Report from the Speaker's Bureau

CALICE Collaboration Meeting

October 12th, 2022

François Corriveau

on behalf of the Speakers' Bureau

CALICE Speakers' Bureau

Role

Manage Publications (Analysis Notes and Papers)

Set up Editorial Boards, Indico pages and follow the review process

Participation to Conferences

Before: call for contributions, organize speakers, rehearsals, distribute slides or posters

After: review proceedings, collect documents, update web pages

Organization of Analysis Meetings every ~2-3 months if possible

Others

Composition

Jerry Blazey (NIU)	√	
Vincent Boudry (LLR)	√	
Wataru Ootani (Tokyo)	√	
François Corriveau (McGill)	√	Chair
Frank Simon (MPP)	√	ex-officio as IB Chair
Roman Pöschl (LAL)	√	ex-officio as Spokesperson

meet once or twice a year

last: January 2022

next: TBD

Theses

https://twiki.cern.ch/twiki/bin/view/CALICE/CaliceTheses

TWiki > CALICE Web > SpeakersBureau > CaliceTheses (2022-04-18, FrancoisCorriveau)

Edit Attach PDF

CALICE Theses

The following theses have been written using CALICE data. These should NOT be regarded as official CALICE results, but are the responsibility of the students concerned.

Ph.D. Theses

- Kostiantyn Shpak Development and optimization of highly granular silicon tungsten electromagnetic calorimeter for the International Linear Collider (LLR, École polytechnique, January 2018)
- Sviatoslav Bilokin Hadronic showers in a highly granular silicon-tungsten calorimeter and production of bottom and top quarks at the ILC (LAL and Université Paris Sud, Université Paris Saclay; July 2017)

etc..

29 listed theses

Groups are strongly encouraged to submit CALICE-related theses here !

still no change since 2018 .. but ..

Archeological Search for CALICE-related Theses (1)

1. Optimierung von hochauflösenden Sampling-Kalorimetern mit szintillatorbasierter SiPM-Auslese. Phi Chau(Mainz U.) (Jun 23, 2022)

2. Particle Flow Studies with Highly Granular Calorimeter Data. Daniel Heuchel(Heidelberg U.) (2022)

3. Performance of High Granularity Calorimeter prototypes for the CMS HL-LHC upgrade in beam test experiments at CERN. Shubham Pandey(IISER, Pune) (2022)

4. Analog Hadronic Calorimeter for a Future Linear Collider. Amine Elkhalii(Wuppertal U.) (Oct 28, 2020)
5. A Low-Power Silicon-Photomultiplier Readout ASIC for the CALICE Analog Hadronic Calorimeter. Yuan Zhenxiong(Kirchhoff Inst. Phys.) (2020)
6. Towards Precision Time and Energy Measurements in Highly Granular Hadronic Calorimeters. Christian Graf(Munich, Tech. U.) (2020)
7. Studies of the Response of Silicon Photomultipliers and Testbeam Data Analysis of a Highly Granular Analog Hadron Calorimeter Prototype. Sascha Christian Krause(Mainz U.) (2020)
8. Study of semi-digital hadronic calorimeter and study of physics channel (etc..) in the Circular Electron Positrion Collider of \sqrt s = 240GeV. Bing Liu(Lyon, IPN) (2020)
9. Data acquisition software development and physics studies for future lepton colliders. Tom Coates(Sussex U.) (Dec 11, 2019)
10. Energy Reconstruction in Highly Granular Calorimeters for Future Electron-Positron Colliders. Yasmine Israeli(Munich, Tech. U.) (2019)
11. Time Resolved Imaging Calorimetry. Sebastian Piet Laurien(U. Hamburg (main)) (Dec 13, 2018)
12. Time development of hadronic showers in a Highly Granular Analog Hadron Calorimeter. Eldwan Brianne(DESY) (2018)
13. Calibration and Analysis of Data taken with the Technological Prototype of the Analog Hadron Calorimeter (AHCAL) for a Detector at the International Linear Collider. Ambra Provenza(DESY) (2018)
14. Jet Energy Measurements at ILC:Calorimeter DAQ Requirements and Application in Higgs Boson Mass Measurements. Aliakbar Ebrahimi (Nov 29, 2017)
15. Développement d'un algorithme de suivi de particules pour l'ILC : outils de surveillance de qualité de données en ligne. Rémi Ete(Lyon, IPN) (Mar 8, 2017)
16. Comparison of Two Highly Granular Hadronic Calorimeter Concepts. Coralie Neubueser(U. Hamburg, Dept. Phys.) (Oct 26, 2016)
17. Comparison of Two Highly Granular Hadronic Calorimeter Concepts. Coralie Neubüser(U. Hamburg, Dept. Phys.) (Oct 26, 2016)

