fernando.marchesano@gmail.com

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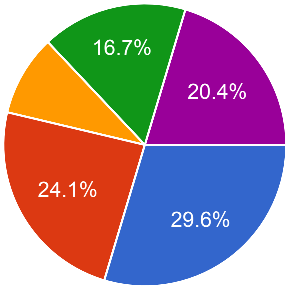
Summary

Will the LHC (the HL-LHC) discover new physics?



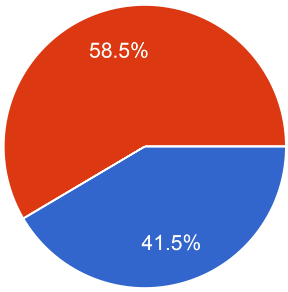
No	**16**	29.6%
Yes, in the form of SUSY	**13**	24.1%
Yes, in the form of additional Higgs particles	**5**	9.3%
Yes, with both SUSY and additional Higgs particles	**9**	16.7%
Yes, but in other form (please specify below)	**11**	20.4%

specify here

Exotics
same-sign dibosons and higgsino pair plus jet production
≈200 times more statistics can be accumulated: so it is not impossible that something new will be discovered, but it is too late to measure it precisely and understand what it is: SUSY or else.
Unexpected
We may not be able to decipher clearly the identity of new physics though.
Susy has not yet been properly understood. Suppressed Susy is giving rise to an entirely new interpretation, which has not yet been worked out theoretically or tested experimentally.
Not excluded, but now less and less likely after the initial energy jump. Maybe some tensions will appear, but unlikely to be spectacular.
I think it is likely that the LHC will find something, but I cannot say if it will be some superpartner or rather something else.

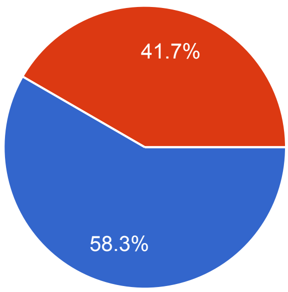
SUSY plus some new strong dynamics to solve the Higgs mass problem and the missing superpartner problem
Who knows what we will discover at the LHC. It might be SUSY or it might be something different.
new resonances related to gravity
resonances
?

Will LHC (or ILC) Higgs measurements point us towards BSM physics?



No	**22**	41.5%
Yes	**31**	58.5%

Given the LHC results so far, can ILC be a discovery machine?



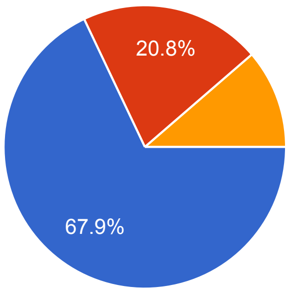
No	**28**	58.3%
Yes (please specify)	**20**	41.7%

specify here

light electroweak (SUSY) particles, which are difficult for the LHC
discover light higgsinos required by naturalness
Since LHC is an hadron collider is not very sensitive to electroweak precision observables. Given the fact that one of the main motivations to look for new physics at TeV scale is the sensitivity of the electroweak scale, one should expect that BSM physics should appear also in precision measurements of electroweak processess. Besides of direct detection of new states.
For Susy and EWPO

It's not impossible
Yes the ILC "can" be a discovery machine, if energetic enough
light higgsinos with a small mass gap
only if uncoloured sparticles are light.
It is however early to guess what Suppressed Susy will predict.
Just a hunch
I do not understand this question.
The Higgs discovery puts the parameters characterising the particle in the spotlight for the next decade in high energy physics. A cleaner and more accurate measurement of the these parameters could help in our understanding of the Brout-Englert-Higgs mechanism itself.
Higgs precision measurement is more accurate
For example, nearly-pure Higgsinos are not yet past the LEP bound and may never be at the LHC.
to find light Higgsinos
Precision Higgs measurements

Is this the appropriate time to push for a 100 TeV machine?



