC3



- Decision for virtual conference in Oct. 2020
- Main challenges to replicate in-person conference:
 - Include posters and full proceedings publication
 - Promote live discussions between different time zones
 - Attract industrial exhibitors

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IPAC21 Virtual Edition - Synoptic Table

UTC -3	Monday, May 24	Tuesday, May 25	Wednesday, May 26	Thursday, May 27	Friday, May 28
08:00	(MOPAB) 1 hour and 30 min Monday Poster Session A	(TUPAB) 2 hours Tuesday Poster Session A	(WEPAB) 2 hours Wednesday Poster Session A	(TUPAB) 2 hours Thursday Poster Session A	
09:00	Opening Chair: Liu Lin	Chair: Pratik Kiyelkar	Chair: Sandra Hedron	Chair: Ralph Assmann	
10:00	Scientific Opportunities for 4th Generation Storage Ring Light Sources Harry Weinstock, Jr. (JALOS)	Review of high brightness photoinjectors Houjun Qian (DESY)	Award Session 1- 2021 IPRF PAMP Distinguished Award: Young Min Yeh (University of Maryland at College Park) 2- 2021 IPRF PAMP Award: Di Xie (SLAC) 3- 2021 IPRF PAMP Award: Ralf Casel (DESY) 4- 2021 IPRF PAMP Award: David H. Dowling (ANL) 5- 2021 IPRF PAMP Award: Prof. Fay Chen (University of Wisconsin-Madison)	The Path to High Power FELs Robert Holzapfel (SLAC)	
11:00	Building the Facility for Rare Isotope Beams Thomas Gansbacher (MEL)	Future directions for particle physics in the US Young-Kee Kim (Univ. of Chicago)	Industry Session Chair: Rebecca Bernabeux Chair: Mal Raj Chair: Ming-Wei Kang Chair: Mark Beard Chair: Mikael Taniuchi Chair: John Boyd Chair: Toshiaki Kikuchi Chair: Chikako Yano Chair: Anna Grassellino Chair: Wolfgang Pfeiffer Chair: Mal Raj Chair: Ming-Wei Kang Chair: Robert David Chair: Mark Beard Chair: Mikael Taniuchi Chair: John Boyd	High Power Proton Sources for Neutrino Science Edward Pozdeyev (JINR)	
12:00	Women in Science : The Inconvenient Truth Marie Saubon (JUPREC)				My View on the 5 Most Beautiful Formulas in Accelerator Physics Kazuo Yokoyama (JYU)
13:00	Accelerating and Storing of BSM Chair: Holly Murray Chair: Fernando Barao Sade Chair: Ali Rezaei-Niazi Chair: Toshiaki Kikuchi Chair: Chikako Yano Chair: Anna Grassellino Chair: Wolfgang Pfeiffer Chair: Mal Raj Chair: Ming-Wei Kang Chair: Robert David Chair: Mark Beard Chair: Mikael Taniuchi Chair: John Boyd	Accelerating and Storing of BSM Chair: Holly Murray Chair: Fernando Barao Sade Chair: Ali Rezaei-Niazi Chair: Toshiaki Kikuchi Chair: Chikako Yano Chair: Anna Grassellino Chair: Wolfgang Pfeiffer Chair: Mal Raj Chair: Ming-Wei Kang Chair: Robert David Chair: Mark Beard Chair: Mikael Taniuchi Chair: John Boyd	Accelerating and Storing of BSM Chair: Holly Murray Chair: Fernando Barao Sade Chair: Ali Rezaei-Niazi Chair: Toshiaki Kikuchi Chair: Chikako Yano Chair: Anna Grassellino Chair: Wolfgang Pfeiffer Chair: Mal Raj Chair: Ming-Wei Kang Chair: Robert David Chair: Mark Beard Chair: Mikael Taniuchi Chair: John Boyd	Accelerating and Storing of BSM Chair: Holly Murray Chair: Fernando Barao Sade Chair: Ali Rezaei-Niazi Chair: Toshiaki Kikuchi Chair: Chikako Yano Chair: Anna Grassellino Chair: Wolfgang Pfeiffer Chair: Mal Raj Chair: Ming-Wei Kang Chair: Robert David Chair: Mark Beard Chair: Mikael Taniuchi Chair: John Boyd	Accelerator Needs for Materials Research: Opportunities for Synergistic Collaboration John Sato (LANL)
14:00	(MOPAB) 2 hours Monday Poster Session B	(TUPAB) 2 hours Tuesday Poster Session B	(WEPAB) 2 hours Wednesday Poster Session B	(TUPAB) 2 hours Thursday Poster Session B	
15:00					Announcements and Closing Remarks Chair: Alan White (EPFL)
16:00					Closing Remarks
17:00					Sirius visit

2h-poster

2h-live talks

2h-poster

- ✓ 10 live plenaries
- ✓ 45 pre-recorded Invited talks
- ✓ 50 pre-recorded Contributed talks
- ✓ 27 live Q&A session
- ✓ WISE
- ✓ Award session
- ✓ Industry session
- ✓ Special talk
- ✓ 30 Virtual Exhibitor Booths
- ✓ ≈ 1200 Posters with short pre-recorded videos (400 zoom rooms/day)
- ✓ Conference proceedings

- ✗ Student poster session
- ✗ Light peer-review

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Posters

Whova platform

Filter by: All Poster

Search by title, booth, or presenter

- All Poster
- 1 MO-MC1
- 1 MO-MC2
- 1 MO-MC3
- 1 MO-MC4
- 1 MO-MC5
- 1 MO-MC6
- 1 MO-MC7
- 1 MO-MC8
- 2 TU-MC1
- 2 TU-MC2
- 2 TU-MC3
- 2 TU-MC4
- 2 TU-MC5
- 2 TU-MC6
- 2 TU-MC7
- 2 TU-MC8
- 3 WE-MC1
- 3 WE-MC2
- 3 WE-MC3
- 3 WE-MC4
- 3 WE-MC5
- 3 WE-MC6

[MOPAB260] Optics Corrections with LOCO on Sirius Storage Ring

Sirius is a 4th generation 3GeV synchrotron light source at the Brazilian Center for Research in Energy and M...

Watch video

Presenters

Murilo B. Alves
Accelerator Physicist
Brazilian Synchrotron...