37 new ones found up to now

Archeological Search for CALICE-related Theses (2)

18. Scintillator Calorimeters for a Future Linear Collider Experiment. Oskar Hartbrich(Hasylab, DESY) (Jul 22, 2016)
19. Analysis of an integrated readout layer for use in a highly granular analog hadron calorimeter. Heath J. LeFevre(Northern Illinois U.) (2016)
20. Measuring Hadronic Jets at the ILC - From Particle Flow Calorimetry to the Higgs Self-Coupling. Benjamin Hermberg(U. Hamburg, Dept. Phys.) (Sep 22, 2015)
21. Calorimetría hadrónica con lectura semidigital basada en cámaras de planos resistivos de vidrio para experimentos en colisionadores lineales e+e-. Jorge Berenguer Antequera(Madrid U.) (Mar 6, 2015)
22. Comparison of Iron and Tungsten Absorber Structures for an Analog Hadron Calorimeter. Clemens Günter(U. Hamburg, Dept. Phys.) (Feb 4, 2015)
23. The time development of hadronic showers and the T3B experiment. Christian Soldner(Munich U.) (Jun 6, 2013)
24. Design of a glass resistive plate chamber for the upgrade of the Compact Muon Solenoid muon system. Sander Julien H Vanheule(Gent U.) (2013)
25. Silicon Photomultipliers in High Energy and Space Applications. Alessandro Berra(Insubria U., Como) (Jun 22, 2012)
26. Entwicklung eines integrierten LED-Kalibrationssystems und Studien zur Ortsauflösung für das szintillatorbasierte hadronische CALICE Kalorimeter. Sebastian Weber(Wuppertal U.) (Jun 15, 2012)
27. Interactions of Particles with Momenta of 1–10 GeV in a Highly Granular Hadronic Calorimeter with Tungsten Absorbers. Ching Bon Lam(Twente U. Tech., Enschede) (Apr 30, 2012)
28. Commissioning and LED system tests of the engineering prototype of the analog hadronic calorimeter of the CALICE collaboration. Oskar Hartbrich(Wuppertal U., Dept. Math.) (2012)
29. Scintillation Light Detection and Application of Silicon Photomultipliers in Imaging Calorimetry and Positron Emission Tomography. Klaus Alexander Tadday(Heidelberg U.) (Dec 14, 2011)
30. Triple gauge couplings and polarization at the ILC and leakage in a highly granular calorimeter. Ivan Marchesini(Hamburg U.) (Dec, 2011)
31. Caractérisation d'un calorimètre hadronique semi-digital pour le futur collisionneur ILC. Robert Kieffer(Lyon, IPN) (Oct 26, 2011)
32. Hadronic Imaging Calorimetry. Alexander Kaplan(Heidelberg U.) (Jun 1, 2011)
33. Hadron showers in a highly granular calorimeter. Benjamin Lutz(Hamburg U.) (Nov, 2010)
34. Etude d'un prototype de calorimètre électromagnétique auprès de l'expérience CALICE dans le cadre du projet "International Linear Collider".. Mustapha Benyamna(Clermont-Ferrand U.) (May 19, 2010)
35. Front-End Electronics in calorimetry : from LHC to ILC. Christophe de la Taille(Orsay) (Sep 25, 2009)
36. Commissioning of the readout electronics for the prototypes of a hadronic calorimeter and a tailcatcher and muon tracker. Benjamin Lutz(Hamburg U.) (Dec, 2006)
37. Commissioning of an LED calibration and monitoring system for the prototype of a hadronic calorimeter. Nanda Wattimena(Hamburg U.) (Dec, 2006)

