


Fig. 1

# On unifying the laser family

**In this interview**, Georg Isbaner, editor of *laser—international magazine of laser dentistry*, spoke with DGL/ISLD President Prof. Dr Norbert Gutknecht about the success of the 16th WFLD World Congress in Aachen in 2018, as well as current trends and future developments in laser dentistry.

**At the beginning of October last year you hosted an international congress in Aachen in collaboration with the DGL and the WFLD/ISLD. What was the response?**
In a nutshell—a huge success. This conference exceeded all expectations and pre-planning efforts by far. Considering that the last Laser World Symposium in Japan attracted only 220 visitors and we ended up with more than 540 participants, in Aachen, from 44 countries all over the world representing every continent on the planet, that's really quite something. Even the number of free short presentations (over 200) and the number of e-posters presented (86) reached an unprecedented level. The world-class line-up for the 38 plenary sessions, who not only presented the latest scientific research, but also demonstrated the significant advantages of applying lasers to a wide range of different dental treatment settings was particularly pleasing.

**A laser convention of this magnitude is simply extraordinary. What do you think were the reasons for this success?**
Put simply, it was the programme. The selection of the invited speakers took a very long time because we put great emphasis on the relevance and significance of the content. We also allocated time for many young scientists to present their research results in short presentations and for the first time ever, we also provided more opportunities for additional presentations by showcasing scientific posters as e-posters. In addition, there were great social parts of the programme including the first evening get-together held in the industrial exhibition area which featured live music and buffet snacks. Furthermore, the gala dinner held at the Rahe Castle was spectacular with its great musical and dance interludes which culminated in a firework display.

**And was there much interest from the German dental community?**
We received a great deal of positive feedback from our German participants, above all because, in addition to the diverse series of lectures, we also offered up-to-date continuing education and training, which was also supplemented with numerous practical workshops. We also more than doubled the number of German participants compared to last year's conference, and I am sure that we would have had even more German visitors if they had been able to imagine the scope, variety and quality of the programme on offer and if the German laser manufacturers and distributors had provided their customers with even better information and incentives.


Fig. 2

**Fig. 1:** The 16th WFLD World Congress in Aachen in 2018 was expected to be the most successful WFLD conference ever. **Fig. 2:** Prof. Dr Norbert Gutknecht is curious about future innovations in laser dentistry.

**In Germany itself and in the wider German-speaking region, laser dentistry has lost some of its buzz. What do you think are the reasons for this?**
One of the reasons I can identify is the domination of manufacturers and commercial companies. Every manufacturer tries to keep their training and further education in-house—even their own meetings are initiated merely to improve perceived customer loyalty. I think it's good to keep close contact with your customers, but these "in-house events" can't replace conferences and meetings organised by an independent scientific society such as the DGL. Only a scientific society can represent the interests of its members in professional organisations and take care of the sensible and correct use of lasers in dentistry objectively and impartially.

In the past, manufacturers and distributors in Germany used to encourage their customers to become DGL members. These days, this is no longer the case because they fear that customers might be won over by competitors' products. But this is precisely the "spice of life" that stimulates the consumer's appetite for this technology and which generates new customers and new membership. That's why I have called upon all manufacturers and sales organisations to encourage their customers to become DGL or ISLD members. I'm sure that their sales performance would improve as a result and that they would inject new momentum.

**Where does laser as a therapy tool stand today?**
These days, lasers have a much broader therapy spectrum than ever before. With the improvement of technology, the greater variety of different wavelengths and a sound scientific basis, lasers as a therapeutic tool have become an integral part of modern, innovative, minimally invasive dental therapy.

The completely outdated assertions made over the past years and even decades are still being used as arguments against laser applications, albeit now to a much lesser extent. That would be like saying today that an electric typewriter is still superior to a computer just because you ignore current computer technology and you refer to technical data of computers from the late 1980s to support your claim. This could also apply to automotive engineering and many other technical achievements. The progress of laser technology is readily accepted in medicine and is now fully integrated into treatment processes.