125 9 2

Enter

[THPAB257] Fast Orbit Corrector Power Supply in MTCA.4 Form Factor for Sirius Light Source

A novel fast orbit feedback (FOFB) hardware architecture has been pursued at Sirius, where fast orbit correct...

Watch video

Presenters

Augusto Giachero
Engineer
CNPEM

101 6 1

Enter

[THPAB259] High Level Applications for Sirius Accelerators Control

Sirius is a 4th generation 3 GeV synchrotron light source that has just finalised the first commissioning phase ...

Watch video

Presenters

Ana Oliveira
Brazilian Synchrotron...

125 10 13

Enter

[THPAB347] Status of Sirius Storage Ring RF System

The design configuration of the Sirius Light Source RF System is based on two superconducting RF cavities ...

Watch video

Presenters

André Pontes Barbes...
Physics Engineer
Brazilian Center for R...

Felipe Koj Godinho ...
LNL/CNPEM

Mark Wallner
RF Engineer
Brazilian Center for R... + 1 more

143 9 3

Enter

✓ POSTER

- 5-minute pre-recorded video
- Format-flexible pdf file
- Cover picture
- Abstract
- Short presenter bio
- ZOOM room to receive visitor live

✓ 2 Poster Sessions per day

- POSTER A: before live session
- POSTER B: after live session

✓ 400 ZOOM rooms per day

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Invited and Contributed Talks

	Chair: Ubaldo Iriso	Chair: Jim Clarke	Chair: Yongbin Leng
I n v i t e d	Full energy injection from the SACLA into the SPring-8 storage ring <i>Hirokazu Maesaka (RIKEN)</i>	The Progress of the In-Vacuum Superconducting Undulator Prototype for SHINE Project <i>Qiaogen Zhou (SARI)</i>	Superconducting Radio-Frequency Cavity Fault Classification Using Machine Learning at Jefferson Laboratory <i>Chris Tennant (JLab)</i>
	Advances in beam stability in low-emittance synchrotron light sources <i>Guimei Wang (BNL)</i>	Development of 36 GHz RF systems for RF linearisers <i>Alex Castilla (CERN)</i>	Non Invasive Bunch Length Measurements Exploiting Cherenkov Diffraction Radiation <i>Stefano Mazzoni (CERN)</i>
	Harmonic RF Cavities and Instabilities in Storage Rings <i>Marco Venturini (LBNL)</i>	Cold Powering Systems – MgB2 Based High-Current Power Transmission Lines for the HL-LHC Magnets: from Concept to Prototype Validation <i>Amalia Ballarino (CERN)</i>	Next generation sensor systems for online beam diagnostics <i>Meghana Patil (KIT)</i>
C o n t r i b u t e d	Commissioning results of LCLS-II MHz repetition rate electron source <i>Feng Zhou (SLAC)</i>	Newly Development of Ceramics Chamber with Integrated Pulsed Magnet for Super Narrow Bore in KEK-PF <i>Chikaori Mitsuda (KEK)</i>	Time-Resolved H-Beam Emittance Measurement at the SNS Linac Using a Laser Comb <i>Yun Liu (ORNL)</i>
	Record High Extraction Efficiency of Free Electron Laser Oscillator <i>Heishun Zen (Kyoto Univ.)</i>	Muon Ionization Cooling Experiment: Results & Prospects <i>Chris Rogers (STFC)</i>	Non-Invasive Gas Jet In-Vivo Dosimetry for Particle Beam Therapy <i>Joseph Wolfenden (Univ. of Liverpool)</i>
	Mitigation of Beam Instabilities in the Echo-Enabled Harmonic Generation Beamline for FLASH2020+ <i>Fabian Pannek (Univ. of Hamburg)</i>	Direct Response Time Measurements On Semiconductor Photocathodes <i>Gregor Loisch (DESY)</i>	Development of the prototype of the Cavity BPM system for SHINE <i>Jian Chen (SSRF)</i>
	Ringdown Measured in a Four-Bounce, 20 Meter Hard X-Ray Cavity <i>James MacArthur (SLAC)</i>	Injector Optimization with 480 kV Electron Gun for IR-FEL Operation at the Compact ERL at KEK <i>Olga Tanaka (KEK)</i>	Uncertainty Quantification for Virtual Diagnostic of Particle Accelerators <i>Adi Hanuka (SLAC)</i>

30 min. Q&A Session with 3 speakers

✓ Invited Talks

- 20-minutes pre-recorded video
- No recap
- 3 speakers on each session just for Q&A

30 min. Q&A Session with 4 speakers

✓ Contributed Talks

- 15-minutes pre-recorded video
- No recap
- 4 speaker on each session just for &A



Registration and abstract submission

Delegates using credit card

Delegates, Exhibitors or Labs using wire transfer

CNPEM
Payment System

Voucher

Whoova virtual platform

Christine
SPMS
Guardian



Authors

Abstracts

JACoW - SPMS



Todd
SPMS
Master



Registration and abstract submission

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- Do not underestimate the work needed to process wire transfers
- The Labs have different groups and each one will register separately

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Abstracts

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Registration and abstract submission