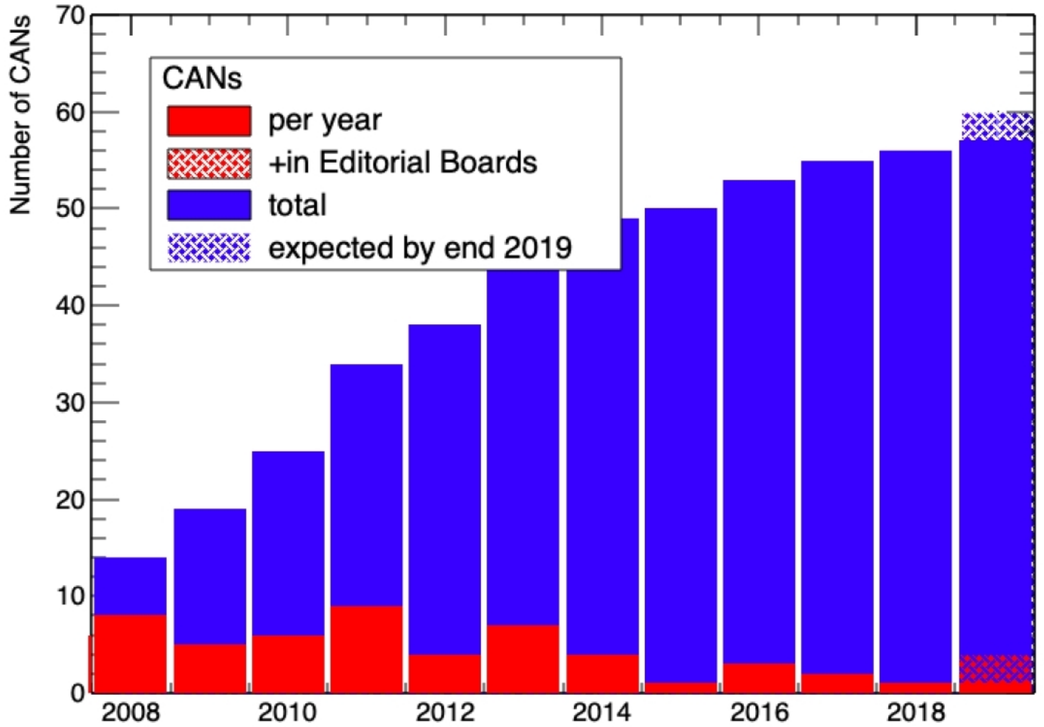
Please have a look ..

Analysis Notes

https://twiki.cern.ch/twiki/bin/view/CALICE/EditorialBoards

60 available
2 on hold in EB
1 in EB (#61)
1 in EB+review (#63)
2 turned into paper

no change since 2019



from Roman,
(April 2019)

Although nowadays one often goes directly to a publication, groups are strongly encouraged to write down notes on their current work, also as incentives for more papers.

