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Dr. Wei-Shao Lin is an associate professor in the department of prosthodontics at Indiana University School of Dentistry.
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Dr. Damian Lee is the Director of the Advanced Prosthodontics Program at The Ohio State University College of Dentistry.
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Mr. Eugene Royzengurt began as a Dental Assistant, later becoming an In-house Laboratory Technician, specializing in Removable Prosthodontics. He currently resides in Sandy, Utah.
► Cover

Cover photo artist: Eugene Royzengurt

On the cover: Photoelastic photographs of the teeth is something that I was introduced to a few years back. The process requires a few preparatory steps and can take a significant amount of time. Extracted teeth that have been disinfected with sodium hypochlorite are thinly sliced to a thickness between 0.3-0.5mm. This requires a use of a diamond disk and several hand polishings with wet fine grit sandpaper. The tooth slices are then soaked in some type of mineral oil for a period of no shorter than two days and as long as the time will permit. In order to capture the image with the photoelastic colors we need to utilize two types of filters. Linear polarizing filter is placed over the light source and the circular polarizing filter is placed on the camera lens. The tooth slices are placed on the glass between these two filters. Rotation of the circular polarizing filter will allow you to capture different color combinations that are produced by the tooth slices. The settings on this particular shot were ISO 100, F 25, 1/200 sec, white balance flash and shot as a raw file in order to ease the steps of post processing.
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True mastery: ten thousand hours vs. Takumi

A commonly held belief in popular culture is that it takes 10,000 hours of dedication, focused attention, and practice to truly master a given skill. A cursory look at the math reveals that this roughly works out to around five years of intensive training (assuming eight hours each day, 250 days out of each year).

The Japanese, however, have recognized the extremely shallow learning curve that is associated with obtaining the truly highest-level of mastery for a given trade, and the name they assign to a craftsman who ultimately reaches this upper echelon is “Takumi” (a word with double meaning that translates to “artisan” or “skillful”). To become a Takumi, an estimated time frame of approximately 60,000 hours, not 10,000, is required. A protracted goal that represents 30 years in the making.

From my own personal experience and self-reflection, I can assuredly state that after a three-year residency, and nearly an additional decade of single-minded, concentrated effort toward prosthodontics, I have yet to achieve “true mastery.” I believe that there are aspects of this profession that I am very good at, but as I consciously continue to make advancements and breakthroughs in my techniques, philosophies, and understanding of this great specialty, I know that my contemporary efforts will remain humble when viewed against achievements of my future self. A colleague once pointed out that my dental-related talents were widely celebrated on social media platforms, and albeit a flattering remark, I suspect that being Facebook famous is roughly tantamount to being rich in Monopoly and certainly places me no closer to satisfying the Japanese standards of the Takumi.

In the 2020 winter edition of the ACP Messenger, we summarize the dedicated years of education and training that have gone into the production of the outstanding student poster presentations, the John J. Sharry research competition, and all of the news and happenings that took place at the 49th Annual Session in Miami. Dr. Wei-Shao Lin, who was one of the distinguished speakers at the Annual Session, segues from the lecture stage to the pages of this issue with the state of the art applications in the broad and ever-evolving landscape of 3D printing technology. To round out the first issue of 2020, Dr. Damian Lee puts the recently implemented post-doctoral matching program under the microscope and takes an up-close look at the data and sentiments of the prosthodontic programs and the future residents who stand at the precipice of their 60,000-hour journey toward Takumi.

The perception that obtaining mastery of a dental-related skill within five years should be neither celebrated nor proliferated. This notion detracts from the reality that our specialty requires decades of continued preparation and repetition. From the vantage point of a prosthodontist, 10,000 hours of time evaporates rather quickly. After all, it is not entirely uncommon to have on-going complex patient treatments that consume the majority of this interval. Wherever you are on this timeline, remaining appreciative of a journey that will last more than a quarter-century should provide comfort and solace rather than despair if we consider that every single day for many foreseeable years ahead represents an opportunity to realize and discover an improved iteration of ourselves.
Additive manufacturing, otherwise known as 3D printing, is gaining in popularity and becoming a routine part of contemporary clinical practice.

Although subtractive manufacturing (milling) has long been the preferred process when utilizing computer-aided manufacturing (CAM) technology in dentistry, the milling process can be wasteful and the resulting accuracy of products can be limited by the geometrical complexity of an object and the size of tooling.\(^1\) In the recent years, the development of desktop-sized, easy-to-use, and affordable 3D printers entering dental market has been noteworthy. Industrial 3D printers were cost-prohibitive for dental clinicians and technicians to own and operate in the private practice setting, however the improving affordability and quality of commercially available desktop 3D printers has altered the current CAM landscape. Young entrepreneurs have utilized the crowdfunding platforms to materialize their ideas and have made desktop 3D printers an economic reality. These options are disruptive technologies and represent game changers for dental product and prosthesis fabrication. More and more large dental companies have recognized these changes and have since joined this expanding market, subsequently releasing their own 3D printers, often with concurrent quality and efficiency enhancements.

Many contemporary desktop 3D printers use vat polymerization (LCD, stereolithography or directed light projection) technology and the photopolymerizing resin-based material. At present, this limits manufacturing options to a single material printing process.\(^2\) Manufacturing applications for economic desktop 3D printers include fabrication of surgical templates, dental casts, fixed and removable prostheses, and occlusal splints (Fig. 1). Additionally, more capable and expensive industrial 3D printers are utilized by Dental Support Organization (DSO) practices, large dental laboratories, and centralized production centers. These industrial 3D printers are often capable of utilizing varying printing technologies, including material jetting and powder bed fusion. As a result, these 3D printers are capable of metal printing which is becoming a more popular option in dentistry. For instance, material jetting can be used to print multi-color dental casts (Fig. 2), cobalt-chrome metal printing can be used to fabricate frameworks for removable partial dental prostheses, and noble alloy printing can be used for copings or frameworks used in fixed partial dental prostheses (Fig. 3).
However, there are a few areas of concern related to the popularity of economic 3D printers. The first issue is related to regulatory guidelines governing use of 3D printers as a dental device. Numerous open source CAD software programs can be downloaded and used freely to design various 3D objects. Social media platforms have been leveraged to advertise cost saving benefits of open source software used in conjunction with desktop 3D printers with little to no solid supporting evidence (Fig. 4). Using Food and Drug Administration (FDA) regulations as an example, for moderate risk devices (Class II medical device, such as denture bases, interim crowns, and occlusal guards), the manufacturer or distributor must prove the device is “substantially equivalent” to a legally marketed device which has the same indication. Although 3D printers are not finished medical devices and not regulated by the FDA, the FDA does regulate software capable of designing finished medical devices. The software developers often work with various stakeholders to validate the 3D printers, materials, and post-processing procedures to ensure the finished medical device possesses with desired accuracy and properties. When there is any deviation from the original FDA 510(k) cleared manufacturing process, the dental clinician and technician may create a product not appropriate for its intended usage or appropriate standards. The dental clinician and technician who wishes to utilize the open source CAD software programs and the 3D printers to manufacture dental devices should conform with regional regulations, such as FDA’s regulations in the United States and the European Union’s (EU) Medical Device Directive (MDD). A product (such as 3D printing material) has been cleared in one regulatory body does not necessarily mean the approval in another.

The infringement of intellectual property is another area of concern. The open source design software programs and 3D printing technology opens a convenient door for duplicating patented objects. The computer aided design (CAD) file can now be created by the hobbyists, and easily shared over the internet to any consumers with a 3D printer. It’s not uncommon for some consumers to choose to print their own products rather than purchasing original or replacement products from the manufacturers. Especially with regard to economic desktop 3D printers, this enables the manufacturing of a product at the point of demand, rather than in the centralized production center. Anyone who owns a 3D printer can
While 3D printing technology will continuously evolve and change all aspects of dentistry (education, clinical application, and research), utilizing it could be a constant learning process for the dental technicians and clinicians.