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Whoova virtual platform

- Do not underestimate the importance of the receipt

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Authors

Abstracts

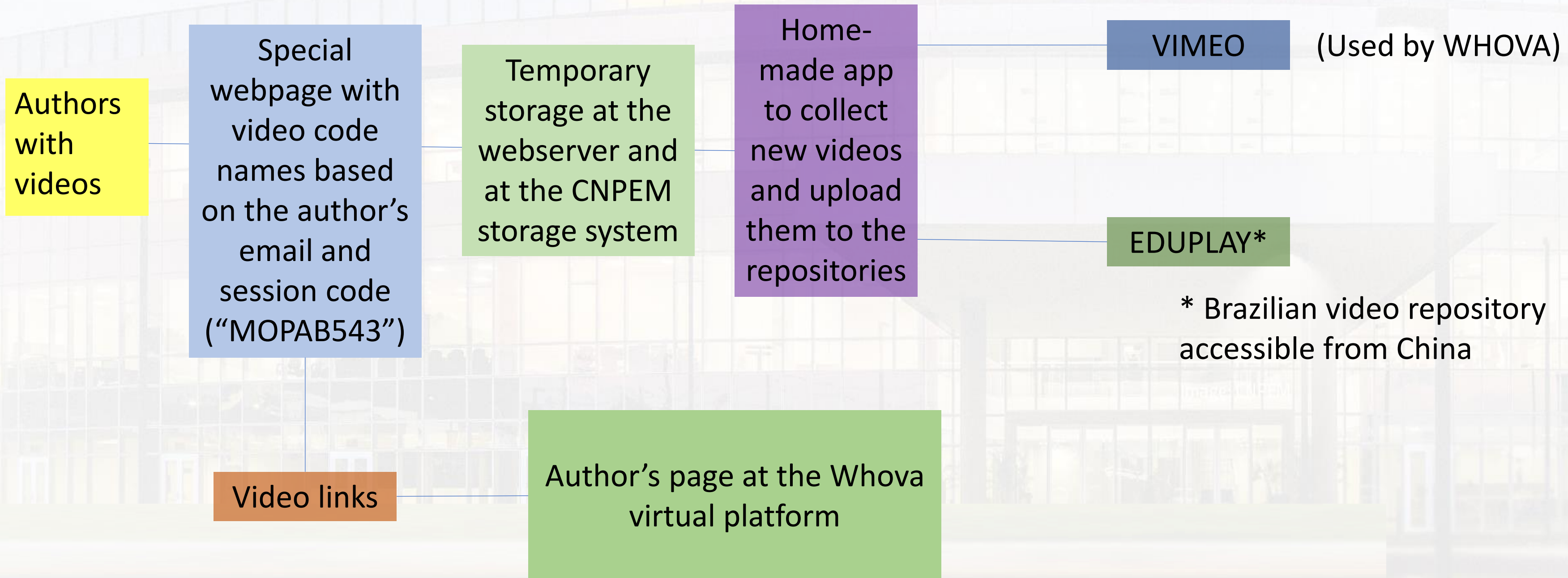
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Video upload system



Authors with videos

Special webpage with video code names based on the author's email and session code ("MOPAB543")

Temporary storage at the webserver and at the CNPEM storage system

Home-made app to collect new videos and upload them to the repositories

VIMEO

(Used by WHOVA)

EDUPLAY*

* Brazilian video repository accessible from China

Video links

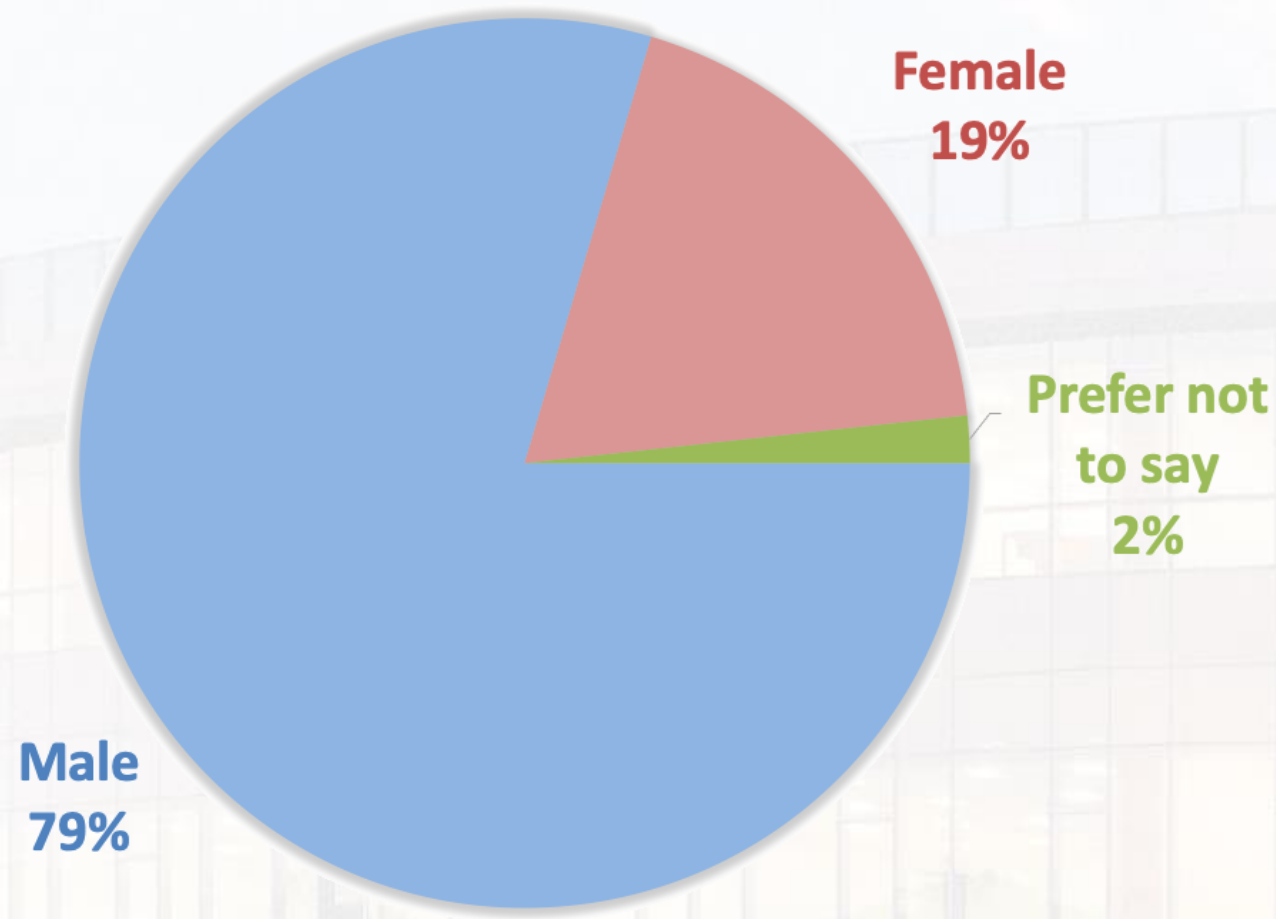
Author's page at the Whova virtual platform