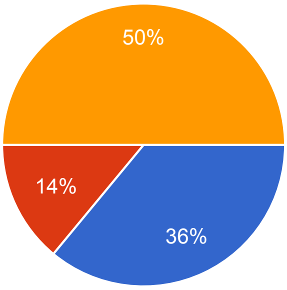
Yes	**36**	67.9%
No, this is a distraction for the HEP program	**11**	20.8%
No, for other reason (please comment)	**6**	11.3%

comment here

new physics should be search elsewhere: cosmology, underground, gravitational waves
push for ILC and then 28-33 TeV HE-LHC first
A lot can be done and searched for with 100 TeV whatever the results of the LHC
Too expensive
This is the fronteer
As long as there is no BSM seen at LHC, there is no convincing physics case for a 100 TeV

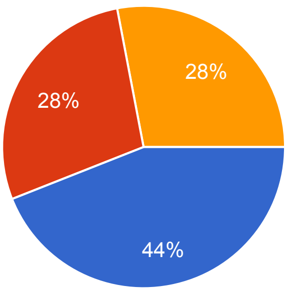
machine.
The time horizon is too long and detracts from other facilities that could come on sooner.
Until we have theoretical advances, it is unlikely to be successful.The public is rather aware of the lack of theoretical progress.
Be passionate like there is no tomorrow... which might just be the case...
I personally believe that, regarding Susy searches, is far much more useful to push energy up, instead of doing precision measurements.
Although the case right now is very weak, it may never get stronger, and if we don't push for it now it may be too late.
It would be more effective to wait until the HL-LHC starts
to find sparticles

Will low-energy observables give (clear) indications for BSM physics/SUSY?



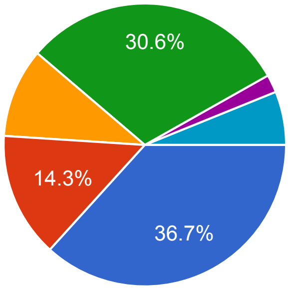
No	**18**	36%
Yes, with indications of SUSY	**7**	14%
Yes, but no clear indication of SUSY	**25**	50%

Is there a Little Hierarchy Problem?



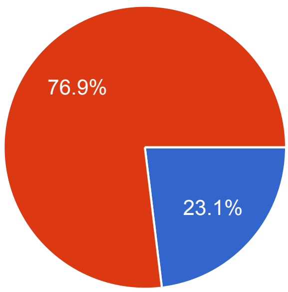
No, all literature in fine-tuning is almost irrelevant	**22**	44%
Yes, provided the LHC does not find anything	**14**	28%
Yes, in any case	**14**	28%

Concerning the Large Hierarchy Problem, which of these options is in your opinion closer to the truth:



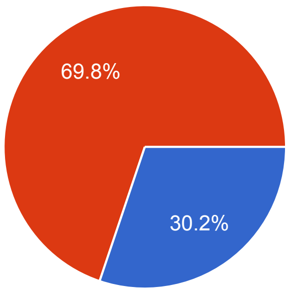
Low energy SUSY solves the hierarchy problem	**18**	36.7%
There is no hierarchy problem	**7**	14.3%
The hierarchy is understood by anthropic arguments, perhaps in connection with the landscape	**5**	10.2%
New physics above the TeV scale	**15**	30.6%
Low scale string theory above a few TeV	**1**	2%
Other	**3**	6.1%

Will dark matter (either WIMP, axions or other) be detected in the next fifteen years?



No	**12**	23.1%
Yes	**40**	76.9%

Will be learn something important for fundamental physics from cosmological measurements?