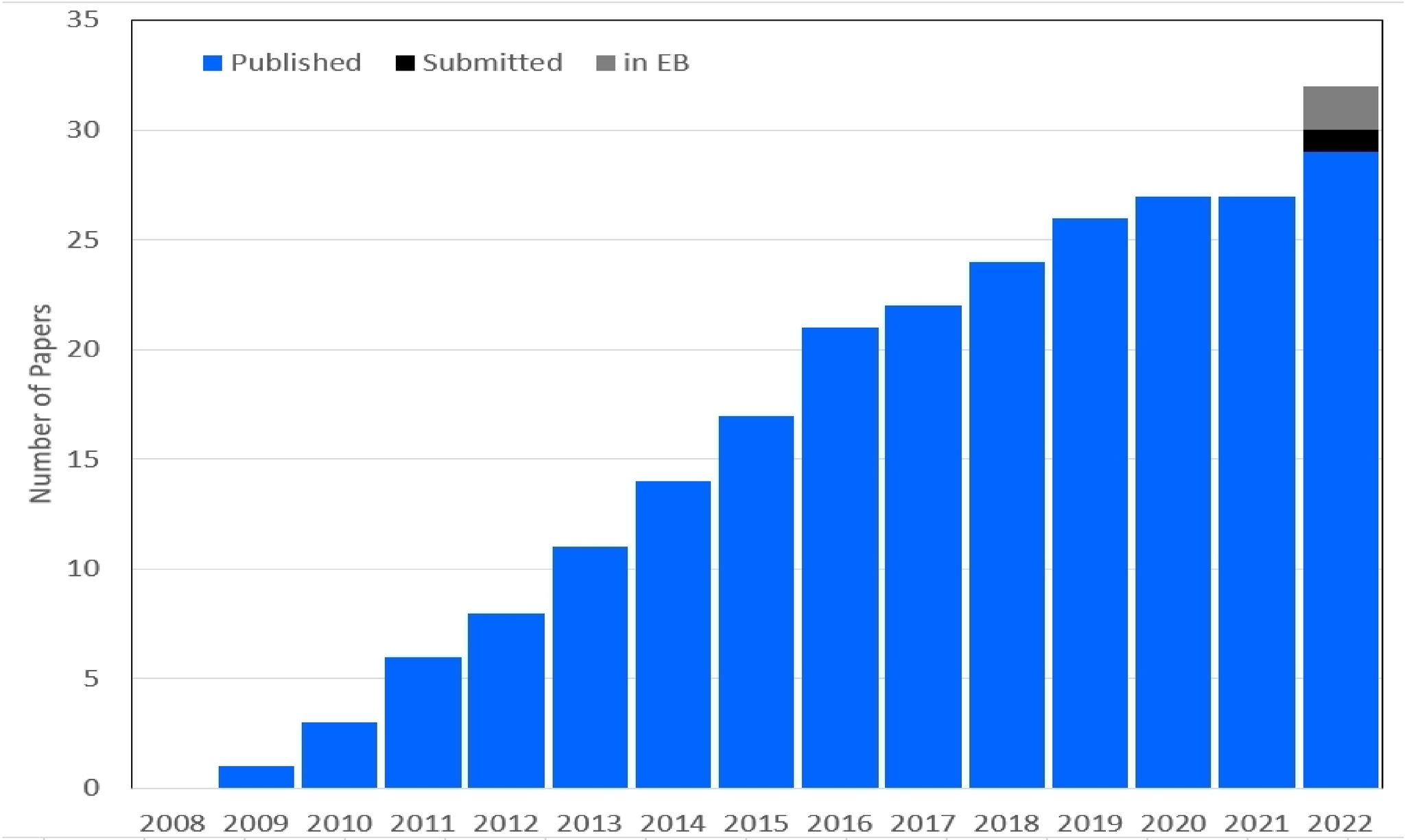
Papers

https://twiki.cern.ch/twiki/bin/view/CALICE/EditorialBoards

29 published
4 on hold/stopped
2 submitted
1 in EB

	Board	Authors	Title	
Paper031 -> CALICE-PUB-2020-001	Fouz, Cvach, Simon	Liu, Laktineh, Yang	Particle ID in SDHCAL using BDT	Link to drafts
last **Paper032 -> CALICE-PUB-2022-001**	Fouz, Cvach, Simon	Liu, Laktineh	Hadron Energy Reconstruction in SDHCAL using BDT	Link to drafts
Paper033	Kawagoe, Grenier, Corriveau	Krüger, Sefkow	AHCAL Technological Prototype	Link to drafts
done **Paper034 -> CALICE-PUB-2022-002**	Chadeeva, Sicking, White	Boumediene	Description and stability of SDHCAL	Link to drafts
Paper035	Zerwas, Sefkow, Peitzmann	Krüger	HGCAL+AHCAL Performance	Link to drafts
new *Paper036*	Takeshita, Bilki, Irles	Garcia	SDHCAL Angular Performance	Link to drafts

Papers


Published
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in EB
Number of Papers
0
5
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35
2008
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Status of Papers

Paper032 – SDHCAL

https://arxiv.org/abs/2202.09684, published in 2020 JINST 15 P10009

Paper033 – AHCAL

approved by the collaboration in September 2022

Congratulations to Katja et al.!

https://arxiv.org/abs/2209.15327, to be submitted to JINST

Paper034 – SDHCAL

https://arxiv.org/abs/2207.06291, published in 2022 JINST 17 P07017

Paper035 – AHCAL+HGCAL (i.e. with CMS)

approved by the collaboration, submitted to ArXiV

Paper036 – SDHCAL

currently in second EB round

MC-based Papers

Three such papers by CALICE collaboration members have been recently proposed.
They are MC-based, not using CALICE data and thus justifying limited authorships:

"Time assisted energy reconstruction in a highly granular hadronic calorimeter",
C. Graf and F. Simon. https://arxiv.org/abs/2203.01317, published in JINST 17 P08027.

new "Machine-learning-based prediction of parameters of secondaries in hadronic showers using calorimetric observables", M. Chadeeva and S. Korpachev. May 2022.
https://arxiv.org/abs/2205.12534

"Generation of Artificial Neutral Hadron Showers in A Highly Granular Calorimeter using Cycle-Consistent Neural Networks", J. Rolph, E. Garutti and G. Kasieczka. A draft exists, the AHCAL geometry is used. Status?

CALICE is favorable to such initiatives and appreciates being made aware of them via the Speakers Bureau in order to resolve any potential conflict and satisfy collaboration rules.

Conferences

https://twiki.cern.ch/twiki/bin/view/CALICE/CaliceConferenceTalks

2022 (participation to 10 events)

CEPC 2022 (October 24-28, 2022, Nanjing/IHEP, virtual)	1-talks (+1?)	25-26
ECFA Workshop 2022 (October 5-7, 2022, DESY)	1 talk, 2 posters	
TWEPP 2022 (September 19-23, 2022, Bergen)	-	
• ICHEP 2022 (July 6-13, 2022)	4 abstracts submitted, 3 talks	
• NDIP 2020 (July 4-8, 2022)	1 abstract submitted	
• NewTrends 2022 (June 26 - July 2, 2022) Abstract deadline: end of March 2022	*postponed*	
• Pisa 2022 (May 22-28,2022) Abstract deadline: 20 February 2022	1 talk	
• CALOR 2022 (Sussex, UK, May 16-20, 2022) Abstract deadline: 11 March 2022	10 talks	
• QM 2022 (April 4-9, 2022)	-	
• VCI 2022 (February 21-25, 2022)	1 video	
• BTTB 2022 (January 31 - February 4, 2022)	2 talks	
• LP 2021 (January 10-14, 2022)	1 talk, 1 poster/video	
• HEP 2022 (IAS Program, January 13-39,2022, virtual}	1 talk	

2021 (participation to 8 events)

• ILCX2021 (KEK, Tsukuba, Japan, October 26-29, 2021, virtual)	4		33
• PSD12 (University of Birmingham, UK, September 12-17, 2021, virtual)	-		
• PANIC 2021 (Lisbon, Portugal, September 5-10, 2021, virtual)	1 talk,		
• EPS-HEP 2021 (DESY/Hamburg, July 26-30, 2021, virtual)	2 talks		
• TIPP 2021 (TRIUMF, Canada, May 24-29, 2021, virtual)	6 talks, 2 posters	(K.Krüger, plenary)	
• CPAD 2021 (Stony Brook, USA, March 18-22, 2021, virtual)	3 talks		
• LCWS 2021 (March 15-18, 2021, virtual)	13 talks	(R.Poeschl, lecture)	
• BTTB 2021 (Lecce, Italy, February 8-11,2021, virtual)	1 talk (2 parts)		
• HEP 2021 (Hong Kong, January 14-21, 2021, virtual)	3 talks		

Analysis Meetings

Analysis meetings between collaboration meetings are back on since 2020:

~4-6 presentations each time, with attendance of ~30 participants.

This is an excellent forum for exchange on current issues towards completion of analyses → publications, or special topics.

https://agenda.linearcollider.org/category/158/

5 analysis meetings since May 2020:

2020 - May, July, December
2021 - June
2022 – February

The meeting of July 2022 had to be cancelled for lack of presentations (only one), despite reminders.

The next should take place early December 2022

A.O.B.’s

To-do list for the Speakers’ Bureau and the CALICE Management:

- Finalize the CERN e-groups for CALICE. Some institutes have not responded.
- Retire JISCMAIL for CALICE ?
- Update the CALICE author list. The last official one stored is from 2016.

Those items are highly correlated ($\rho \approx +1$).