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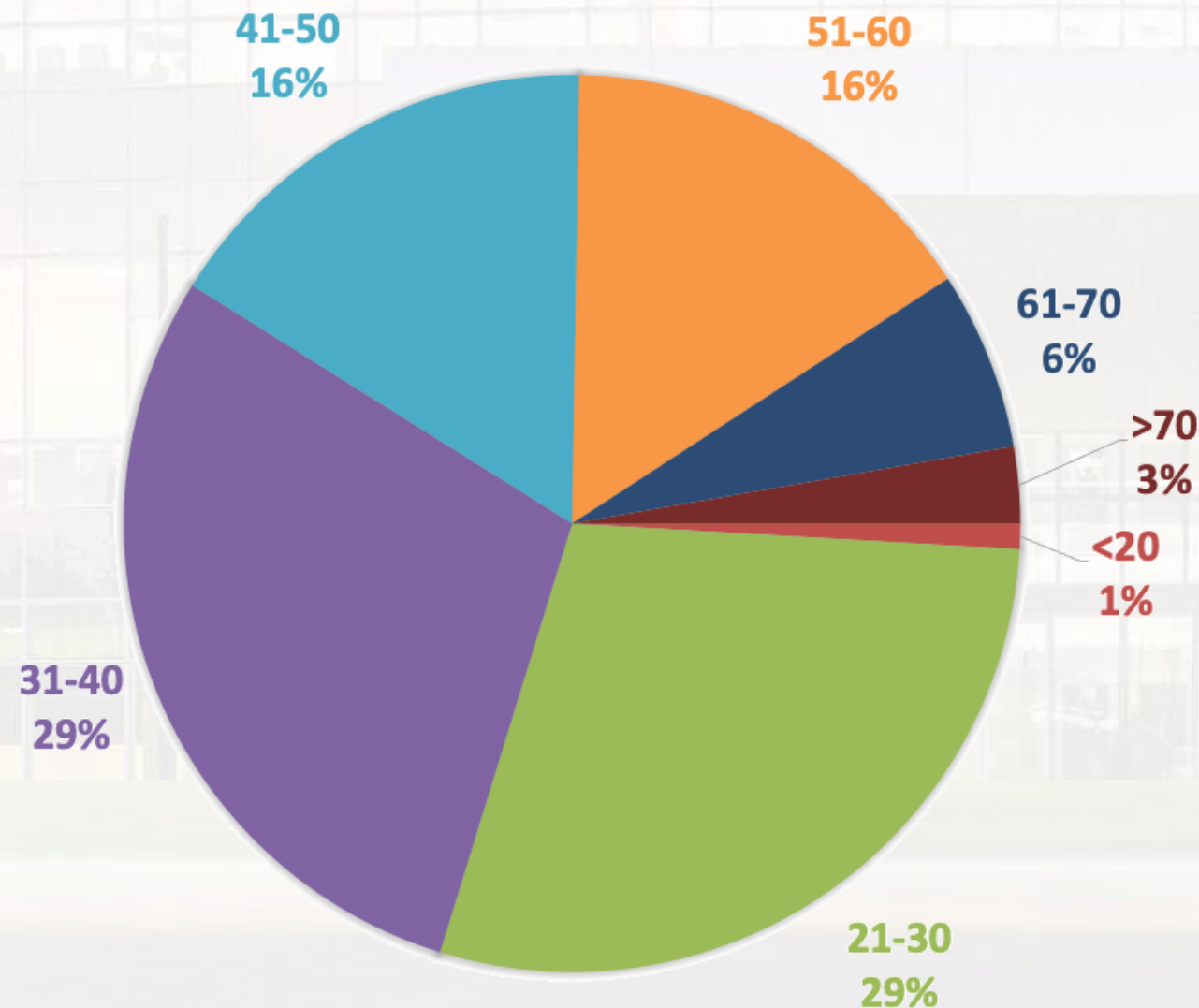


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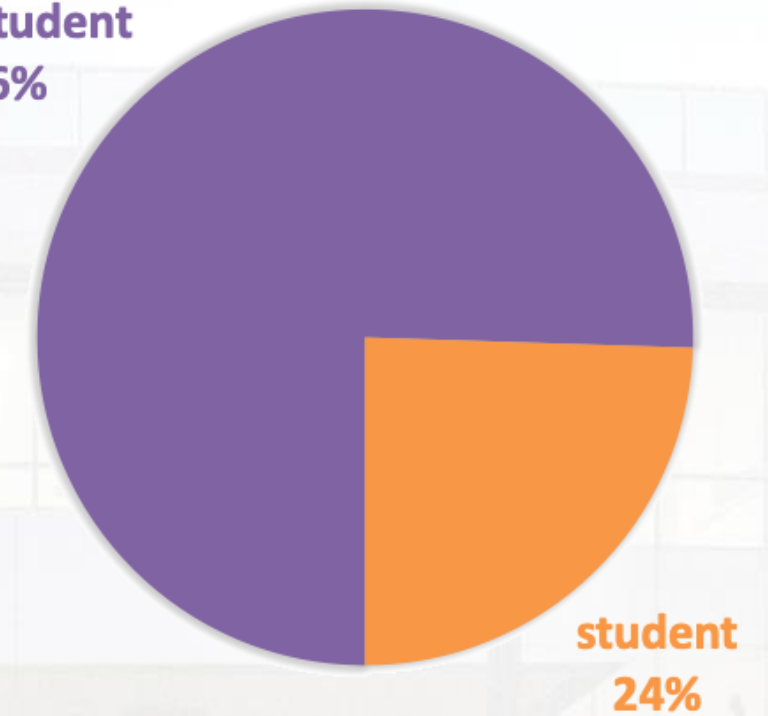


