The 69th TIEC Research and Presentation (ONLINE) Q&A

	Question	Answer
Ms.Chen Yingting	Questioner: June Patrick Bulaon-san (☆The winner of "Awards for Good Question"‼☆) (Original sentence) Great and relevant presentation! I just want to ask two questions: 1. It's interesting that there is less participation during online meetings but 50% more off-topic utterances, why do you think is that the case? 2. It's also insightful that thoughts are more developed during offline meetings compared to online meetings. Given that online meetings will not go out of fashion anytime soon, do you have any preliminary ideas on how to bridge these two gaps?	(Original sentence) 1. According to my observation, online discussion has higher tool dependency, the off-topic utterances were mostly related to tool operations in the sample I collected. 2. Thank you for your feedback. I think the issue needs to be addressed from two perspective. Instead of treating 'online meeting' as a replacement of 'offline meeting', we shall consider it as a new format of collaboration. Thus we may have to think of a new way of facilitation method. Also, corresponding to the observed limitation of tool operation, future research needs to be done regarding supporting tools for synchronous virtual discussions.
	Questioner: Alam-san (Original sentence)What do you think why speaking in offline meetings were used on idea development more than online one's?	(Original sentence) According to my observation, online discussion has higer tool dependency, which may limit the problem-representation of solvers. Since idea development is directly related problem-representation, the was less idea development. However, further scientific research needs to be done to justify my opinion.
	Questioner: Mami-san (Original sentence)Your research shows that participants talked less in online discussions. What would you think the main reason/s for the results and do you think the encouragement of participation in conversations would improve productivity as you said you would like to reduce the gap between online and offline settings of productivities?	(Original sentence)According to my observation, one of the possible reason can be 'online discussion fatigue'. You may find some recent scientific research about this phenomenon. And depends on the format of 'encouragement' the productivity might improve to different extend. For example, 'invite to participate the discussion' might work better than 'active listening'. Further scientific research needs to be done to justify my opinion.
Mr.Pohl Michel	Questioner: Aqsa Shakeel-san(☆The winner of "Awards for Good Question"‼☆) (Original sentence)Hi Pohl, you work and results are quiet interesting. I have a question from slide 13 (Results: Prediction Performance accuracy), the bar graph for mean absolute error also shows good results for SnAp-1 compared to UORO. And better results (Maximum error) than UORO for irregular breathing. From your results SnAp-1 seems like another promising technique. So what are the disadvantages of SnAp-1 over UORO? Why should one opt for UORO rather than SnAp-1?	(Original sentence) Thank you for your question. UORO and SnAp-1 seem to be promising methods when looking at the histogram. On the one hand, UORO benefits from theoretical proofs of convergence recently established (in 2020) that SnAp-1 does not have. SnAp-1 is indeed a purely empirical algorithm. On the other hand, the authors of SnAp-n reported superior performance of algorithms of the SnAp-n family in comparison with UORO for natural language processing tasks. We should however be cautious about such claims because of the publication bias: one should in principle demonstrate the superiority of the published method. In my slide, I simply emphasized that UORO has on average a lower error when performance is averaged over the 9 sequences.
Ms.Emily Wong	Questioner: HU-san (☆The winner of "Awards for Good Question"‼☆) (Original sentence)Thank you for this wonderful presentation! I understoond your methodology for measuring the age of moon. And I also noticed that you mentioned a different density of crater for a satellite. I just curious how do you evaluate the effect of rotation and revolution of a satellite on the crater density? As we know, the rotation and revolution of our moon are same, so we can not observe the "back face" of our moon. In this case, the "back face" of our moon is always face to outer space, and perhaps, the probability of crater formation is much much higher. That is the case of rotation = revolution. So, how about other cases? Like 1 rotaion period = 2 revolution or 10 rotation period = 1 revolution? Should this effect be considerd in your surface age measuring model, and give some adjustment value?	(Original sentence)Thanks for the question; you have a good understanding, impressive. Allow me to answer the part for observation first. We have satellite images and space missions that visited and showed the crater density on the mystery back-side of our Moon. And yes, we observed more craters on the back-side, but it's more due to the geology of Moon rather than the probability of collision that forms craters on Moon. For the other "rotation-to-revolution" case, it's a great question. Unfortunately, we didn't consider other cases. We studied the icy moons as "1 rotation = 1 revolution" because their host planets are massive enough to keep them in such orbiting fashion. It would be interesting to see such an effect, especially for some young exo-planets systems, and the host-planet is smaller. The self-rotation of the moon and the revolution (or orbit) of the moon around the host planets affect the crater density. E.g., synchronously rotating moon (means: rotation period = revolution period), the leading hemisphere has substantially more craters than the trailing hemisphere (the hemisphere parallel/toward the orbital motion suffers more impacts). If we view the moon as a dish from the host planet, we expect to see one side has more craters than the other side. The studies of craters' asymmetry are astonishing because we hope to see the crater asymmetry on those icy moons in the Outer Solar System, but it turn out we did not. We still do not know why and such topics would be my next focus. Hope we could get some answer soon.
	Questioner: Ju Hyung Kim-san (Original sentence) First and foremost, thank you for the interesting presentation! The possibility of a living organism in Enceladus is indeed exciting news. Bearing that in mind, I have the following two questions: I. When measuring the age, I guess there exist other measures—for instance, details of Saturns' moons' orbit—apart from the two methodologies you've pointed out (namely, radiometric dating of the in-situ samples and examining crater density on the surface). Are they (other measures) not applied since they are less reliable? II. My understanding is that the chances of a living organism's existence will be heightened when the age of a planet is adequate (meaning not too old, not too young. In the case of the former, the chemical reactions needed to sustain life will die out while it might not have enough time to mix essential elements like carbon and nitrogen to create life in case of the latter). Given your observation regarding the age of Enceladus, do you think the chances are high?	(Original sentence) Thank you. I am glad you enjoy the presentation and found the possibility of life inside Enceladus exciting. Answer (I): yes, there's another way but indeed less certain. E.g., we could measure the heat generates from Enceladus today and estimate the ages from its cooling rate. But it depends on which solar system formation model we adopt. The models have large uncertainties, and the error bars for the estimated ages are large. Answer (II): sorry to disappoint you, I might not be able to give a satisfying answer. From my studies, we found Enceladus, 3.9 billion years, is older than we previously thought but still younger when compared to other moons. Compared to our Earth (ages 4.5 billion years) and Earth's life (3.5 billion years), Enceladus does have the time for the life that we know to evolve. If we believe life is more likely to exist in an older body, then our results look promising and would encourage further exploration into the Enceladus's subsurface ocean. However, we need to consider Enceladus's size: one-seventh of our moon, and it's very different chemistry than our Earth. To sustain life, it's more complicated. We need biochemists and geophysicists to tell us the internal interaction and material exchange within Enceladus, which is still highly uncertain and model-dependent.