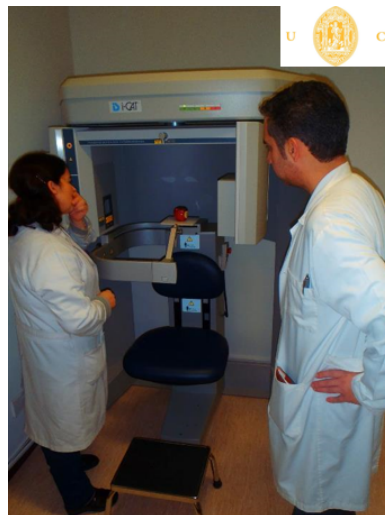


PARCERIAS INTERNACIONAIS

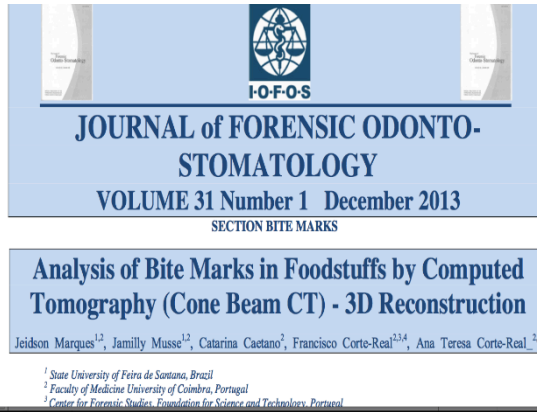
A interação entre países é de grande valia para o desenvolvimento técnico científico entre os envolvidos. Por vários anos, a FAESF/UNEF tem buscado firmar parcerias com instituições internacionais, promovendo o intercâmbio de docentes e alunos na produção do conhecimento. Diversos países fazem parte do grupo de parceiros, como: Japão, Portugal, Paraguai, Índia, Peru, Estados Unidos, Espanha, Argentina, Equador, Emirados Árabes Unidos, Reino Unido, México, Arábia Saudita.

PORTUGAL – UNIVERSIDADE DE COIMBRA

Em 2012, diante da realização do pós-doutorado do professor Jeidson Antônio Moraes Marques, iniciou-se a parceria entre a FAESF/UNEF e a Universidade de Coimbra. Na área de Impressão 3D nas perícias forenses têm sido realizados diversos estudos com etapas integradas.



Realização de Pesquisa com etapa em Portugal. 2012.



Artigo produzido em cooperação com a Universidade de Coimbra.

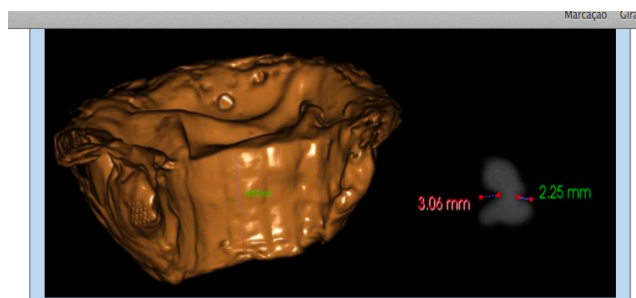


Fig. 5: Measurement of a bite mark's depth in the 3D reconstruction of the tart (left) and in a tomographic slice of the chewing gum (right).

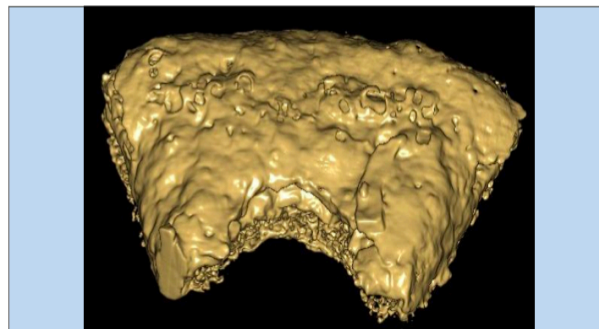
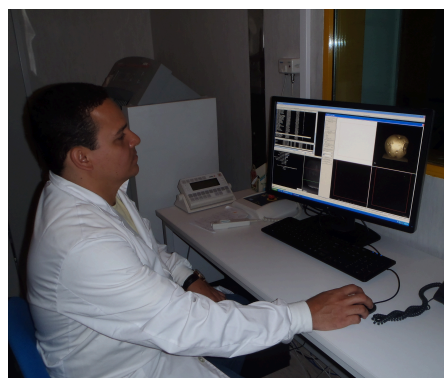


Fig. 6: 3D reconstruction of the pizza.