1750 attendees

AGE



non-student
76%



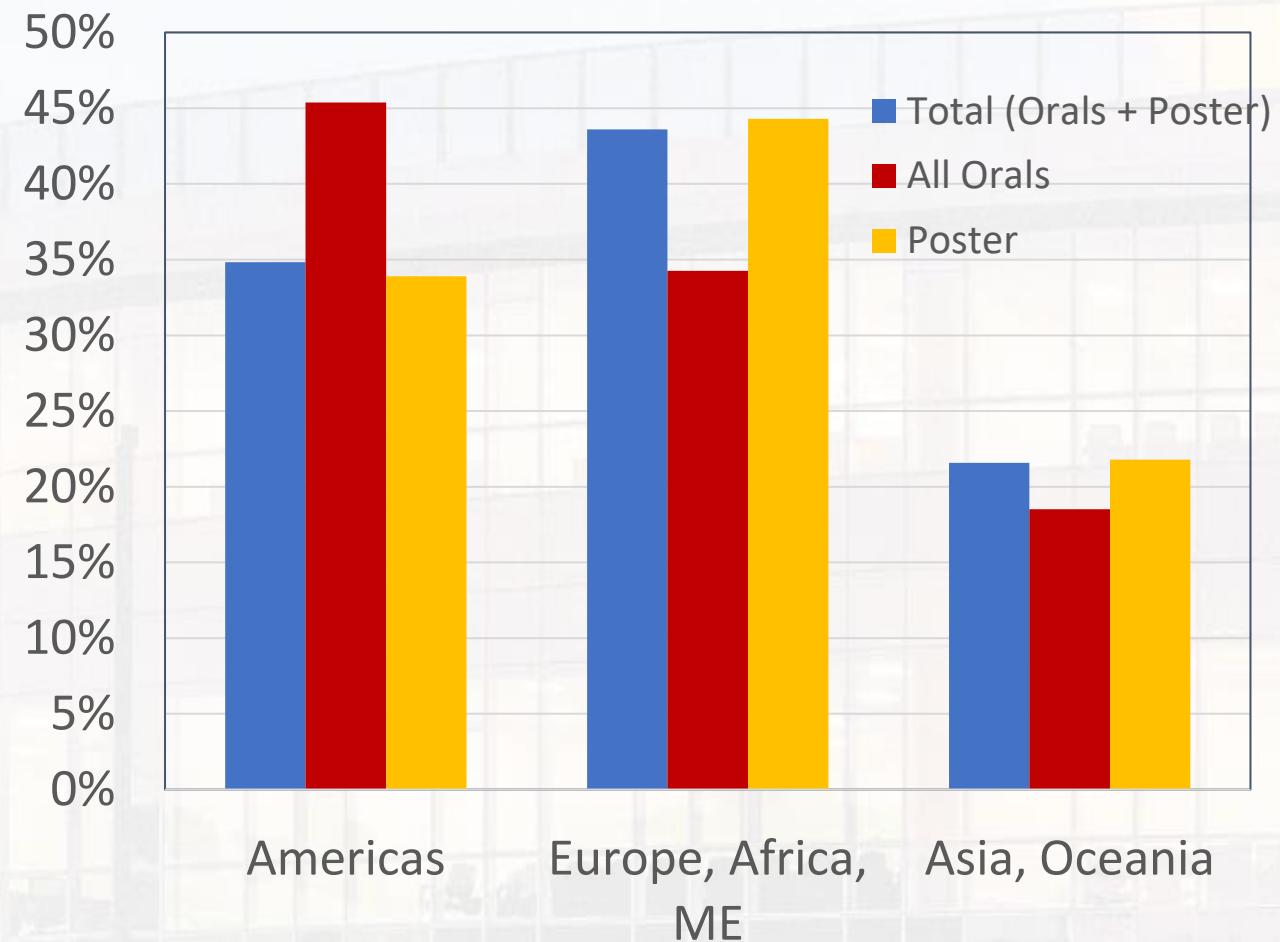
- Unlimited student grants (100% discount)
- 97 conceded
- Reference letter required

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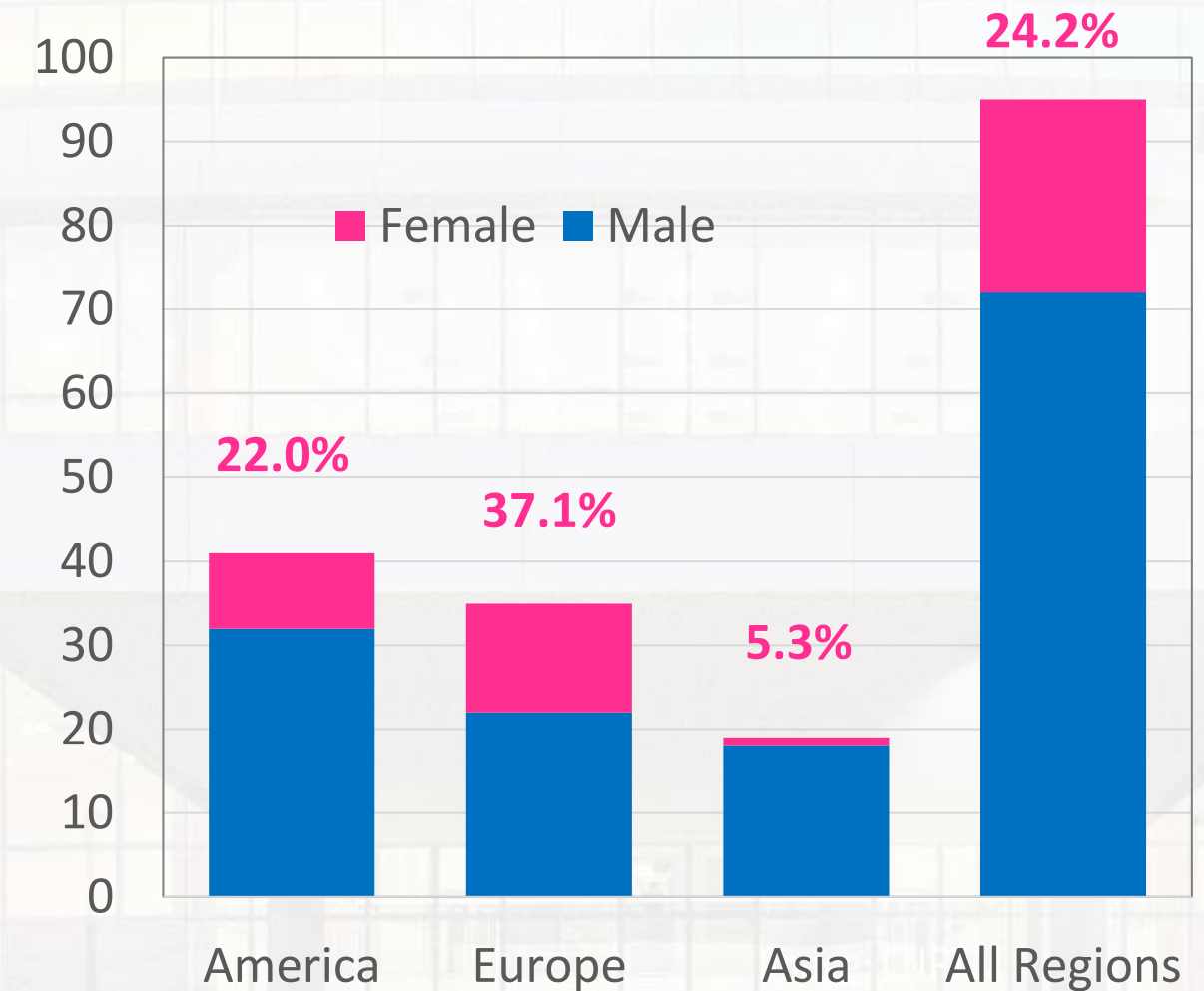