- Re-vamp the CALICE webpage

Outlook

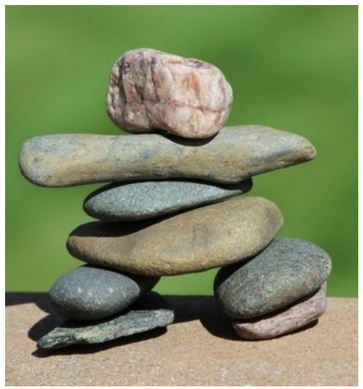
Collaborative R&D is the core of CALICE.
Diffusion of results are its expression to the community.

There are many ways for members to contribute to the reach of CALICE:

take part in technical/analysis meetings,

participate to workshops and conferences
present/discuss methods and results,

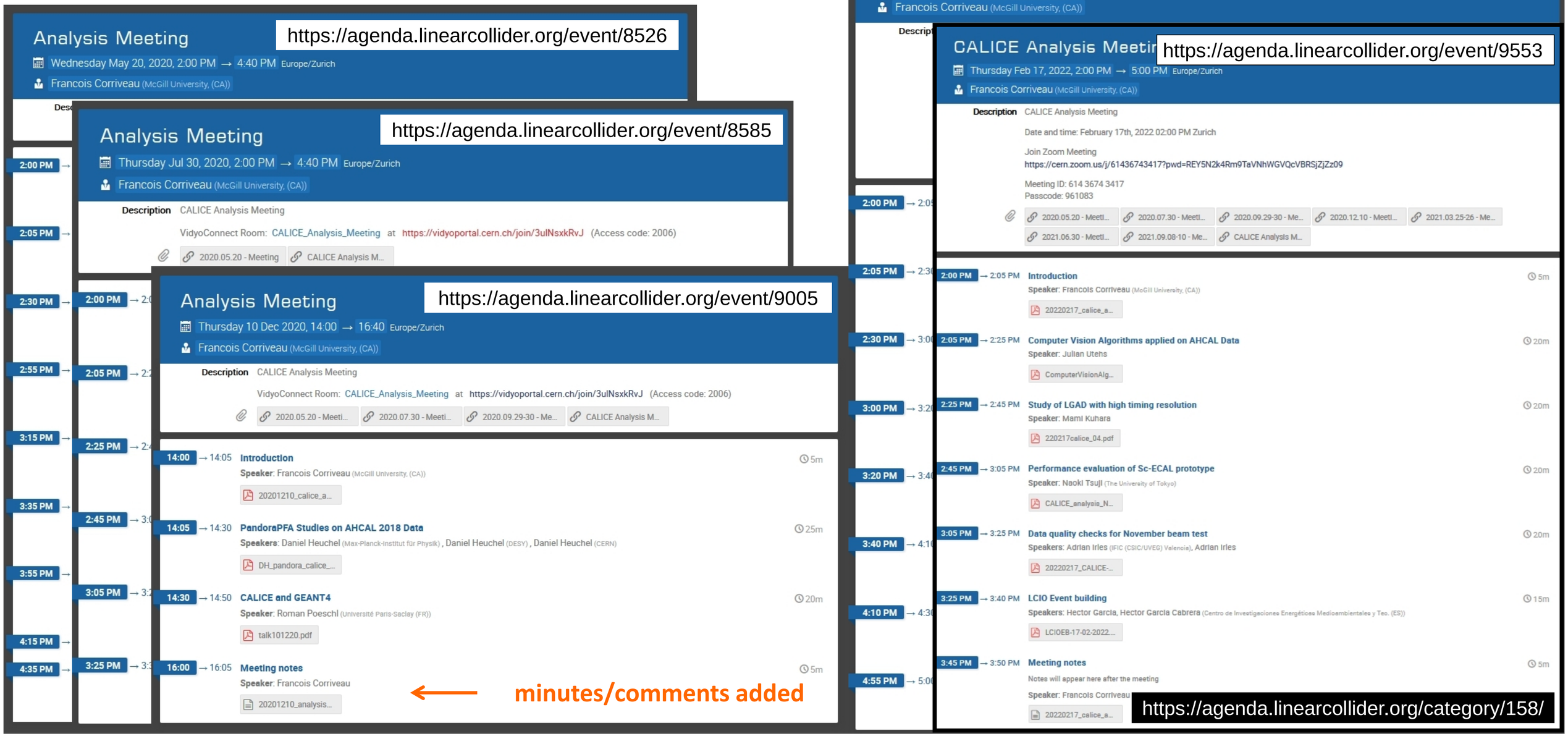
write down technical/analysis works
in the form of theses, notes and publications.



