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Chapter 12

1 message

Izzet Coskun <coskunizzet@gmail.com> Tue, Nov 21, 2023 at 4:16 AM
To: Joe Harris <harris@math.harvard.edu>, David Eisenbud <de@berkeley.edu>

Dear Joe and David,

Here are some thoughts on Chapter 12.

Best, Izzet

page 226, line 13, `it may be viewed at' -> `it may be viewed as'

page 227, Corollary 12.1.4, you are not consistent with putting a period after each statement

page 227, paragraph 3 of proof of 12.1.4, you have a broken reference

page 227, line before 12.1.5, broken reference

page 229, first paragraph, line 4, a general such curve `will have' -> `has' and in line 7 in this case C will have -> has

page 232, line 6, reference to Plucker formula broken

page 232, line 9, reference to Clifford's theorem broken

page 233, line 6, will have -> has

page 233, line 11, you could remove `What we do know'

page 233, 2nd paragraph of 12.4, better: (r+1)-dimensional
You are missing) in G(r+1, H^0(O_P^1(d)))

page 233, Statement of 12.4.1, you could shorten the statement of the theorem by replacing the last sentence with `, depending only on the collection of ramification sequences.'

page 234, when do you put your ramification or vanishing sequences in parentheses and when do you not?

page 235, line 4, you could write `for 1 \leq i \leq l'

page 235, line 6 of 12.4.2, the `center' of Schubert calculus?

page 235, line 9 of 12.4.2, missing) in A^*(G(l,e))

page 236, Corollary 12.4.8, do you mean to switch from Chow to Cohomology?

page 237, line 1, corresponding is misspelled,
The first sentence is very hard to parse. You might want to put a comma (presumably after C?)

I am not sold on your construction `\leq r-a_i+1 further conditions' or `codimension \leq r-a_i + 1', etc. Why not `it is at least r-a_i+1 further conditions' or `the codimension is as most'
I think that would make some of these sentences far more readable.

Wouldn't it be better to switch to dimension notation rather than codimension notation for Schubert cycles, i.e. the indices denote the dimensions of the jumping flags. I have never understood why Schubert cycles are indexed the way they are (the fact that codimensions add is weak justification for the choice). This would help you avoid wonders like the last paragraph of the proof of 12.4.9.

page 237, 1st paragraph of the proof of 12.4.10, Do you mean the codimension cannot be too small rather than the codimension cannot be too large? In fact, shouldn't the codimension be exactly the sum of the codimensions?

page 238, last line of proof of 12.4.11, will have -> has

page 239, the last sentence of 12.4 needs a period at the end

page 240, exercise 12.5.3, you could say Grassmannian G or G(l, e)

page 240, exercise 12.5.5, Let in line 2 should not be capitalized
in line 6 `U_t is the linear span'

page 240, exercise 12.5.6, missing parenthesis) in (p_i q_i) \in C

page 241, exercise 12.5.9, line 2, projective space isn't \mathbb{P}