Contribution Counts by Region



	Total	All Orals	Posters
America	539	49	490
Europe	677	37	640
Asia	335	20	315
All Regions	1551	106	1445

Speaker (Con+Inv) Gender by Region



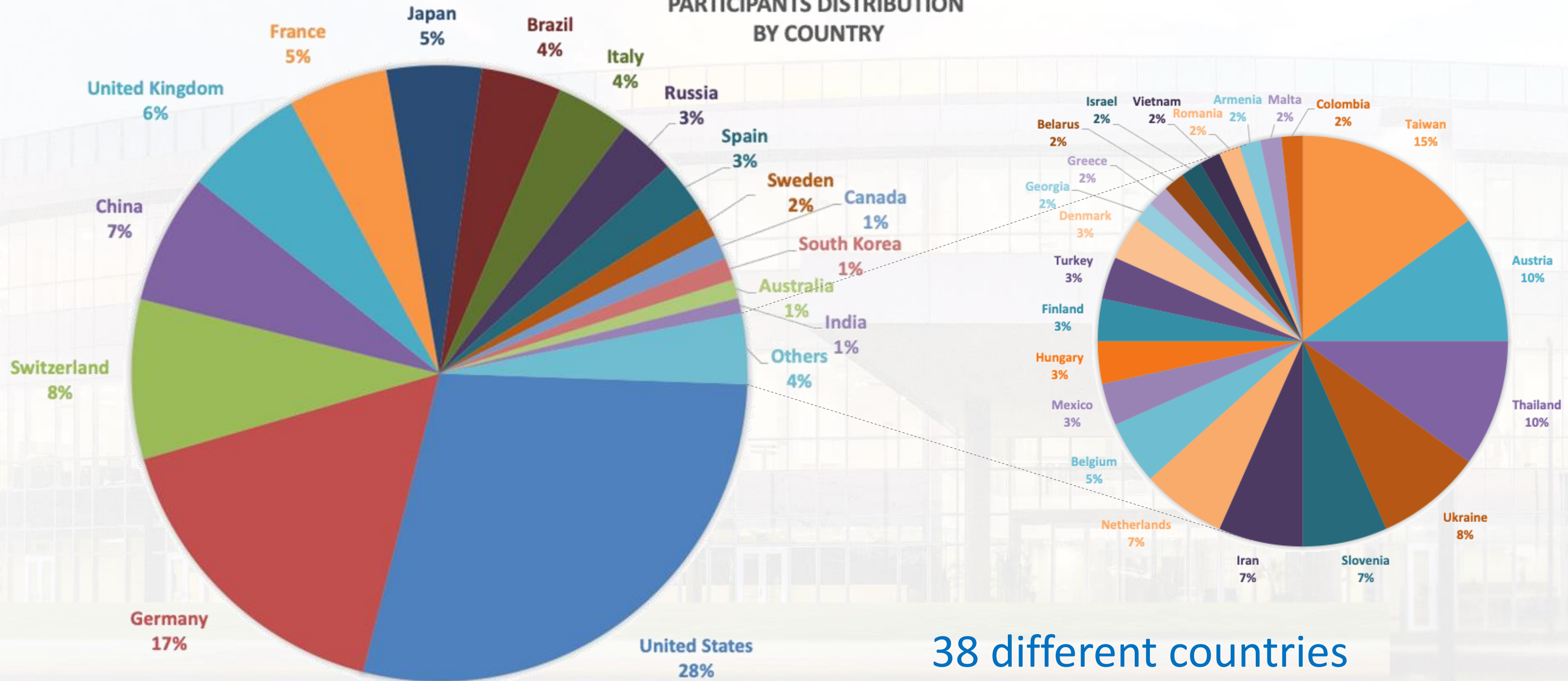
	Male	Female
America	32	9
Europe	22	13
Asia	18	1
All Regions	72	23

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PARTICIPANTS DISTRIBUTION BY COUNTRY