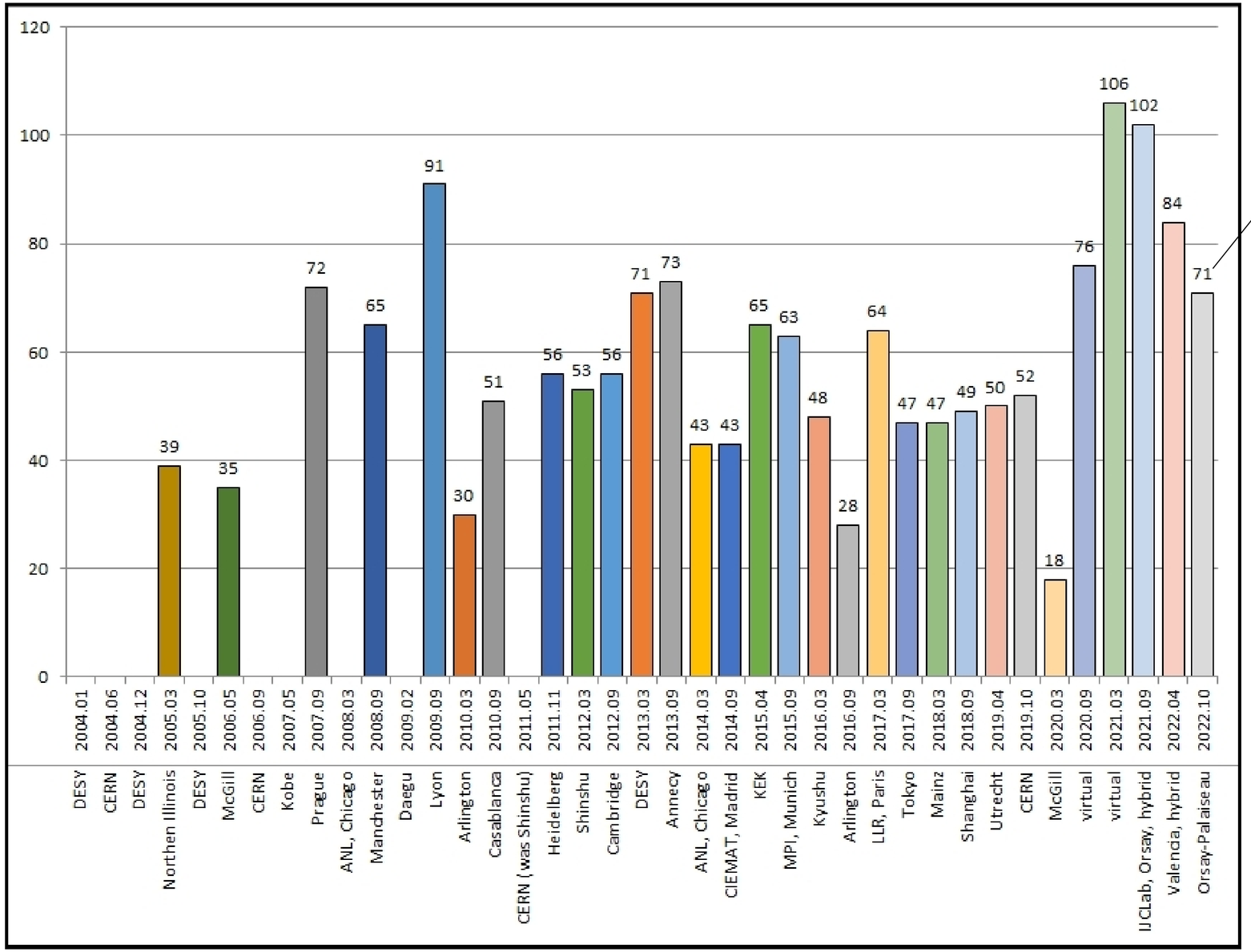
The role of the CALICE Speaker’s Bureau is to facilitate.
We welcome inquiries and suggestions for improvements.

Extras

Analysis Meetings



CALICE Collaboration Meetings



as of 2022.10.07