Impressão 3D na UNEF com modelos digitalizados em Portugal.

JAPÃO

Em 2017, durante a reunião da INTERPOL em Singapura, deu-se início a parceria entre a UNEF e a Universidade de IWATE-Japão. A partir do Projeto CIDEM foram realizadas diversas atividades que cooperaram com os preparativos do Japão com o Campeonato Mundial de Rugby (2019) e Jogos Olímpicos Tokyo 2020.



Palestra do professor Jeidson para comitê olímpico, cientistas, professores e policiais do Japão-2018.



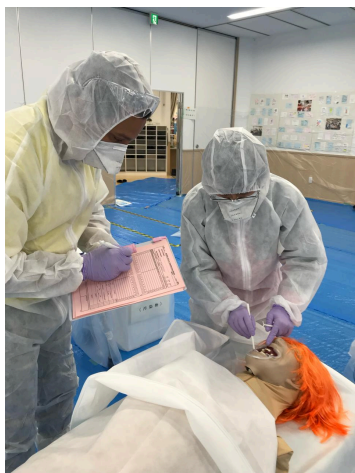
Participação do Japão, Paraguai, Estados Unidos, Arábia Saudita, Peru, Argentina, Espanha e Equador em evento na UNEF, 2018.



Treinamento Integrado em desastres com Brasil, Japão, Paraguai, Estados Unidos, Arábia Saudita, Peru, Argentina, Espanha e Equador em evento na UNEF, 2018.



Treinamento prático em Iwate-Japão 2019.



Interação em exercício prático – Japão.



Livro produzido em Parceria Brasil-Japão



Cooperação técnico-científica entre os países com publicações de livros da equipe

UNEF



Reunião em Tóquio 2024.

JUMP seminar
Japanese Unidentified and Missing Persons Response Team
Sun. 17th March 2024

Place : Waim Conference Room D in Ochanomizu
4th floor of Union Build. 2-1-20, Kanda-surugadai, Chiyoda-ku, Tokyo, 101-0062, Japan
<https://waim-group.co.jp/space/ochanomizu/>

Admission Free
The lecture will be translated to Japanese

Special lecturer
Professor Jeidson Marques
Universidade Estadual de Feira de Santana, Brazil

Professor Marques, who is a forensic odontologist from Brazil, will visit Japan again and lecture regarding the disaster training with IV CIDEM (International Congress of Mass Disaster), which was held for the first time in five years due to the global activity restriction into COVID-19 pandemic. We hope that learning about the disaster response in Brazil will be effect as an opportunity to reconsider the responses to disasters in Japan.



Chamada para palestra do Prof. Jeidson Marques no Japão.



Palestra do Prof. Dr. Jeidson em Tóquio -2024.



ARGENTINA

Em 2013, foi iniciada a parceria com Argentina, na área do Projeto CIDEM, atuação em desastres e em perícias de mordidas. A cooperação já levou a realização de diversos estudos, treinamentos, participação em Congressos no Brasil e na Argentina, além da atuação em casos periciais.



Participação de representantes argentinos no I Congresso Internacional de Desastres em Massa – Feira de Santana-Bahia-Brasil. 2015.



Participação de presidente da Federação Argentina de Futebol no II CIDEM.
Salvador-Bahia-Brasil.2016.

PARAGUAI

Em 2012 deu-se início a parceria com o Paraguai, através do Professor e Perito Juan Carlos. Diversos eventos e treinamentos têm sido realizados em cooperação.



Participantes internacionais no III CIDEM. Feira de Santana 2018.



Peritos do Paraguai, Japão, Peru, Espanha e Estados Unidos em treinamento conjunto. Feira de Santana-2018.

PERU

Em 2012 deu-se início a parceria com o Peru, através da Professora e Ana Maria Erazo. Diversos eventos e treinamentos têm sido realizados em cooperação.



Fórum Internacional sobre perícias de mordidas. Salvador-Bahia-Brasil, 2013.



Diversos países reunidos para discutir perícias de mordidas.

ÍNDIA

Durante o ano de 2020, no primeiro semestre, durante a pandemia deu-se início a parceria com a Índia. O uso de tecnologia de impressão 3D proporcionou um trabalho de cooperação entre os laboratórios de impressão 3D da UNEF e da Universidade de Gujarat-Índia. Diversos trabalhos têm sido desenvolvidos, participações conjuntas em eventos e publicações científicas.