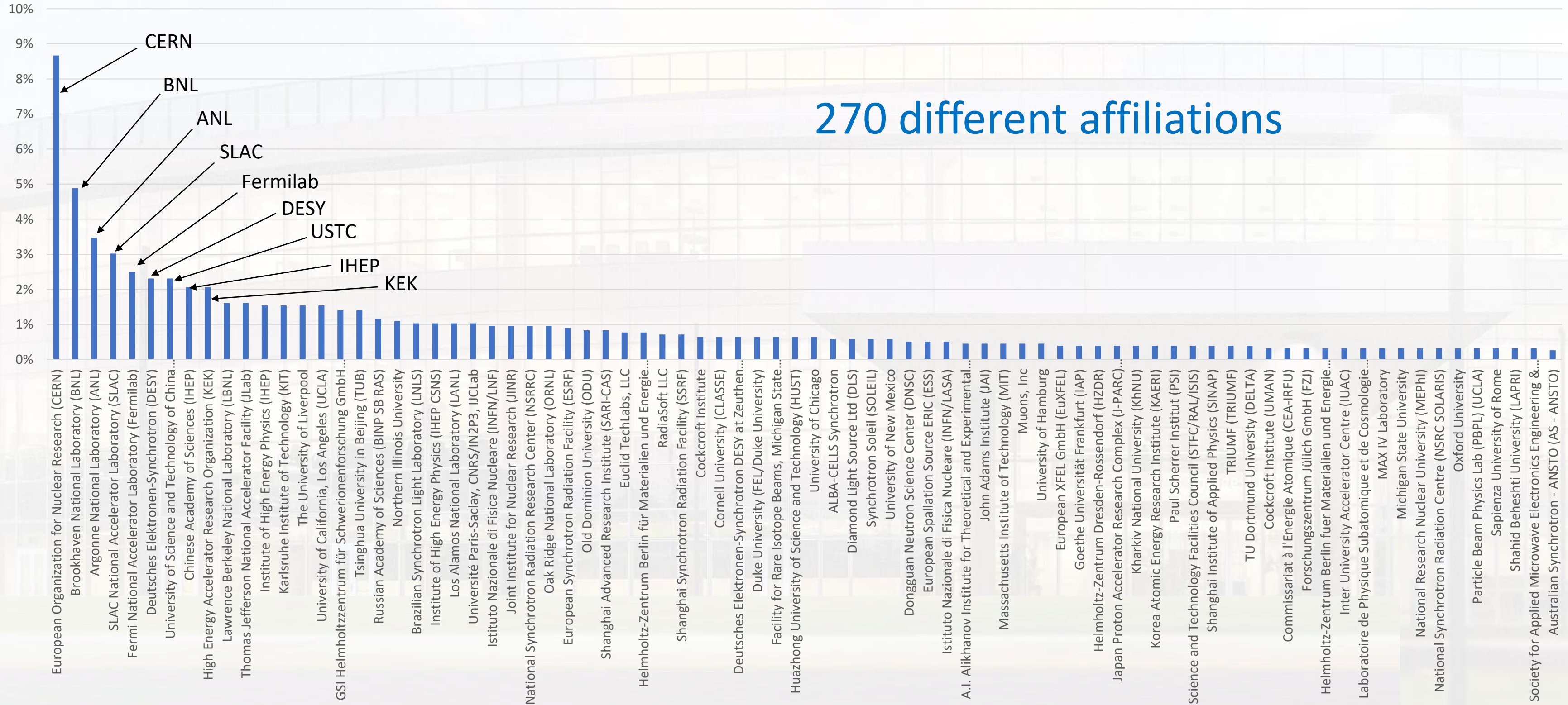
38 different countries

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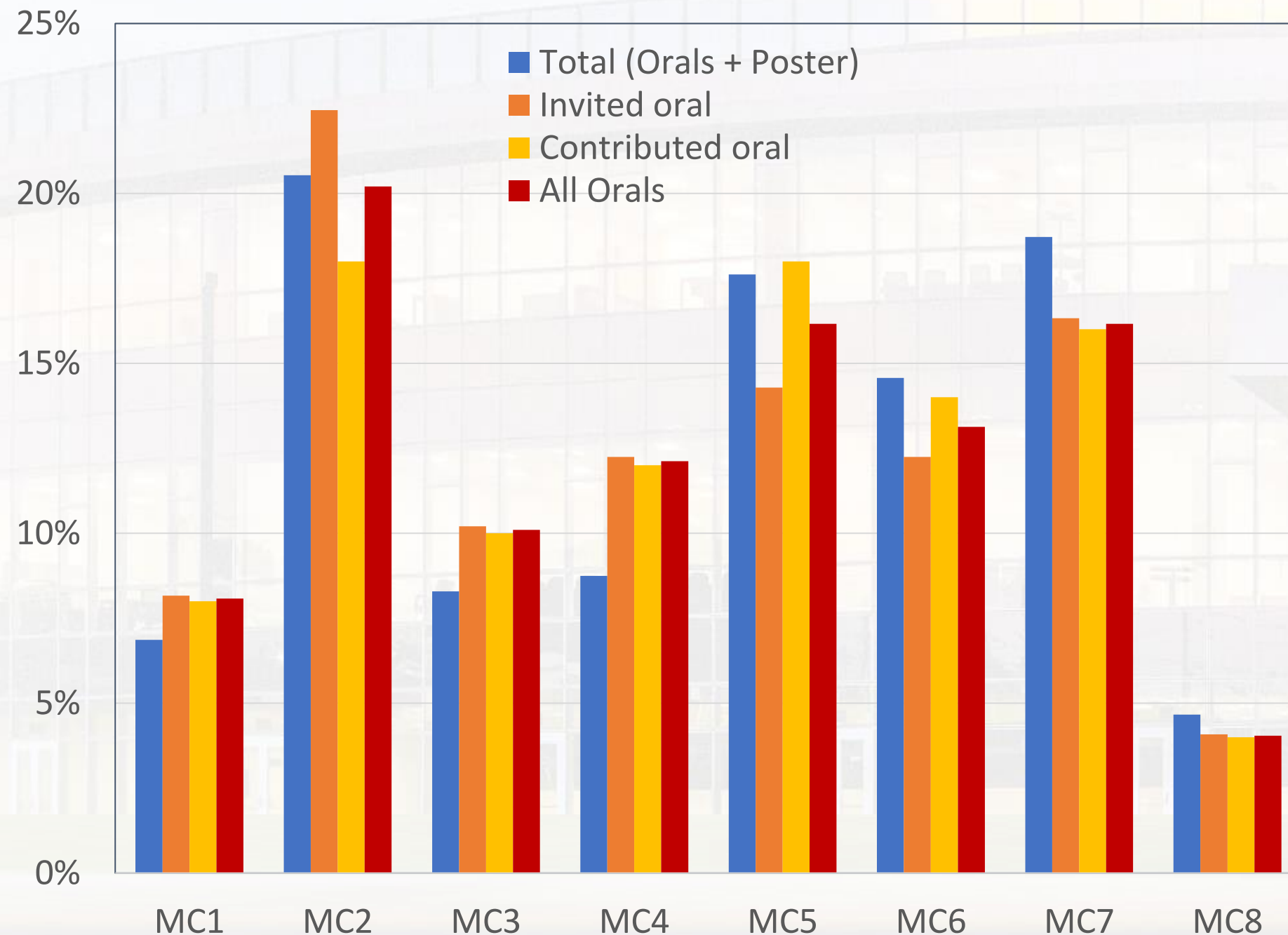
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CONTRIBUTION COUNTS BY AFFILIATION