To adopt 3D printing technology properly in the daily practices, requires a new business philosophy, additional trainings, investment in equipment, and a great amount of confidence and knowledge. Although the regulatory guidelines and intellectual property laws are outside the expertise of most dental clinicians and technicians, the individuals who wish to procure 3D printers should be aware of these issues, and be mindful of overall development of dental technologies.

References:
Embracing the Vision of Giving

The shared vision of the ACP and ACP Education Foundation is that “everyone can enjoy the confidence, fullness of life, and overall well-being that comes from a healthy mouth and an attractive smile.”

This year the ACPEF put that vision into action during the Annual Session in Miami. As individuals made monetary pledges to the Foundation, their gifts were matched with oral hygiene products that were then donated to The Lodge, a non-profit domestic violence center in Miami.

“One of the biggest impacts we can make on people is giving them the confidence to smile,” said Dr. Karen Bruggers, ACPEF Vice Chair. “When people are already having issues in life the gift of oral hygiene may seem small, but it allows that person to interview for a job or interact with their loved ones with more confidence.”

“At Colgate we saw this as an opportunity to support two great causes at once, firstly supporting the ACPEF and secondly to help survivors of domestic violence. I am delighted that the generosity of ACP members made this possible.”

- Dr. Barbara Shearer, Colgate

In total over 1600 oral hygiene pieces - toothbrushes, toothpaste and floss generously provided by P&G Crest Oral-B and Colgate – were donated by the ACP and ACPEF to The Lodge.

P&G Crest Oral-B strives to help others by engaging with the local community and providing the necessary oral care products needed.

- Dr. Stephanie Gans, Crest + Oral B

“The Foundation wishes to thank Colgate and P&G Crest Oral-B for their enthusiastic participation in this endeavor,” said ACPEF Chair Dr. Leonard Kobren.

The Lodge provides 24/7 crisis intervention 365 days a year, and upon arrival each new resident receives a care package with essentials, including oral health care items. This donation will enable them to continue this service.
Postdoctoral dental matching program in prosthodontics: a closer look

For many years, the process to select a prosthodontic residency program was full of uncertainty – for both the resident and the institution. Residents would apply to schools, have an interview, and may feel the pressure to accept or reject a school on the spot. For institutions, there was often a sense that they need to fill spots and might not get to the full applicant pool before making decisions.

Other issues included programs’ recruitment starting earlier each year, inconsistent selection communications between program directors and candidates, temptation by applicants to ignore early acceptance decisions, and programs having selectees cancelling their commitments. To help address these difficulties the postdoctoral dental matching program (the Match), which has existed in other specialties since 1985, was proposed for prosthodontics. The first class of prosthodontic residents using the Match program was selected in 2017, and now two entering classes have completed this experience.

The National Matching Service Inc., which organizes the Match, generated a report in 2019 that provides a very thorough description of the programs and applicant pools. Based on this data, the number of applicants and positions offered are increasing – an encouraging sign of success. Out of 48 eligible total CODA accredited prosthodontic programs (military programs cannot enter the Match), 39 participated in the Match process in 2019 (81.3%). Of those that participated, most offered 3 positions or less, a few had 4-5 positions, and a smaller number had 6 or more positions to fill. Among the 39 programs, there were 114 positions filled through the Match and 16 unfilled positions.

Among the 114 matched applicants, 82 (71.9%) matched with their first choice. Seventeen applicants matched with their second choice (14.9%) and 12 with their third choice (10.5%). Only 3 applicants matched with their choice of 4 or higher (2.6%). Among the 114 matched applicants, 64 were from U.S. or Canadian dental schools (59.6%) and 46 were internationally trained (40.4%). However out of 223 overall applications, 138 were foreign (61.9%) and 85 (38.1%) were from the U.S. and Canada.
The ACP conducted its own survey of residents in the spring of 2018. Out of 158 first year residents, 53 responded (33.5%), and of those respondents 41 (77%) participated in the Match process.

When asked about their experience with the Match, 76% indicated that they had a positive experience, and 93% expressed that it was beneficial to be able to visit many programs before making a final choice for residency. The majority indicated that they would not have preferred being offered a position on the spot. Almost all the respondents (83%) expressed their desire to have the Match continue.

To get the perspective of those who did not have the opportunity to participate in the Match process, the ACP asked 168 graduating third-year residents their opinions. Of those that responded, 62% expressed that they would have preferred to have gone to more interviews before accepting a residency position, and 85% would have liked the post-Match service if they had not received an offer for a residency position.

From the educational perspective, a recent survey was completed among prosthodontic program directors that found that a third of programs that participated in the Match saw an increase in the number of applications and the quality of applicant pool. Program directors expressed that the Match process was fair, that it was good to have applicants come to interview as planned rather than cancel because they accepted another position, and it helped to not have to keep moving up the interview dates.

Based on this data, and anecdotal experiences shared by many residents and program directors, the Match process has been positive for both the applicant and the prosthodontic residency programs. While no system is ever perfect, the Match helps formalize the interview and offer process, providing more access to applicants and directors. Selecting the right resident and choosing the right program is a rigorous, yet rewarding, process all prosthodontists must complete.

References:
1. Position Statement on Postdoctoral Dental Education Matching Program (the ‘Match’), American College of Prosthodontists https://www.prosthodontics.org/assets/1/7/Match_Position_Statement.pdf, Accessed May 2018
2. Report for Steering committee meeting for the 2020 dental match, Postdoctoral dental matching program, National matching service Inc.
X-Guide: Empowering clinicians to digitally plan treatment and place implants on the same day

Making a dramatic change in the lives of patients is the ultimate achievement for an experienced dental team. Using technology to ease the anxiety of the patient experience and shorten the time to teeth for the dental implant process can accomplish that goal.

Clinicians are using DTX Studio Implant to plan their treatments and then proceed to implant surgery in the same day using X-Guide, the cutting-edge 3D-navigated surgery technology.

Empower Same-Day Implant Surgery
X-Guide is a dynamic 3D-navigation system that can become part of a streamlined workflow for same-day guided surgery. On the day of treatment, the clinician carries out the 3D CBCT scan, intraoral surface scans, creates the treatment plan in DTX Studio Implant, and immediately exports it with all the planning components to X-Guide. The practice can be ready to perform 3D-navigated dental implant surgery on the very same day. Furthermore, DTX Studio Implant gives the clinician direct access to the Nobel Biocare implant library to order surgical templates, place TempShell requests, and execute navigated surgery when creating the treatment plan.

Fig. 1: X-Guide’s impressive tracking technology even makes it possible to control the drill when it is out of sight.

Increasing Immediate Accuracy with 360-degree Views
X-Guide’s impressive tracking technology makes it possible to control the drill when it is out of sight. By guiding the clinician through the treatment plan, X-Guide is using a 360-degree, real-time view of the exact placement of the drill and anatomy during osteotomy preparation and implant insertion. The ability to oversee every movement of the handpiece helps achieve a more precise implant placement compared to freehand surgery. That would greatly decrease possible implant complications but increase the life span of your patient’s smile.

This alternative to surgical templates provides complete control throughout the surgery, with the power to immediately adapt the treatment plan at any time.

Nobel Biocare was invited to submit this feature as part of their sponsorship of the Annual Session.
Combining X-Guide technology with 3D imaging and DTX Studio Suite can produce a precise dental implant placement with restorative design for a tooth. It allows the surgeon to connect the well-thought out plan in terms of position, depth, and angle to the computer with the patient’s mouth in real time.