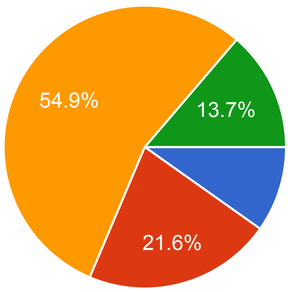


No	**16**	30.2%
Yes (please comment on what)	**37**	69.8%

comment here

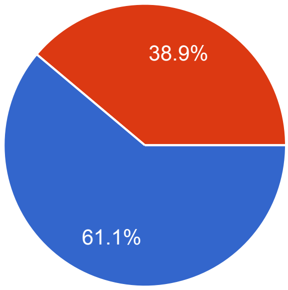
Primordial gravitational waves, the nature of cosmic inflation, structure formation
The energy scale of inflation
r
energy scale inflation; non-gaussianity probe of Planck scale physics; gravitational waves
Nature of DM
hone in on inflation models
Inflation has a lot to say about fundamental physics.
Gravitational waves
the scale of inflation
Solidify the inflation paradigm
When theory advances so will our understanding. This is not just experimental.
Strongly interacting DM
The correct answer is "I have no idea". The "no" is just out of pessimism. A measurement of the tensor to scalar ratio in cosmological perturbations will of course be of historical importance.
The bound on dark radiation
existence of sizable CMB tensor perturbations, or no
the scale of neutrino mass
role of gravity in new physics
extra neutrinos, primordial gravity waves
eg measurable tensor/scalar ratio implies high scale inflation
modified gravity
in case dark matter is not produced a lot of information about its nature will be extracted from cosmology

Which of the following experiments do you think that have still an important role to play?



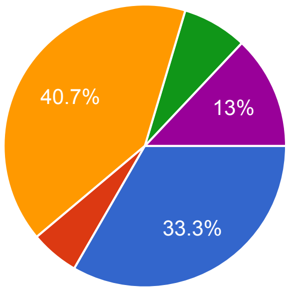
P-decay	**5**	9.8%
Charged lepton flavor violation	**11**	21.6%
Axion searches	**28**	54.9%
None of the above	**7**	13.7%

Do you consider that the fact that the measured gauge couplings unify rather well in the MSSM but not in the SM as…



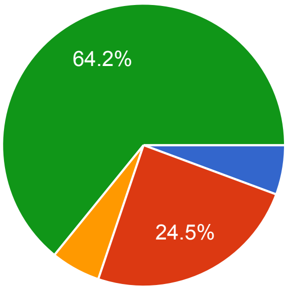
significant	**33**	61.1%
a cruel joke of Nature	**21**	38.9%

What would be the implications of the non-discovery of SUSY at the LHC for string theory?



None at all	**18**	33.3%
Circumstantial evidence against string theory	**3**	5.6%
Will boost the idea of high scale SUSY	**22**	40.7%
Will boost the idea of the Landscape	**4**	7.4%
Other	**7**	13%

Have your expectations and aspirations of Weak Scale SUSY changed since the early 80's, when SUSY started playing a role in Particle Physics?

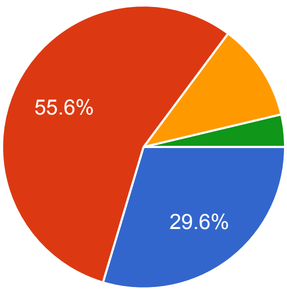


Yes, they are lower now (please comment)	**13**	24.5%
Yes, they are higher now (please comment)	**3**	5.7%
I am too young for this question	**34**	64.2%

comment here

mh=125 GeV is highly supportive of weak scale SUSY
Starting to get worried about SUSY being late to the party...
It was a beautiful idea
do I need to???
Suppressed Susy can explain many current problems.
Low energy Susy is in tension since LEP. So, I would give the second answer if you change "early 80´s" by "early 90´s"
expectations decrease as bounds on the susy breaking scale increase
In the early 80's I was still in diapers.
we were naive

Is SUSY alive and well?