1. Introduction

Three-dimensional (3D) printing is a technique used to produce a realistic physical 3D structure from a computer-aided design (CAD) model or a digital 3D model [1]. The terminology behind 3D printing may be applied to several processes in which material is powdered, assembled or solidified under computer control to build up a 3D object [2], with material usually attached together layer by layer. 3D printing technology was introduced by engineers dedicated to the development of structural models with simple and efficient performance after which over the past decade there has been rapid development in 3D printing techniques and materials [3]. Consequently, the technology was introduced to health scientists to improve the fields of medicine and dentistry especially when it comes to maxillofacial surgery, radiology imaging and anatomy [4,5]. However, in spite of obtaining satisfactory outcomes in medical and dental fields, very few instances have been reported in forensic where 3D printing is being used. The present paper would discuss 3D printing technology and demonstrates the application of 3D printing technology from medicolegal and forensic viewpoint.

2. 3D printing technology-An overview

Digital imaging and communications in medicine (DICOM) images are used for generating 3D-printed models that provides both tactile feedback and tangible depth information of anatomic and pathologic states of an object [6]. 3D printers generally accept standard tessellation language (STL) file format that define surfaces as a collection of triangles (called faces) that fit together like a jigsaw puzzle. In general, 3D model can be printed from any volumetric imaging or surface scanned dataset, such as computed tomography scans, infrared, or laboratory optical surface scan data [7]. A newer format called additive manufacturing file format (AMF), was approved by the American Society for Testing and Materials ASTM International in June 2011, to overcome many of the limitations of the simple STL format, such as enabling the user to incorporate features including surface texture, colour, and material properties into each part [7]. The process of 3D printing can be divided into three parts: image acquisition, image processing, and 3D printing. The quality of the 3D printed model depends on the technology such as fused-deposition modelling (FDM), Stereolithography (SLA), digital light processing (DLP), Photopolymer jetting (PJ), Powder bed printers (PBF), and Selective laser sintering (SLS) [8]. FDM is one of the early techniques in which 3D printers have robotic extruders that move through a stationary frame or have a stationary extruder and a movable framework [9,10]. Biodegradable polymeric acid (PLA) is a commonly used material; or similar materials such as poly(vinyl chloride) (PVC), nylon, acrylonitrile butadiene styrene (ABS) and investment casting wax have

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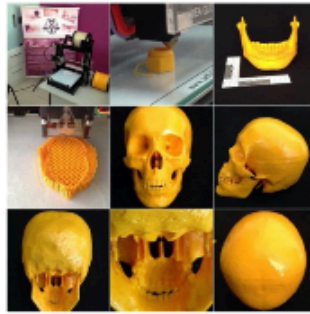


Fig. 1. 3D printed models of a skull and skull base.

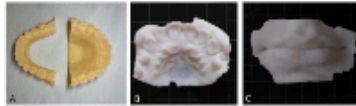


Fig. 2. 3D printed models of a skull base. (A) 3D printed model of a skull base. (B) 3D printed model of a skull base. (C) 3D printed model of a skull base.

Differences in the morphology of a skull and skull base are important for forensic identification. 3D printing technology is a cost-effective and efficient way to produce 3D printed models of a skull and skull base. 3D printing technology is a cost-effective and efficient way to produce 3D printed models of a skull and skull base.

3D GRAPHY
CONFERENCES AND EXHIBITIONS

India's 2nd Global Medical 3D Printing Conference, Exhibition, VP Lounge, Library, Meeting Rooms, Exhibition Booths for a real time experience close to a physical expo expecting more than 800+ participants in a exhibition.

Book your seat soon for each 3D Printing Medical specialisation sessions. An opportunity to hear and learn from experts speak. Also meet them in the VP lounge and Meeting rooms for exploring contacts.

A PLATFORM FOR KNOWLEDGE, NETWORKING & BUSINESS.

Global speakers, exhibitors and sponsors from India, USA, UK, Germany, Japan, Italy, China, France, Malaysia, Brazil, Japan, UAE, Kuwait, Qatar, South Korea, Australia & other countries to go.

Exhibition will be showcasing their products in 3D printing hardware, medicine, software, services, solutions, materials and 3D printing business offering in Dental & health industry.