“Fully digital implant planning and treatment using highly precise, restoratively driven surgical procedures, not only increases the accuracy and predictability of this treatment, but also allows for the delivery of a final result on the day of implant placement which greatly reduces treatment time. The fully digital final molar implant tooth in one day is a reality today,” Dr. Bobby Birdi, DMD

Easing Patient Anxiety in the Implant Process
Dental implants are the preferred solution to tooth loss. Patients can, however, experience anxiety in long procedures with multiple potential surgeries. Showing patients that you are leveraging the latest technology in same-day dental implants is a win in patient retention. When performing dental implants, it’s important to avoid injury to the dental nerve, maxillary sinus, bone perforation, or teeth injury in general. When using X-Guide, there is a greater chance to avoid these issues, as supported by multiple peer-reviewed studies(2-4).

Performing free-hand surgery with real-time 3D guidance of your drill or using X-Guide to perform flapless surgery or elevate flaps is all a reality with X-Guide.

Stand Out with Innovation
Nobel Biocare’s prominence in innovation is demonstrated once again by this exclusive distribution partnership with a pioneer in computer-navigated surgery, X-Nav Technologies. With the new X-Guide technology, which is already supported by peer-reviewed studies(2-4), clinicians can impress patients and peers alike.

Advantages of X-Guide Technology
• Dynamically adapt your surgery
• Using shorter implants without damaging bone
• Avoiding grafts in difficult cases
• Maximum retaining of bone
• Complete precision
• Enable same-day implant surgery
• Comfortable for the patient
• Faster recovery
• Higher security
• It’s like GPS for your surgery

References
Let us raise a collective glass to 50 years!

As the College celebrates its fiftieth anniversary, I celebrate 40 years in private practice. When I reflect on the past, and look to the future, there are many similarities. Although, I’m not always certain who has aged better.

During the last 50 years, we have made many significant accomplishments on behalf of our members. From simple beginnings as a small group in Texas, we – the College – are now on both the national and international stages. We have over 4,000 members, our own Journal, a strong and vibrant foundation, and so much more. Most recently we have secured surgical placement at the competency level for all prosthodontic residents. We have strong productive relationships with the other specialties through the Dental Specialties Group, as well as with general dentists through both the American Dental Association (ADA) and the Academy of General Dentistry (AGD).

The College leadership continues to advocate for prosthodontics and prosthodontists. We are actively involved in and have a seat at the table on the new Commission on Specialty Recognition and Certification. We have a representative on the Commission of Dental Accreditation (CODA) meetings. These are a few efforts undertaken by the College that affect both education and specialty recognition.

Through the sustained efforts of the ACP Education Foundation, we continue to support the professional development of our residents through membership, attendance at the Annual Session, and research funding. We have collectively built a $6 million endowment. And thanks to the generous support of so many, the contributions coming in from the Drive for a Million campaign will, in a few years grow the endowment to $10 million. This will create a legacy for our members.

During this 50-year journey, we have been joined by many industry supporters. Thanks to the generous support of Henry Schein, we have created a landmark Digital Dentistry Curriculum, and with support from Nobel Biocare we have initiated a leadership workshop for state section officers. There are many others who continue to generously support our education and research programs.

Looking forward, the strength of the relationship between the College and Education Foundation will continue to lead dentistry in innovation. As we listen to our members and strive to respond to their needs, we continue to evolve new and innovative deliverables. This past year we delivered the first
one-day Practice Management Course. Responding to the feedback from that initial group of attendees, we will begin to customize future course content. It is our goal to have more of these types of programs in the coming year.

This winter, with the support of the ACPEF and Nobel Biocare, we will host the first Section Officers Workshop at the Nobel education facility in Yorba Linda, CA. Twenty section officers and future leaders will join me, president-elect Dr. Mark Hutten, and several ACP staff for this first leadership training program designed to support leadership development at the local level. The goal is to continue to support you – our members – the next generation of leaders. There are many challenges facing healthcare in general, dentistry, and prosthodontics. It is critical in this ever-changing world to have a strong unified voice for our specialty. At the 2019 Annual Session in Miami, the 18-member ACP Prosthodontic Forum began a thoughtful dialogue about the need for a strong collaborative voice. I applaud all these organizations for beginning this vitally important conversation.

As I begin my presidency, I look forward to working with the ACP Board of Directors, ACPEF, Executive Director, and central office staff in support of our mission and membership.

One final note: it is not too soon to make plans to join me and many of your colleagues at the 50th Anniversary Annual Session, Nov. 4-7, 2020 in New Orleans.

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Excellence at the crossroads of technology and biology

The 49th Annual Session of the American College of Prosthodontists highlighted how our specialty has embraced change, and why our specialty will continue to be vibrant for many years to come.

ACP President Dr. Nadim Z. Baba and Program Chair Dr. Carlo Ercoli welcomed over 1,200 professional attendees to Miami.

Technology and biology are driving our specialty forward. This meeting focused on how advances in those two areas can help you treat more patients, avoid complications, achieve superior esthetics, and lead collaboration with other specialists. Speakers covered the latest evidence on ceramic restorations, diagnosis with advanced digital imaging, and state-of-the-art digital workflows.

The attendee experience was enriched by conversations with friends and colleagues at social events, demonstrations in rapidly evolving fields of dentistry, and the beautiful backdrop of Miami Beach.
John J. Sharry Competition

The John J. Sharry Research Competition is held annually to stimulate and acknowledge original research in prosthodontics by students. This year’s competition included six great presentations from residents and recent graduates.

Thank you to all six of the Sharry Competition finalists, who deserve to be commended for their outstanding presentations. Also, thank you to the ACP Research Committee, and Committee Chair Dr. Galen B. Schneider (pictured with winners) for overseeing the competition.

1ST PLACE
Brittany Kane, DMD, University of California, Los Angeles (2021)
A Stem Cell-Laden Photocrosslinkable Adhesive Hydrogel for Treatment of Peri-implantitis

2ND PLACE
Jin (Julie) Xue, DMD, MS, United States Army (2019)
Effect of Manufacturer and Laboratory Processing Variability on Pre-shaded Ceramic Color

3RD PLACE
Rami Ammoun, DDS, MS, Loma Linda University (2018)
Influence of Tooth Preparation Design and Scan Angulations on the Accuracy of 2 Intra-oral Digital Scanners: An In Vitro Study Based on 3-Dimensional Comparisons

ACPEF Founders Society Award

Dr. David L. Pfeifer was recognized as the recipient of the 2019 ACPEF Founders Society Award, which honors individuals who have made a significant impact on the growth and development of the ACP Education Foundation, and have demonstrated an extraordinary level of commitment to the advancement of the specialty.

Dr. Pfeifer was selected for his legacy of vision, leadership, service, and dedication to the ACPEF and specialty of prosthodontics. He served on the Foundation Board for 11 years and is a past president of the ACP. He served for over 22 years in the U.S. Navy, attaining the rank of Captain, and practiced prosthodontics for 27 years in California.

Dr. David L. Pfeifer, pictured left, with Dr. Leonard B. Kobren, ACPEF Chair.
The American College of Prosthodontists would like to recognize the generosity of Nobel Biocare as the primary sponsor of the 2019 Annual Awards & President’s Dinner.

Award recipients participated in the Annual Awards & President’s Dinner through the generosity of Ivoclar Vivadent.

Special thanks to Henry Schein for their support of the Distinguished Service, Educator of the Year, Dental Technician Leadership, and President’s Awards.
Resident & Dental Student Digital Poster Session

During the Annual Session in Miami, 128 posters were presented digitally. The ePosters varied between presentations of research results, clinical outcomes, laboratory techniques, and more. All posters are available online at acp49.com

This year, the ACP held three competitions: Resident Competition (Original Research), Resident Competition (Case Presentations), and Dental Student Competition. Finalists are pictured with Dr. Sang Lee, Poster Session Chair. Congratulations to the following resident and dental student winners!