Alive and well	**16**	29.6%
Alive but not well	**30**	55.6%
Almost dead	**6**	11.1%
Well dead	**2**	3.7%

please comment top two reasons for your answer

SUSY not low-scale SUSY, consistency of string theory
There is as much experimental evidence for/against SUSY as for/against any other BSM theory. However, the nice features of SUSY (hierarchy problem, DM, g-2_mu, coupling constant unification, ...) are as convincing as ever.
Let's hope for the best of the rest.
It can be high scale.
should have been found at energy scales below TeV to make any sense; no wimp found (note that room for discovery is tiny now after Xenon/Lux)
Direct detection has not seen DM
old naturalness estimates were off by factors of 10-100
Reports of SUSY's demise are greatly exaggerated, nevertheless, she is late to the party. Naive interpretations of null search results in simplified models have helped kill her in some people's minds, but in my opinion these are unsophisticated. However, really we need to see SUSY next year for the LHC to have a realistic prospect of detecting her.
The problem is just we have been too optimistic about our detection possibilities. The search strategies should be reviewd dropping some asumptions that could be not so natural and obvious as comonly argued.
Susy as BSM is a challenge, but Susy as a symmetry of Nature is well, although it may not be detected by LHC, and in that sense it is not "well". In a year from now, the answers will be sharper
Higgs mass fits nicely.
1) experiment; 2) theory
SUSY isn't doing worse than any other BSM model; SUSY is not just the MSSM: there are many ideas for non-minimal SUSY models to address the problems of the MSSM (Higgs mass, naturalness, collider limits,...)
Higgs mass, absence of stops and gluinos (so far)
large hierarchy problem; sensible extrapolation to high scale as in susy guts
It is very difficult to kill SUSY completely, but we would prefer it to be close to the electroweak scale and so far it is not too close...
1. Suppressed Susy yields an entirely new vista for Susy. 2. See recent Phys Lett B paper by me, John Dixon, re Suppressed Susy and the SSM.
Almost imposible to kill
SUSY is alive and well, but may be heavy, so not obvious wether it will be seen at colliders
The better answer is, "alive in dreamland". I still think it will play a role in relation to gravity, but this is of course my theoretical prejudice. As for low energy physics, it was never the naturalness bazooka that many people promoted. The cosmological constant was always the elephant in the room...
Of course it is alive. Since there exist even a single SUSY model not ruled out by experiments (and there are lots of them) then Susy, as a framework, is alive. Also, even if

Susy will one day be ruled out completely and in all of its form by experiment, it will always be alive due to enormous amount of work on the most formal and non-pheno side. (I.e. dualities of N>=2 field theories, exact solutions, localization, etc). With this I mean that even is Susy is not realized in Nature, it is a simplifying and powerful tool for us to study properties of QFT, and it will always be so. So SUSY is (and always will be) alive. For the "well", I would say Susy is not feeling well phenomenologically, as the more time passes the more models get heavily bounded by experiments.
Some important ideas to solve the Higgs mass problem and the missing superpartner problem are still missing in SUSY.
It's alive. But clearly heavier than we expected (note also the mH=125 GeV is heavier than expected). So no guarantees that we can find SUSY at the 13 TeV LHC.
SUSY is more than a phenomenological tool to solve a hierarchy problem; the non-observation thus far does not imply its non-existence, it just implies that we have to think harder how it is realised in nature (the electroweak theory is also not the simplest Yang-Mills theory one can write down)
Alive enough to hold a workshop on it. Not well due to weak human nature. Believe!
It is impossible to kill, it will always be alive!!
Little hierarchy
It could have been discovered many times already, but the fact that it has not does not mean it is dead. The parameter space that is fully natural is severely restricted by the latest null results, but not completely eliminated.
It is in a very similar situation to Pedro Sanchez in Spanish PSOE
little hierachy problem, increasing bounds on neutralino dark matter
Answer refers to low energy SUSY....still (small) region to explore
we are missing something
There is still room to hide. But I do not believe that it can solve the hierarchy problem (including the little one), and the problem of the DM and secure unification. Reason number one: the LEP. Reason number 2: the LHC.
the reasons why SUSY was introduced are loosing strength

Number of daily responses