

# Meet the eBeamers

Hayashi-san has worked on eBeam technologies for 35 years

- Hayashi-san installed the first MEBES system, #14, at DNP - shown in the picture to the right.
- Then he installed another 8 systems after that!
- Hayashi-san spent two years in total in the US working with ETEC while learning the language, technologies and building human networks that would last his entire career.



Hayashi-san grew up near the Pacific in Japan and studied at Tokyo Institute of Technologies with many interests.

- Hayashi-san has a Canon Cinema EOS to take short movies for Photomask Japan entertainment.
- This year he got two quadcopters with HD cameras to extend the filming capability from the air as shown in the picture to the left at SPIE.
- He loves to visit airplane museums world wide, especially fighter aircraft.

The eBeam Initiative provides education on new eBeam technologies that reduce mask cost and improve quality

- Hayashi-san and DNP are founding members.
- Next time you see Hayashi-san, ask him how eBeam technology will be extended to advanced nodes using immersion lithography.
- “eBeam technologies are used for advanced mask making and gain the possibility for wafer writing with multiple beam technologies and complimentary lithography. eBeam technology is a promising candidate for inspection in the future.”



**Naoya Hayashi**  
DNP Fellow



Fan of Cinema Worldwide

- He supports Japanese cinema, small and very old, with digital presentation systems.
- In return, Hayashi-san has earned an annual cinema pass.
- Hayashi-san seeks out old cinemas on his travels like the one in the picture to the left in Japan but also places like Hawaii.

Hayashi-san's interests include fencing

- He fenced during high school and at the Tokyo Institute.
- Hayashi-san was part of the fencing team for the National Athletic Meet in Japan.
- He returned to the Institute two years ago to fence with the current team, pictured to the left.