Contribution Counts by Main Classification



MC 1: Circular and Linear Colliders

MC 2: Photon Sources and Electron Accelerators

MC 3: Novel Particle Sources and Acceleration Techniques

MC 4: Hadron Accelerators

MC 5: Beam Dynamics and EM Fields

MC 6: Beam Instrumentation, Controls, Feedback and Operational Aspects

MC 7: Accelerator Technology

MC 8: Applications of Accelerators, Technology Transfer and Industrial Relations



IPAC'21 Budget Balance (USD)

Expenses		
Editing expenses	\$ 61,204.91	40.3%
PCO (Professional Conference Organizer)	\$ 26,272.67	17.3%
Currency difference for 40k loan (3.75 → 5.61)	\$ 13,254.88	8.7%
SPC1 (Foz do Iguaçu)	\$ 11,303.35	7.4%
ZOOM	\$ 10,125.78	6.7%
CNPEM Technical Team	\$ 8,143.48	5.4%
IEEE PAST Prizes	\$ 8,000.00	5.3%
WHOVA	\$ 5,381.85	3.5%
WEBPAGE (Creation and maintenance for 10 years)	\$ 3,879.50	2.6%
Participation prizes	\$ 1,654.04	1.1%
Advertisement at IPAC19	\$ 1,469.19	1.0%
IEEE membership	\$ 636.62	0.4%
VIMEO	\$ 599.00	0.4%
Total	\$ 151,925.27	100%

Income		
Registration fee	\$ 171,321.00	86%
Exhibits	\$ 28,529.84	14%
Total	\$ 199,850.84	100%

Income – Expenses = \$ 47,925.57

Registration fee	Early	Regular
Delegates	\$ 120	\$ 160
Students*	\$ 50	\$ 70
Exhibitors	\$ 1000	\$ 1400

* All students who applied for grants were exempted from the registration fee.

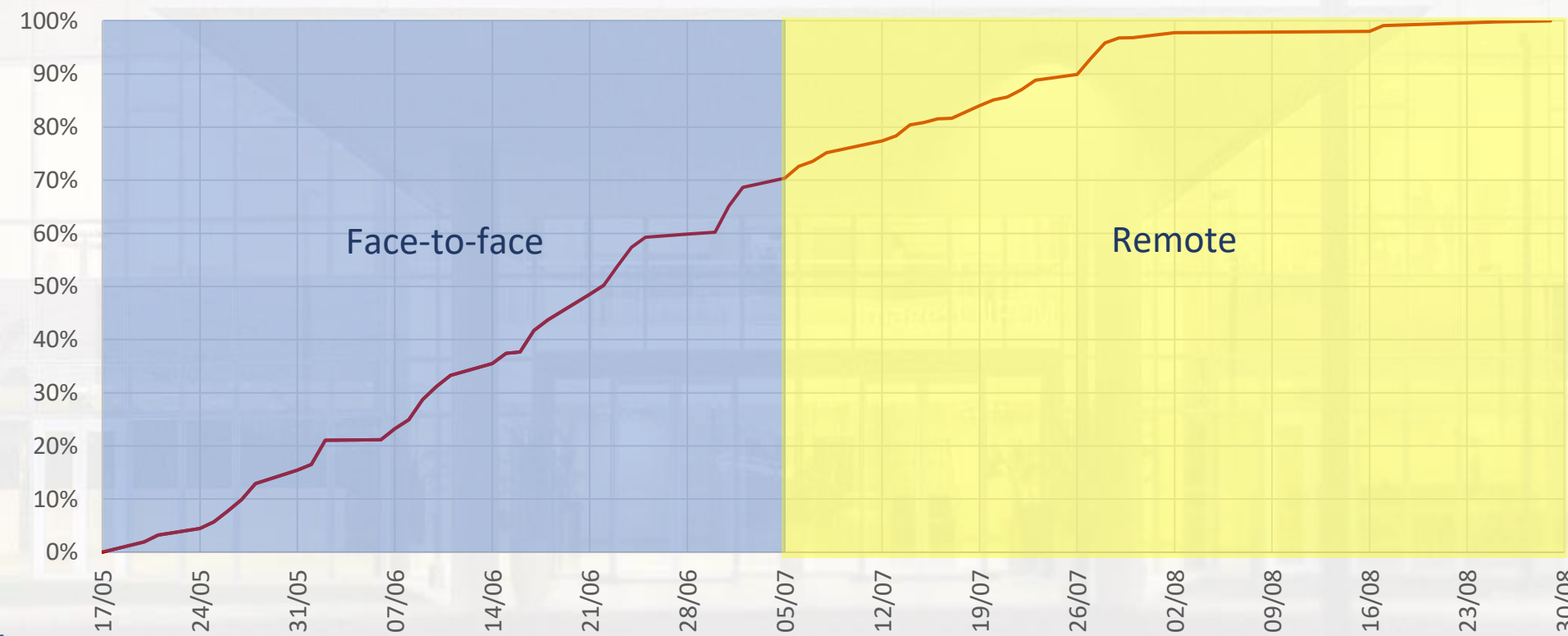
Local Editorial Team

- large area was adapted to receive editors with security measures for covid
- 1 local editor-in-chief
- 8 newbie editors were hired for 3 months. Requirements:
 - experience with Word & LaTeX
 - English speaking
 - availability for face-to-face → remote (1 suspicion of covid, not confirmed)
 - problem with LaTeX package required extra effort to finalize proceedings



Volker
SPMS
Wizard

IPAC'21 editorial evolution - Total of 1296 papers



Start: May 17

Final proceedings publication: Sep. 10



Editorial Costs

Item	USD	%
Editor's contract (8 editors for 3 months)	26,467.29	43%
CatScan upgrade (including lot of taxes)	16,091.02	26%
Computer rental	6,200.00	10%
Conference Proceedings – Volker Schaa (incl. lot of taxes)	4,911.13	8%
Brazilian Team at JTM 2019 (Santos) and 2021	2,197.28	4%
Editor's Room Office preparation	1,864.49	3%
Adobe License rental	1,459.20	2%
Office Infrastructure (food, paper, coffee, etc.)	796.79	1%
PitStop License rental	756.00	1%
Printer rental	461.73	1%
Total	61,204.91	100%

Around 50 usd/paper

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Thank you