Dental Student Competition

1st Place: Mr. Anthony Strazella
University at Buffalo (2020)
Effect of Chemically Treated Zirconia on Bond Strength of Resin Cement-Zirconia

2nd Place: Ms. Jennifer Michelle Mehrens
Touro College of Dental Medicine (2020)
To Extract or Not To Extract?: A Tale of Full Arch Reconstruction

3rd Place: Ms. Kelly M. Suralik
Harvard University (2020)
Effect of Fabrication Method on Fracture Strength of different Interim FDP Restorations

Resident Competition (Original Research):

Ultrashort-Pulse Laser Surface Treatment Improves Bonding Between Zirconia and Resin Composite

Dr. Mahmood M. Abu Ruja, University of Toronto (2021), 1st Place

The ACP poster session was a great opportunity to learn about current dental research and to share knowledge and research with others. I feel extremely privileged to have the chance to participate in such a wonderful meeting. I was fascinated by the big crowd at the poster session, which indicates an understanding of the research importance, and the need to apply research outcomes to improve patient care.

During my research, I realized an increase in Zirconia’s popularity in the field of dentistry and prosthodontics due to its biocompatibility and excellent mechanical properties. However, there are some challenges associated with its usage. One of these challenges is the lack of a glassy matrix and the absence of silica on the Zirconia bonding surface, which resulted in poor bond strength to the underlying substrate even when resin-based cements are used. A strong bond is needed for long-term clinical success and becomes even more important when bonded restorations are considered. This bond can be potentially improved by treating the surface of YTZP. Different surface treatment methods have been proposed but no benchmark has been established. Therefore we proposed the use of ultrashort pulsed laser, which includes effective surface irradiation with reduced energy, and potentially does not induce any thermal or mechanical damage to the surface. This appears to be a possible alternative method to conventional treatments of the surface. The results were promising and suggest the ability of the ultrashort pulsed laser to improve bonding to the underlying resin cement without compromising the strength of the restoration.

It is a great honor to be the first-place winner. I am privileged to be recognized in front of all my peers. This pushes me to conduct more research, and to continue contributing to our specialty. I am also very proud to be able to represent the Graduate Prosthodontics Program at the University of Toronto.
Evaluation of Implant Placement Position Accuracy Planning Using Slicer/Blender versus Blue Sky Plan Programs: An In-vitro Study Based on 3D Comparisons

Dr. Georgi Talmazov, UT Health Science Center at Houston (2022), 2nd Place

In the realm of computer science, Open Source software favors technological advancement by providing an ideology of unrestricted access to data. Such software is created in a collaborative and public manner where licensing allows for the free replication, modification, and redistribution of the software’s source code.

Two powerful software applications built under open source licensing are Blender and 3D Slicer. Blender is computer animation software with a plethora of native tools that are versatile to 3D model just about anything. Blender itself has existed since 1998 and its completely open nature has allowed the software, its community, and other technologies to grow from it. 3D Slicer on the other hand, is an open source software used in medical imaging, segmentation, and modeling. The open nature of both platforms allows developers to build powerful plugins that extend their function. Blender’s flexible nature has allowed several projects tailored to the dental community to grow and be freely accessible. Dr. Patrick Moore developed Open Dental CAD, linkSlicerBlender, and two additional plugins. linkSlicerBlender is an important tool because it bridges the gap between Blender’s 3D modeling capabilities and 3D Slicer’s powerful medical imaging and segmentation algorithms. As part of our study, I have also been developing and using a plugin of my own for 3D Slicer called slicerPano which allows for pantomographic reconstruction of CT data as well as the manipulation of various views on a fiducial path.

The aim of this project was to show that the underlying algorithms within the open source community (Blender and 3D Slicer) are comparable technologies to those adopted in commercial dental software. The collection of tools described in this study are open for public use which allows any operator to modify the extensions to establish their own workflow and protocol. Open source software has the potential to provide solutions for various problems and limitations within the realm of digital dentistry. Our study demonstrates that Blender and 3D Slicer, and the aforementioned plugins, reflect accuracy and precision comparable to established software products and thus may serve as viable alternatives in implant planning and guided placement.

These tools exist as a result of contribution from a community of many people and their time. I would like to thank the people involved in furthering technology to make it accessible and innovative. This project was done in collaboration with Drs. Sompop Bencharit and Rami Ammoun. The ACP Poster Session was a great environment to share this project and its vision with other attendees.
Complex prosthodontic cases frequently require capturing an accurate impression of abutment teeth spread throughout the full dental arch. Due to challenges in isolation, gingival retraction, and materials management, conventional impressions are often repeated, in order to achieve resolution of prepared abutment margins and an accurate full arch model. Intraoral scanners present an opportunity to scan, trim and edit a full arch impression without managing conventional impression materials. However, previous studies have shown that full arch impressions taken using intraoral scanners tend to overestimate the size of the dental arch and exhibit a higher rate and magnitude of local inaccuracies, as compared to conventional impressions.

Our study proposes and tests a novel technique for generation of accurate full arch dental models: digitally merging portions of a full-arch intraoral optical scan to a digitized PVS full-arch impression. A master model was impressed using PVS material and an intraoral scanner, and subsequent digital and stone models were compared to those created using our proposed technique.

So far, the data appear to show that models generated via intraoral scan exhibit the highest positional deviation of arch landmarks, with the greatest deviation occurring in the posterior portion of the arch. The overall deviation of models generated using our proposed technique appears to be similar to that of a stone model. Based on these promising initial results, it seems that the technique used in our study may allow practitioners to combine the benefits of conventional and digital techniques to produce a full arch model exhibiting margin resolution and full arch positional accuracy.

Presenting during the poster session at the Annual Session was a very rewarding experience for me. Learning about other research projects and gaining exposure to emerging technologies that may someday be used in our daily practice offered me a greater appreciation for the importance of continued research and intellectual curiosity in our field.
Resident Competition (Case Presentations)

NAM Express: How Late is too Late?
Dr. Alexa Schweitzer, Montefiore Medical Center (2022), 1st Place

Pre-surgical nasoalveolar molding (NAM) is a treatment used in the early management of cleft lip and palate patients. The treatment involves making an impression of the defect within the first week of life and fabricating an intra-oral device to approximate the alveolar segments. Simultaneously, an extra-oral nasal stent is attached and used to mold the alveolar soft tissues.

My research is on a NAM treatment performed for a patient who presented to the Montefiore craniofacial team at five weeks old. Typically, NAM treatment is started within the first week of life when the cartilage in the newborn is soft and lacks elasticity, making it more easily adaptable. After discussion with the craniofacial team and the patient’s family, it was determined we would attempt NAM despite the delayed start. Impressions were made when the patient was six weeks old and the device was inserted at seven weeks. We were pleased to see positive results almost immediately, with closure of the cleft from 11mm to 6mm within the first month. At this point, we introduced the nasal stent to begin molding the soft tissues. We elongated the columnella noticeably and provided pronounced nasal tip projection, along with improvement in symmetry by both a combination of nasal molding and taping of the lip segments horizontally. Though treatment was initiated more than a month later than protocol suggests, an acceptable outcome was achieved. This is only one patient treatment and other factors must be considered, but based on our results we can conclude that NAM should not be ruled out even with delayed start.

