

## **Robotic Prosthodontics.**

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We feel humans are unable to assemble cars accurately with the required millimeter precision. Why do we use people with their eyes disorders and unstable hands for something so incredibly demanding on the accuracy, such as a preparation of a dental crown? Are humans really capable to grind with a micrometer precision? Not really. So, we have to replace them in the mechanical work and we have to give them just what they can really do, e.g. diagnosis, treatment planning and final controls. But we do not have the ideal technology, yet...

There is no secret and no surprise that the precise work of skilled dental technicians is becoming replaceable by CAD/CAM machines. But because currently the prosthodontists have to work on live and movable persons, we shall address the safety issue first, before machines can replace humans. But the benefits of robots such as their ability to work 24/7, long lifetime and the economy of scale will outweigh one day. The usual team of dentist and his assistant will be potentially expanded by a robot that can take part of whole treatment plan. A larger number of robots in the office can greatly increase performance, reduce the cost of treatment and give access to high quality care to more patients.

From this moment we are still far away. We have already first successful studies. Journey has begun thanks to the experience of dental laboratories. The aim of this lecture is not to scare skillful and experienced prosthodontists that they will lose their job but to show the way for the possible development and give inspiration for research.