



University of Goce Delcev- Stip



**First International Students
Congress in Dental Medicine
- 2018**

**DIGITAL VS
ANALOGICAL
IN DENTAL
MEDICINE**

Stip, Republic of Macedonia

28.03-29.03.2018

Multimedia centre, Stip

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DAY TWO – THURSDAY, 29th of march

MORNING SESSION



9:00	ORAL PRESENTATIONS-SESSION 4
	Chairmen: Prof. Dimova C.; D-r. Terzieva-Petrovska O.; student-Dimovski H.
9:00-9:20	Invited speaker <i>Prof. Lidija Popovska, University "Sv. Kiril I Metodij"- Skopje</i> Cleaning and shaping using rotary endodontic instruments
9:20-9:40	Invited speaker <i>Jetmire Jakupi -Alimani, State University of Tetovo</i> Assessing the caries risk factors among children at the age from 4-5 using the Cariogram program
9:40-9:50	Aesthetic restorations with porcelain veneers Author: Monika Kasuba Mentor: Zlatanovska Katerina, Co-mentor: Longurova Natasa
9:50-10:00	An assesment of some psychological aspects in children undergoing dental interventions Author: Iva Maslarevska , Co-author: Liljana Petrova, Mentor: Sarakinova Olivera, Co-mentor: Kostadinovska Emilija <i>Faculty of dentistry, European University, Skopje</i>
10:00-10:10	Immediate loading of dental implants with hybrid bridge Author: Danilo Krstevski , Co-author: Katerina Spasovska, Dubravka Angelik Mentor: Veleviski Dragoljub, Co-mentor: Dimova Cena
10:10-10:20	Invited speaker <i>Pavle Apostoloski</i> CAD/CAM systems- the basis of modern dental prosthetics
10:20-10:30	Discussion
12:30-13:00	COFFEE BREAK

Invited speaker lecture



CAD/CAM Systems-the basis of modern dental prosthetics

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Abstract

Dental Laboratory CAD/CAM Systems enable a laboratory to produce high-quality fabrications from single crowns to long span bridges. CAD/CAM systems include digital scanning, digital design software and a production system which is usually a dental mill. Depending on the CAD/CAM system chosen, various materials may be used including zirconia, titanium, aluminum oxide, gold or other precious metals, ceramics, resins, waxes and more. A CAD/CAM system can allow faster production of dental restorations, as well as parts for implant cases, removables and other products the dental lab produces. In order to realize the best return on your technology investment, it is important to be properly trained and to put the new workflows to use right away so they become an integral part of your lab operations.

Process of production

- The dental impression or the dental cast is placed inside the scanner. The scanner creates the digital impression.
- Dentists can also use intraoral scanners to make a digital impression directly without any impression materials.
- Specific clinical information is entered into the computer. The desired restoration is designed by the main software and the required data is sent to the milling machine.
- The milling machine carves it out of a solid block of zirconium, ceramic or composite according to the information received.
- If zirconium restorations or frames are manufactured, after milling, the zirconium core is placed inside special furnaces at high temperatures (1500 degrees Celsius or 2730 Fahrenheit) for 9 hours. This operation aims to increase the tensile strength of zirconium.
- After completion, the structure is sent to the dental office for fitting.

Advantages

- High accuracy. CAD/CAM systems, especially the newly developed, are highly accurate. It is estimated that the system has a margin of error of less than 20 microns.
- Restorations can be completed in less time. Conventional prosthesis, such as crowns or bridges, have temporaries placed from one to several weeks while a dental laboratory produces the restoration.

Designed to provide a seamless workflow, in some cases, CAD/CAM systems allow practitioners to provide patients with crowns, inlays, onlays and veneers in a single appointment.

Keywords

CAD/CAM Systems, options, advantages, modern prosthetics.