Conducting this research and participating in the ACP poster session has been an incredibly valuable experience. Maxillofacial prosthodontics and specifically nasoalveolar molding is an integral part of our prosthodontic training at Montefiore and has given me the unique opportunity to work alongside and learn from Oren Tepper, MD, Elyse Uppal, CPNP, and the entire Montefiore craniofacial team who contributed immensely to the positive outcome of this treatment. As a first-year resident, it was an honor to represent our program and share this meaningful treatment with other residents and ACP members. I learned a great deal from the posters presented by my fellow residents and I look forward to participating again next year!

The DDPP Concept:
Pre-orthodontic Implant Planning with the use of a Digitally Designed and Produced Prototype
Dr. Ali Abdallah, Boston University (2021), 2nd Place

My poster demonstrates the use of a digitally designed and produced prototype (DDPP) in diagnosis, treatment planning, and guiding of surgical and orthodontic therapy in a partially edentulous patient.

The loss of posterior teeth is a challenge for interdisciplinary cases requiring orthodontics due to the lack of anchorage. The use of implants has been documented to provide anchorage for difficult orthodontic movements. However, it is traditionally challenging to plan the implant positions prior to orthodontics. A 40-year-old partially edentulous man was referred by orthodontics with missing maxillary posterior teeth and severely malpositioned remaining teeth. Restorative space and anchorage for orthodontic retraction were inadequate.

The objectives were to establish the desired occlusal plane and tooth position, to simulate the needed orthodontic movements, to design the future restorations for the edentulous areas, and to create a prototype of this design as a surgical and orthodontic guide. Following the DDPP
Maxillary Full-Arch Implant Supported Restoration Digital Impression and Maxillomandibular Relationship Workflow

Dr. Walaa Magdy Ahmed, University of British Columbia (2019), 3rd Place

Intraoral scanners are increasingly being used as a replacement for conventional impressions, including the capturing of edentulous arches, although this may be clinically challenging. The literature investigating intraoral scanning for fabricating multiple implant-supported full-arch restorations remains scarce, particularly regarding in vivo studies and the establishment of a definitive scan protocol. My presented poster displayed a novel digital workflow technique that describes the fabrication and use of a custom scanning device to scaffold an intraoral full-arch scan of at least six implant scan bodies in the edentulous maxilla while simultaneously capturing the maxillomandibular relationship for the purpose of establishing a digital workflow to fabricate a maxillary full-arch implant-supported prosthesis. This technique provides the intraoral scanner with anatomical landmarks for improving the likelihood of scanning efficiency and offers a possible scan protocol that may help improve the accuracy of the scan.

Presenting my technique poster at the Annual Session gave me the chance to discuss my digital workflow idea with experienced prosthodontists as well as future prosthodontists in a professional and inspiring environment full of potential to advance digital dentistry. The digital poster session was so convenient for me in terms of poster preparation, transportation, and presentation.

It was an honor for me to receive third place and represent the prosthodontics program at the University of British Columbia. I hope my participation will inspire my co-residents and prosthodontics residents in other programs to challenge their innovative ideas during their prosthodontic residency and share them at future ACP meetings. I would like to thank Dr. Anthony P. McCullag, my clinical mentor in this technique, my graduate supervisor Dr. Ricardo Carvalho, my prosthodontics co-resident Dr. Tyler Verhaeghe and laboratory technician Mr. Jae Won Sim for their support.
New ACP Officers and Board Members

**Dr. Stephen I. Hudis** was installed as President of the American College of Prosthodontists. He maintains a private practice in Princeton, New Jersey. He served as Treasurer of the ACP Education Foundation from 2006-2015 and served on the ACP Board of Directors as the Region 1 Membership Director from 2011-2015. He is a Diplomate of the American Board of Prosthodontics and a Fellow of the ACP.

**Dr. Mark C. Hutten** was installed as President-Elect of the American College of Prosthodontists. He serves as the Director of both the General Practice Residency Program and Dental Oncologic Services at Northwestern Memorial Hospital in Chicago and as an Associate Clinical Professor in the Department of Otolaryngology Head and Neck Surgery, Northwestern University Feinberg School of Medicine. He previously served on the ACP Board of Directors as Treasurer, and as Director of the Prosthodontic Forum. Dr. Hutten is a Diplomate of the American Board of Prosthodontics and a Fellow of the ACP.

**Dr. Lars Bouma** was installed as Vice President of the American College of Prosthodontists. He maintains a full-time private practice limited to prosthodontics and implant dentistry in Oklahoma City and holds an academic appointment at the University of Oklahoma College of Dentistry. Dr. Bouma served in the Air Force Dental Corp for 11 years. He has been involved in many ACP committees, and most recently served on the ACP Board of Directors as the Continuing Education Director. Dr. Bouma is a Diplomate of the American Board of Prosthodontics and a Fellow of the ACP.

**Dr. Mark E. Ludlow** was installed as the Continuing Education Division Director. He is currently the Division Director of Implant Prosthodontics, Associate Professor, and Co-Director of the Digital Dentistry Residency at the Medical University of South Carolina. He has been involved in multiple ACP committees, most recently serving as Program Chair for the Digital Dentistry Symposium.

**Dr. Ryan R. Sheridan** was installed as the Region 6 (Federal Services) Membership Director. He currently serves as the Director of Surgical Prosthodontics at the Air Force Postgraduate Dental School, JBSA-Lackland in San Antonio, TX. Dr. Sheridan has served on multiple ACP committees, and was awarded first place in the John J. Sharry Research Competition in 2015. He is a Fellow of the ACP and a Diplomate of the American Board of Prosthodontics.
Dr. Louis F. DeSantis was installed as the Region 1 (Northeast) Membership Director. He serves as an adjunct associate clinical professor in the advanced education program in prosthodontics at the New York University College of Dentistry. He also has received multiple awards for service to his local community. He is a Diplomate of the American Board of Prosthodontics and a Fellow of the ACP.

Dr. Lisa A. Lang was installed as the Region 3 (Central) Membership Director. She currently serves as the Chair of Restorative and Prosthetic Dentistry at The Ohio State University College of Dentistry. She has volunteered on multiple committees and projects for the ACP. Dr. Lang is a Fellow of the ACP, and a Diplomate of the American Board of Prosthodontics.

Dr. Nadim Z. Baba will remain an active member of the ACP Board of Directors by serving as Immediate Past President for the next year.
Dr. Alvin G. Wee was reinstated as the Education & Research Division Director.
Dr. Douglas G. Benting was reinstated as the Prosthodontic Forum Director.
Dr. Eva Boldridge was formally installed as the Region 4 (Rockies/Plains) Membership Director.
Dr. William O. Wilson, Jr. has been elected to the Private Practitioner position on the ACP Council for the American Board of Prosthodontics.
Dr. Frank J. Tuminelli has been elected as the new Examiner (Director) Elect of the American Board of Prosthodontics.

Thank you to the 2019 corporate supporters of the ACPEF, enabling the Foundation to advance prosthodontics through education, research, and other opportunities for growth.

An additional 90 new abstracts were recently added to the supplemental resource Defining Digital Dentistry: A Survey of Recent Literature. These new abstracts range from Nov. 2017 – present, covering the state of the art in a broad range of topics including: investigations of intraoral and extraoral scanning accuracy, CBCT technology, the CAD/CAM milling of restorations, guided implant surgery, complete denture methodologies, removable partial denture techniques, and applications to maxillofacial prosthetics.

You can access the latest edition of the abstract compilation, along with many other vital assets, on the ACP’s Digital Dentistry Resources page.