Following the session globally in 3D Printing Dental & Medical Meeting in 3D Printing Hardware, Software, Design, Printing Solutions, Services, Research, Materials & Distribution. 3D GRAPHY MEDICAL SOLUTIONS MEET.

Medical Specialisations & Technology:
Neurology, Dentist, Oncology, Prosthodontics, Otorhinolaryngology, Maxillofacial Prosthodontics, Head & Neck Surgery, O-Rheumatology, Cardiology, Orthopedic, Skin, Medical Devices, Prosthetics, Materials, 3D Printing, Software, Hard Tissue & Soft Tissue Engineering.





Participants:
Dentists from each Specialisation, Surgeons, Neurosurgeons, Plastic Surgeons, ENT surgeons, Otorhinolaryngologists, Oral & Maxillofacial Surgeons, General Surgeons, Otorhinolaryngologists, Cardiothoracic Surgeons, Interventional Radiologists, Engineers, Designers, Material Scientist, Software Engineers, 3D Printer, Clin, Medical Device, Clin, Medical Clin.

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 Padmashri Dr. D Y Patil, Ex-Governor Bihar & Tripura, Government of India, Chairman, Dr. D Y Patil Group, Maharashtra, INDIA.		
SPEAKERS- 3D Printing In Forensic Odontology		
PARALLEL TRACK-6		
 Dr. Abraham Johnson, Forensic Odontologist, Asst. Professor, National Forensic Sciences University, Gujarat, India.	 Dr. Jaidson Marques, Professor in UEMS and UNEF Coordinator of Specialization Course in Forensic Odontology, Brazil.	
 Dr. Gargi Jani, Founder, Innovatworks, Gujarat, India.	 Rachel Carew, PhD Research Fellow, Centre for the Sciences, UCL, UK.	
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3D PRINTING IN FORENSIC ODONTOLOGY -

Hosted by: Dr. Abraham Johnson, Forensic Odontologist,
Asst Professor, Gujarat Forensic Sciences University, Gujarat, INDIA



<p>Dr. Abraham Johnson, Forensic Odontologist, Asst Professor, National Forensic Sciences University, Gujarat, INDIA</p> 	<p>Dr. Jeidson Marques, Professor in UFEPS and UNEF Coordinator of Especialization Course in Forensic Odontology, Coordinator of Odontology Graduate Course, BRAZIL</p> 	<p>Rachel Carew, PhD Research Fellow, Centre for the Sciences, UCL, UK</p> 	<p>Dr. Gargi Jani, Founder, InnovatWorks, Gujarat, INDIA</p> 
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ENTIDADES INTERNACIONAIS

FORENSIC ODONTOLOGY ASSOCIATION FOR HUMAN RIGHTS - AFOHR



Em 2015 foi constituído o Grupo Internacional de Odontologia Forense para Direitos Humanos e se tornou uma Associação Internacional composta por 48 países. Em 2017, a convite do presidente Emílio Nuzzolese (Itália), foi apresentado o relatório do II CIDEM no jantar científico, em Singapura. Participaram do evento 26 países e deu início à parceria com o Japão.



Apresentação do Projeto de Desastres em Jantar Científico da AFORH- Singapura 2017.

INTERPOL

A partir de 2015, diante da repercussão e impacto internacional do Projeto CIDEM, a convite da INTERPOL e Polícia Federal, o treinamento foi mostrado para os 196 países que compõem a polícia internacional na Conferência de Desastres da INTERPOL, em Lyon-França, na sua sede. Isto tem tido continuidade, sendo em 2024 a última edição e participação de docentes UNEF.



Palestra sobre Projeto CIDEM na conferência da INTERPOL em Lyon 2015.



Presença do Prof. Jeidson Marques e do Projeto CIDEM em evento da INTERPOL 2024.



Plenária da 33ª INTERPOL DVI CONFERENCE, Lyon 2024.



Apresentação da Edição IV do CIDEM.

PROGRAMA DE BOLSAS DE ESTUDOS PARA PERÍODO EM INSTITUIÇÃO DE ENSINO NO EXTERIOR

São firmados convênios de parceria com instituições estrangeiras em busca de viabilizar mecanismos para fortalecer o intercâmbio de estudantes e docentes.

A exemplo deste, consubstanciou-se parceria com o Banco Santander. Desse modo, a UNEF disponibiliza bolsas para estudo em Instituições internacionais.