



# YOUNG

## RAPTOR (Real-time Adaptive Particle Therapy Of canceR) School: Loop Requirements – Interview with Max Chen

**Mr Brunner:** *Hello Maxin, could you briefly introduce yourself please? What is your name, what do you study and where are you from?*

**Ms Chen:** My name is Maxin Chen. I'm currently doing my PhD at Ludwig Maximilians Universität (LMU) in Munich with medical physics Professor Katia Parodi. I'm originally from Beijing, China.

**Mr Brunner:** *How did you learn about the real-time adaptive particle therapy of cancer (RAPTOR) school on 'loop requirements'?*

**Ms Chen:** I actually interviewed with RAPTOR for one of the PhD positions. I advanced to the final interview round, but unfortunately didn't get one. Professor Parodi is now my PhD supervisor and she suggested that I could participate in this school to get an overview of the adaptive particle therapy (APT) field.

**Mr Brunner:** *It is now day five of the school. What is your general impression so far?*

**Ms Chen:** I think the lectures are all really interesting. There are some great speakers from different backgrounds, so I'm learning a lot. Also, I feel really lucky to meet the other PhD students. You're all nice, energetic people and I can feel that you're really enthusiastic about your research.

**Mr Brunner:** *What are the intersections between APT and your PhD project?*

**Ms Chen:** My project has to do with imaging for particle therapy more than the adaptive part. I am investigating cone-beam computed tomography applications for small animal imaging. We're using photon counting detectors for this project, which are pretty new and probably a bit far away from seeing use in adaptive therapy. But this new imaging is expected to be more suitable for particle therapy treatment planning compared with conventional CT.

**Mr Brunner:** *Was there a talk or presentation you were particularly looking forward to before the school started? Has it lived up to your expectations?*

**Ms Chen:** That one is one taking place right after our interview! It is about automatic contouring in adaptive radiation therapy and it's by Jan-Jakob Sonke (adaptive radiotherapy professor at The Netherlands Cancer Institute). I'm really looking forward to that one.

**Mr Brunner:** *Has there been a talk so far that has particularly surprised or impressed you?*

**Ms Chen:** I really liked the prompt gamma imaging (PGI) talk yesterday. I didn't know much about that topic beforehand, but the talk was very interesting and Christian Richter (medical radiation physics professor, Helmholtz-Zentrum Dresden-Rossendorf, Dresden, Germany) gave a detailed explanation of the subject. Afterwards, one of the PhD students, Steffani Bertschi, gave an interesting poster presentation about PGI. I think there are some interesting combinations between CT and PGI and I'm quite looking forward to its future applications.

**Mr Brunner:** *To wrap things up, I'd like to ask you: is there an impression or a message you're excited to take home from the RAPTOR school?*

**Ms Chen:** Learn more about deep learning. There is a lot of research going on about how deep learning applications can be used to complement traditional methods and I feel I'm kind of lacking in this background. I would also like to learn more about optimisation and patient treatment.



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