New ACP Fellows and Diplomates of the American Board of Prosthodontics

Dr. Salahaldeen Mohammad Assad Abuhammoud
Dr. Haidar Ali Alalawi
Dr. Maram A. ALGhamdi
Dr. Saad S. AlResayes
Dr. Hongseok An
Dr. Matthew S. Bryington
Dr. Asmaa F. Bukhari
Dr. Yo-wei Chen
Dr. Jason S. Chong
Dr. Jefferson L. Clark
Dr. Jody L. Clements
Dr. Mohammad H. Dashti
Dr. Laura J. Davila
Dr. Nicole L. Deakins
Dr. Rafael Del Castillo
Dr. Amy Hiam Elias
Dr. Benjamin D. Fitzharris
Dr. Keaton B. Forrester
Dr. R. Kyle Gazdeck
Dr. Michael D. Gillins
Dr. Evan D. Grodin
Dr. Wainscott Hollis
Dr. Sanjay Karunajaran
Dr. Daniel T. Kerrigan
Dr. Navpreet K. Khatra
Dr. Dong S. Lee
Dr. Sarah K.Y. Lee
Dr. Pamela Maragliano-Muniz
Dr. Mariam Margvelashvili-Malament
Dr. Patrick E. McCurdy
Dr. Dane C. McMillan
Dr. Kale B. McMillan
Dr. Amelia L. Orta
Dr. Douglas A. Porr
Dr. Mahmoud A. Qabazard
Dr. Paola C. Saponaro
Dr. Pooya Soltanzadeh
Dr. Akanksha Srivastava
Dr. Rajesh S. Swamidass
Dr. Patricia H. Swanson
Dr. Amanda G. Syamken
Dr. Sharareh Tajbakhsh
Dr. Loana M. Tovar Suinaga
Dr. Owen Vu Trinh
Dr. Chao-Chieh Randy Yang
Dr. Ahmed M. Zaher
Dr. Paul Zhivago
The 2019 Prosthodontic Review Course was held Sept. 21-22 in New York City with nearly 90 attendees. Led by Program Chair Dr. Leila Jahangiri, speakers covered the entire spectrum of contemporary prosthodontics. From an update on core concepts in fixed, removable, and implant prosthodontics to an overview of the latest developments in dental materials, digital workflows, and more. Thank you to Preat Corporation for their sponsorship of the course.

IN MEMORIAM

The College and Board of Directors remember the following colleagues:

Dr. Ronald A. Bryant
Dr. Richard A. Bullock
Dr. Patrick D. Crowe
Dr. Burleigh W. Quesinberry
Dr. Stanley E. Rye
Dr. Stanley G. Vermilyea
Dr. Ronald D. Woody

In their honor, the College has made a contribution to the ACP Education Foundation.

Volunteer to Help Edentulous Veterans

Are you searching for a way to give back to the community? Would you like to use your training to help veterans?

The ACP, ACPEF, ADA, and Dental Lifeline Network are teaming up to provide prosthodontic services to edentulous veterans. We need your help. Please consider adding your name to our list of volunteers by visiting Prosthodontics.org/Veterans.

We will send you more details about the program and how you can participate as they become available.

On behalf of the ACP, ACPEF, ADA, DLN, and the many veterans whose lives will be changed with these services, thank you for your support.

Latest from the Journal of Prosthodontics

The Journal of Prosthodontics would like to acknowledge our top reviewers for their outstanding peer review efforts in 2019. These individuals consistently deliver comprehensive, discerning reviews. Our associate editors have selected these reviewers for special recognition based on the number of reviews conducted; the quality and constructiveness of their reviews; and the timeliness of review completion. Their expertise and valuable suggestions help maintain the high standard of the Journal.

We thank the following reviewers for their service: Drs. Wael Al-Omari, Mohammed Alrashdan, Hongseok An, Robert Frazer, Kiho Kang, Vincent Lee, Leonardo Marchini, Karen McAndrew, Marta Revilla León, and John Rugh.

In other news, Dr. Vinicius Rosa has joined the Journal as a new assistant editor. He is the Assistant Dean of Research at the University of Singapore with a strong background in biomaterial research. And in October 2019, the Journal welcomed a new Managing Editor, Rachel Yehl. If you have any questions about submitting to or reviewing for the Journal, please contact her at ryehl@prosthodontics.org.
Welcome New Members
September – November 2019

Reinstated Fellow
Dr. Ashley N. Hudson
Dr. Farhad Hakimi
Dr. Kunal Lal
Dr. Ahmad Maalhagh-Fard
Dr. Roger L. Miller
Dr. Vrinda V. Mohunta

Reinstated International Fellows
Dr. Islam A. Khasawneh
Dr. Janghyun Paek

New Members
Dr. Daniel Ben Yehuda
Dr. Elisandra Reyes-Perez
Dr. Burak Taskonak
Dr. Panagiotis Zoidis

Reinstated Members
Dr. Mark S. Andrawis
Dr. Konstantina Angelara
Dr. LaDerrick Bullock
Dr. Norberto N. Delgado
Dr. Judith L. Gartner
Dr. Peter C. Grieco
Dr. Stephen Paul Lambert
Dr. Mauricio A. Malo
Dr. Alexis O. Morales
Dr. Ambar D. Pagani
Dr. Ann Marie Pereira
Dr. Karina Pezo Shirley
Dr. Soraya C. Villarroel

New International Member
Dr. Abdulhadi A. Abannya

Reinstated International Members
Dr. Hassan A. Al Abbas
Dr. Maher S. Hajjaj
Dr. Kushal A. Jaju
Dr. Hossam F. Jokhadar
Dr. Anfal Mandekar
Dr. Vasiliki Raptopoulou
Dr. Veronica Rivera

New Resident/Graduate Student Members
Dr. Feras Mohammad Abounassif
Dr. Dua Abdulrahman Alahdal
Dr. Maha M. Alenzi
Dr. Hussain A. Al-Humoood
Dr. Anan Alijuwahel
Dr. Tareq S. Alsultan
Dr. Yousef Behbehani
Dr. Chang-Kai Chen
Dr. Mai E.L. Najjar
Dr. Thaleia Filokyprou
Dr. Lea G. Hajjar
Dr. Niki Haj Hariri
Dr. Kenneth L. Kronstadt
Dr. Yi-Cheng Lai
Dr. Chun Jun Stuart Lee
Dr. Dongjoo Lee
Dr. Yoojin Lim
Dr. Dianne Luu
Dr. Ravdeep S. Mann
Dr. Taha Mohammad Masood Akhtar
Dr. Feras J. Mirdad
Dr. Abdullah S. Mokeem
Dr. Ignacio Garcia Mur
Dr. Hadjer Sahraoui
Dr. Sher Shah Shahab
Dr. Visalakshi Shivaraman
Dr. Mariana Mambrini Soldatelli

Reinstated Dental Technician Alliance Affiliate
Mr. Joseph Kim

New Global Alliance Affiliates
Dr. Anwaar S. Fattani
Dr. Cynthia M. Solis

New Advanced Program & Graduate Student Alliance Affiliate
Dr. Linah AlManie
Dr. Ahmed A. AlMozyzen
Dr. Waad Alrasheed
Dr. Heba Khaled Alshalawi
Dr. DeVon M.A. Binns
Dr. Myrna Karina Gizz-Cantu
Dr. Chan-Tè Huang

New Predoctoral Alliance Affiliates
Mr. Abdullah Al Qaraghuli
Ms. Morgan A. Atanasio
Mr. Yash Desai
Mr. Arnold Do
Mr. Justin C. Goff
Ms. Carmin P. Gonzalez
Ms. Claudia S. Herdokia
Dr. Farzaneh Hosein Khezri
Ms. Miriam Ivry
Ms. Madeleine A. Maas
Ms. Anahita Norouzi
Ms. Alisa Pham
Mr. Kyle M. Radomski
Ms. Divya Thakur
Ms. Flor Vivar
Ms. Huilin E. Wu
Mr. Paul Davis Yates
Mr. Cory W. Zirkel

Digital Dentistry Symposium
Feb. 18-19, 2020
Chicago
Prosthodontics.org

National Prosthodontics Awareness Week
April 19-25, 2020
Prosthodontics.org/NPAW

50th Annual Session
Nov. 4-7, 2020
New Orleans
acp50.com
Job Opportunities

**Arizona (Tucson) -** Associate needed immediately in a Prosthodontic practice that is for sale. Ideal location, fully equipped operatories, with in-office removable lab, ready for immediate patient care. info@drlarrywest.com

**Arkansas (Fayetteville) - Ozark**
Prosthodontics has an immediate opening due to significant growth in patient treatment. We currently have 3 surgical prosthodontists and are looking to add more. Our clinic & our laboratory uses state of the art digital technology. We understand, and are very successfully using medical insurance to help patients receive very necessary treatment, by reducing their out of pocket expenses. Experience placing implants is highly recommended because the vast majority of our treatment plans involve implant retained/supported restorations. If you are sincerely interested in learning more about us, please contact Dean McNeel (mcneel@ozarkpros.com).