**What are the most important indications that dentists who want to use lasers should be aware of?**
Minimally invasive selective and painless removal of dentine and enamel cavities is only an option with erbium lasers. The removal of old composite fillings including any subsequent preparation has even without anaesthesia become a pleasant experience due to the use of erbium lasers. Diode laser or $CO_2$ laser oral surgery, in which labial frenulum, lingual frenulum, fibroma, hyperplasia, tooth hood and many other small surgical phenomena can be treated easily, quickly, bloodlessly and without sutures or scarring. The laser-assisted treatment of periodontal diseases requires considerably fewer antibiotics, a fact which not only leads to very good and speedy clinical results, but also helps to decrease the spread of antibiotic resistance. The same applies to the inflammatory forms of endodontic diseases, in which laser-assisted treatment not only leads to equivalent bactericidal results in the root canal, but also has an extremely high bactericidal effect in the lateral dentinal tubules, accessory root canals and isthmus.

One of the most promising applications in the future will be in the treatment of peri-implantitis. There's currently no therapeutic approach in the conventional treatment of peri-implantitis that would even come close to the success achievable with erbium lasers.

Beyond that, many minor therapeutic indications which result in very good treatment outcomes, precisely because of the use of lasers, deserve to be highlighted. And finally, I also want to mention the photodynamic therapies using diode lasers, which have a wide range of applications in dentistry and which contribute greatly to improving clinical outcomes and reducing the total number of medications required for treatment.

**Would you also encourage young, prospective dentists to use lasers or is it still reserved for more experienced dentists?**
The answer is quite clearly a very big YES. The application of the laser in dentistry doesn't hinge on many years of professional experience, but rather on sound laser training. A dentist with many years of professional experience completes exactly the same training, since the use of lasers in dentistry does not yet form an integral part of the mainstream dentistry curriculum.

ISLD International Society for Laser Dentistry

**Generally speaking, how do you intend to use your activities to promote the awareness of laser dentistry in Germany? The keyword, of course, being curriculum.**
The only way to stimulate more interest is by providing well-founded information and solid training concepts for the application of lasers. We've, therefore, not only integrated conventional presentations into the programme of the previous two DGL conventions, but we've also integrated workshop-relevant introductory presentations followed by practical workshops featuring a broad range of different wavelengths and manufacturers, which have all proven very popular. We've also launched a programme, initiated by our Practice Advisory Board, to inform colleagues in various regions of Germany about the application potential of lasers in dentistry. At the end of these introductory events, course participants are made aware of the accredited courses on offer at the AALZ in partnership with the RWTH International Academy. Courses offered in this module can be credited towards an M.Sc. in the application of lasers in dentistry.

**In this context, where do industrial partners come into the equation? Are these products technologically mature or do you still expect important future developments?**
Industry partners play a very important role in the dissemination of this therapeutic option. Unfortunately, there's often a lack of trust on the part of independent institutions such as the ISLD, the DGL, the AALZ and other university institutions, because they fear that potential customers might turn to other laser manufacturers and other products. I strongly urge manufacturers and sales organisations of dental laser equipment to open up the market and to raise awareness even among non-laser users by supporting independent events, such as congresses and certified training courses. This technology can only be increasingly integrated into the treatment processes of our colleagues through joint efforts between industry, sales, scientific societies and universities.

Current laser systems are very sophisticated and good, effective and safe to use. It is common to see small innovations and improvements in modern technology from time to time—just like in the car or computer industry.

**Is laser technology going to play a role in dentistry at IDS?**
Yes, of course. Some of the leading laser manufacturers will be exhibiting and demonstrating their products. I'm sure that many new companies will join the circle of established laser manufacturers—I myself am very curious to see which innovations or improvements will be on display.

**In collaboration with the OEMUS MEDIA AG, the DGL, has been publishing a quarterly international trade journal for over ten years now: the *laser—international magazine of laser dentistry*. How important is this journal for the DGL, its members and the international fans of the laser community?**
The journal is an important constituent of the available information channels both in terms of scientific progress and product development and it's completely autonomous and independent from all the other events and training courses. It also gives our members a means of communication that allows them to follow up on events that they might not have been able to attend themselves, both from a visual and content point of view. I consider it a very important part of our laser universe and undoubtedly a unifying element within the greater "laser family".

**Will you be hosting a laser convention this year (2019) and next year too? Can you tell us what you have in store for your participants?**
As you can see from our conversation, we are very interested in developing and refining programmes for our members and interested colleagues that not only have academic scientific components, but also include other significant components in the form of practice-oriented, user-friendly workshops. And last but not least, we don't want to overlook the importance of the social and recreational aspects of our interactive evening events.

**Prof. Gutknecht, thank you for this conversation.**

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