**Florida (Fort Lauderdale) -** We could be your new dental home! Our team of 25 is looking for a nice, bright, PROSTHODONTIST for 1500 DENTAL's new, state-of-the-art facility located near downtown Fort Lauderdale. It’s time to take your career to the next level! Experience how dentistry should be. The practice is a 4,000 sq-ft Center for Complete Dentistry. The center also has a complete digital workflow——CBCT, ITERO, DSD, and CAD-CAM. 1500 DENTAL offers medical benefits, 401K, vacation time, continuing education, and a chance to work with South Florida’s most highly qualified multidisciplinary dental and administrative team. We have a wonderful and highly trained team that focuses on providing high quality care in a comfortable environment. We will provide the practice support needed for your success. Patients go to the dentist every six months because they have to, they come to 1500 DENTAL because they love to! Please email CV and direct inquiries to Dr. Forrest at ADF@1500dental.com. We look forward to hearing from you!

**Florida (Plantation) -** OneSolution Dental Implant Center is a multi-specialty practice seeking a Florida licensed prosthodontist to join our team in Plantation/Tamarac. We offer state-of-the-art technology, and facilities: the office is fully equipped with an in-office lab, 5 dental technicians, milling units, digital radiography, cone beam CT scan and a great support staff. Must possess a patient-centered approach to treatment planning and be able to perform all phases of implant prosthetic dentistry and All-on-4 procedures. Interested candidates please apply with a current CV. We look forward to hearing from you! Submit CV to carolyn@friedmandentalgroup.com

**Georgia (Atlanta) -** Opportunity to become part of an elite dental center in the heart of Metro Atlanta. Established in 1986, professional staff, 6 ops. Offering fixed, implant and removable prosthodontics, dental implants, as well as comprehensive dental care. We’ve built a reputation in Atlanta for quality, compassion and excellence.

Extensive dental implant skills and IV sedation licensure is preferred. Focused on large cosmetic and restorative cases. Excellence in patient care is paramount to consideration and should include exemplary skills engaging with patients, building relationships with referring doctors, and being actively involved in dental organizations and continued education.

Contact: Dr. David Zelby (cell) 678-984-1717
Send resume: dazelby@gmail.com
NewSmileAtlanta.com

**Georgia (Atlanta) -** State of the Art Prosthodontic & Maxillofacial Prosthetic practice is seeking Maxillofacial Prosthodontist for Associateship to Partnership. Visit Orofacialcenter.com for info. Email jamesadavisjrdmd@gmail.com, or call 678-858-2383. Will consider training Prosthodontist if has sufficient art skills and interest in the field.

**Illinois (Chicago) -** FACULTY OPEN RANK (TENURE/NON-TENURE TRACK)
Pre-Doctoral Dental Education
Department of Restorative Dentistry
University of Illinois at Chicago

The Department of Restorative Dentistry at the University of Illinois at Chicago is seeking qualified candidates for several faculty positions from 60% FTE to 100% FTE (full-time) open rank faculty positions in either the tenure or non-tenure clinical track for the Pre-Doctoral education program. The Department seeks individuals with a strong commitment to interdisciplinary care and willingness to engage with all departments in the College. Responsibilities will include preclinical and clinical instruction in all aspects of the Restorative Sciences. Qualifications include a DDS/DMD degree or equivalent and prior teaching experience. Candidates must be eligible for licensure in Illinois. Candidates with training and/or documented experience in research will be preferred. For the tenure position, additional qualifications include a Master of Science Graduate Degree or PhD, postdoctoral training in a clinical science (e.g. Operative
EON Clinics’ generous compensation package includes an annual base salary of up to $360,000 plus bonus based on clinic production (paid quarterly). We offer malpractice insurance (company paid), a continuing education stipend (up to $5,000 annually), a professional expenses stipend (up to $4,000 annually), medical/dental/vision/life benefits (cost-sharing), 401(k), paid time off (up to 21 days) and paid holidays (up to 7 days).

EON Clinics is family owned and privately held with a welcoming, congenial, collaborative culture that expects hard work, strong effort and great success from its dedicated employees, but also allows for work life balance. Our employees are valued and appreciated! We do not require corporate ownership and the complicated tax liability that goes along with that stipulation – there are no company tax returns for you to sign and take responsibility for.

Since 2008 EON Clinics has been a leading provider of dental implants in the Midwest. Our beautiful state of the art, all-in-one treatment facilities are equipped with modern technology, including advanced 3D CAT scan capabilities and full-service in-house labs. Our superior clinical and administrative teams enable us to deliver premium products and treatment that support the highest standard of patient care.

You will be responsible for all aspects of clinic work. We need you to demonstrate strong leadership and management acumen, and work to achieve center profitability through sales efforts. Building good rapport with patients and staff, performing all phases of prosthetic dentistry, providing excellent patient care and helping to strengthen EON Clinics’ reputation in the marketplace as an AO4 leader is required of this role. A strong ability to listen, communicate well, lead a team and be open-minded are keys to success.

If you are a skilled practitioner with a patient-centered mindset, high ethical standard, professional demeanor, superior clinical skills, a sales-orientation and the ability to click and connect with people, incredible growth opportunities exist for you to join our world-class EON Clinics team – don’t miss out!

Contact Peg Rey, HR Manager at 630-308-8663 or peg.rey@eonclinics.com, WEB: eonclinics.com

Illinois (Oak Brook) & Indiana (Munster) - Prosthodontist positions are available in Oak Brook (Illinois) and Munster (Indiana).

EON Clinics’ generous compensation package includes an annual base salary of up to $360,000 plus bonus based on clinic production (paid quarterly). We offer malpractice insurance (company paid), a continuing education stipend (up to $5,000 annually), a professional expenses stipend (up to $4,000 annually), medical/dental/vision/life benefits (cost-sharing), 401(k), paid time off (up to 21 days) and paid holidays (up to 7 days).

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Contact Peg Rey, HR Manager at 630-308-8663 or peg.rey@eonclinics.com, WEB: eonclinics.com

Northern Wisconsin and the Upper Peninsula of Michigan - Opportunity to Become a Partner of Bay Lakes Center for Complex Dentistry - BLCCD.COM

Established in 1978, we have built a reputation for quality, compassion, and excellence with a practice limited to prosthodontics. Our practice focuses on comprehensive dental care featuring all phases of implant and reconstructive dentistry. We are searching for a motivated prosthodontist to join our team and transition to a partner.

Both doctors and their wives are avid sportsmen with a passion for fly-fishing and upland game hunting. Enjoy the low housing costs, excellent schools, and friendly community that Northern Wisconsin and the Upper Peninsula of Michigan offer.

Potential candidates should have extensive dental implant skills, both surgical and restorative, ability to build relationships with referring doctors, leadership abilities, and a Certificate in Prosthodontics from a CODA accredited postdoctoral program

For additional information, please contact Jim Hammond at jehammon@newnorth.net
completed advanced training in a CODA-approved prosthodontics program and be board qualified or certified by the American Board of Prosthodontics. Candidates should currently be an active clinician with minimal five years clinical experience in a prosthodontic practice, however an exceptional recent advanced program graduate would be considered. Candidates with teaching experience will be preferred. Salary is competitive with dental academic pay rates with an additional income that can be generated from one day a week of intramural or extramural practice.

Interested applicants should send a cover letter, CV, and three references to: Ms. JoAnn Nyquist, 3223 North Broad Street, Philadelphia, PA 19140, or jo.ann.nyquist@temple.edu. Temple is an equal opportunity/affirmative action employer. Women and minorities are encouraged to apply.

Tennessee (Memphis) - Outstanding prosthodontic practice opportunity in the rapidly growing Memphis area. Growing practice is seeking an immediate associate prosthodontist transitioning to a partnership after one year. Practice located in affluent East Memphis with state of the art office that is paperless and digital. CBCT, surgery suites, expansive operatories, conference center, in-house dental laboratory and oral surgeons on staff. Our office has a large referral base and maintains prominence as the leader in reconstructive dentistry and all phases of implant dentistry in the Mid-South. Enjoy the low housing costs, excellent schools and vibrant community living that Memphis is known for. Please email resume to cwschulter@aol.com or call 901-435-0980 for more information.

Texas (Dallas-Ft. Worth) - Solo Private Practice seeks ambitious, strong work ethic, high quality oriented Prosthodontist-Associate leading to Partnership. Low volume/high production practice. Great opportunity in one of the strongest economies in the country. Email: david_mcfadden_dmd@yahoo.com

Practices for Sale

Arizona (Phoenix/West Valley) - Established 34-year-old prosthodontic specialty practice in Phoenix, Arizona looking for an associate transitioning to ownership or immediate ownership. Full spectrum of prosthodontic services offered. Implant based care a major portion of treatment including surgical placement, adjunctive grafting and enhancement procedures. One million plus collections for over sixteen years. Fee for service, no HMO, PPOs or insurance contracts. Dentrix office management, digital radiography, and 3Shape lab scanner. Owner will remain per request of new doctor in transition and/or mentor surgical skills for implant based procedures. Enjoy year-round outdoor activities in one of the fastest growing cities in the United States. Contact Fred Heppner, fredh@arizonatransitions.com, (480) 513-0462 or text owner at (602) 757-0454.

California (North San Diego County) - Prosthodontic practice in North San Diego County. Successful FFS practice for over 50 years, with current prosthodontist owner since 1999. 4 full equipped operatories in 2200 sq. ft., beautifully designed environment in stand alone building, with ample parking, and room for expansion. Experienced, highly qualified removable prosth team in building. 760-443-3603

California (San Luis Obispo) - Prosthodontic dental office with a 35 plus year history of goodwill in the San Luis Obispo, CA area looking to find a wonderful, kind practitioner to purchase practice. Offering many transition options. The office is conveniently located in a beautiful Victorian building. Doctor owned real estate and buyer has the option to purchase. The office occupies approximately 1800 sq. feet and consists of 3 fully equipped ops, a private office, a reception area, a sterilization area, a staff lounge. The practice functions with state-of-the-art technology. Office is fully computerized with and operates Dentrix practice management software. This FFS practice grosses approximately 1M and generates approximately 11 new patients per month. The doctor will work back in the practice or mentor (if desired) to help the new doctor with a successful transition. This is only at the request of the purchasing dentist. The practice is located in a great community in which to live and practice dentistry. Please send your CV to: prosthsanluisobispoco@gmail.com

California (Palm Springs) - Exceptional opportunity to purchase a highly profitable Multi-Specialty Practice in the beautiful Palm Springs, California area. Practice collects $1.2M+/year with low expenses, utilizes CT Scan, Digital X-rays, and Laser. Mostly cash practice catering to high-end clientele. Won’t last long! For more information, contact Henry Schein PPT, Kerri McCullough 949-300-0312. #CA604
District of Columbia - The practice was established in 1991 in North West of Washington, DC in the highly desirable neighborhood with current owner with 3 fully digital equipment operatories in 1200 sf beautifully designed in a professional medical building with ample parking. The practice is strictly 100% fee for the service with no insurance arrangement. For more information please send a cover letter and current CV to prosthodontist.washington@gmail.com.

Florida (Lady Lake) - Prosthodontic practice for sale in The Villages, Lady Lake, FL, Florida's Friendliest Hometown. Owner needs to retire because of health issues. Sees patients 3 days a week, 5 hrs. each day, 15 hrs. a week. Will gross from $350,000 to $400,000 a year. Successful fee for service practice since 2003, no contracted plans with insurance companies. 2 fully equipped operatories with a fully equipped laboratory in a 1200 sq. ft. office space. Has an iCrest imaging scanner, a Scan X digital radiograph scanner, Biolase, and a Panorex. For more information: Tel. 352-259-6646 or Email: davilaprosth@hotmail.com.

Massachusetts (Williamstown) - Located in idyllic college town of Williamstown, Massachusetts. T.H.E. designed four-operatory, 2,000 sq. ft., modern office in standalone building with rental apartment or possible expansion. Successful, solo, fee-for-service practice of 39 years. Desire to sell with flexible options to remain active in transitioning, mentoring, and collaborating on part-time basis. Contact jkleedermandmd@gmail.com

Minnesota (Minneapolis) -
• Successful fee for service practice for 17 years
• Full spectrum of prosthodontic services offered
• $896,000 in collections (2018)
• 630 active patients, 10-12 new patients per month
• Beautiful 1,631 square foot office in convenient location

Please contact Minnesota Transitions at 952-297-8308 or info@mntransitions.com to receive a detailed practice prospectus.

Missouri (North Kansas City) - This purchase and transition opportunity is a cosmetic & implant focused general practice with 40 years of goodwill. Located in a highly desired and growing part of North Kansas City, this practice was designed and built new in 2015 with 7 equipped ops. No expense was spared for all of the latest technology including an i-Cat, Dexis, intraoral cameras, iTero and Treo scanners. A lifestyle practice being almost entirely fee-for-service, the adjusted cash flow after all expenses for this practice is over $850,000! An extremely rare opportunity! For more information contact drew@hpadvisors.com.

New York (Finger Lakes Region) - Very profitable prosthodontic practice for sale in Finger Lakes Region of NYS. Enjoy wonderful outdoor recreation including boating, skiing, fishing, hiking and the cultural variety of symphony, opera and SU Division 1 sports while owning an incredibly productive and profitable practice. Located in a quaint riverfront suburb of Syracuse, this practice consistently collects >2.6M while working four days per week and 13 weeks vacation. CBCT, Digital, Laser all part of the usual work flow. For more information, contact the owner at 315.877.5056.

Texas (Austin Metro Area) - Prosthodontics practice located in the Austin metro area. Collections of over $775K through August 2019. Collections on track to be over $1.1M for 2019. List price $971,000.

For a confidentiality agreement/NDA please email Traci Lopez at traci@eandassociates.com.

Texas (Houston) - This cosmetic/implant dentistry focused practice provides implant services and full mouth restoration in a beautiful facility with 6 fully equipped operatories, a CBCT, digital x-rays. Revenues are historically above $2.5M with 1,200+ active patients with a very healthy new patient flow of 50 per month. Seller is open to a mutually agreeable transition structure after closing. For more information please contact McLerran & Associates at: houston@dentaltransitions.com #H443
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