



## **History of the University of Michigan Orthodontics Program**

The graduate program in Orthodontics, established in 1923, is the oldest degree granting orthodontics program in the world. It has historically played and continues to play a strong leadership role by conducting research and promoting scholarship within the profession.

### **Graduate Orthodontic Residency Program**

It is the mission of the Orthodontics Program to provide carefully selected dentists with the knowledge and skills necessary to the life-long conduct of an ethical, patient-centered, evidence-based orthodontic practice. To this end, we hope to graduate specialists who possess high-level technical skills, a broad based scientific foundation, a thirst for knowledge, and ability to assess critically and, where appropriate, implement the scientific and social advances that will be encountered during a lifetime of practice. In the process, we hope to produce alumni who will play a leadership role in specialty governance, education, and/or research. The program engages in multiple broad-based, systematic, and continuous methods of evaluating and improving the educational quality, patient care, and research in order to meet the program goals.

The graduate program in Orthodontics is of 35 months duration and grants an orthodontic certificate and an M.S. in Dentistry through the Rackham School of Graduate Studies. Seven students are admitted annually. A PhD track is also available for those individuals who wish to pursue full-time careers in academic orthodontics. The program also provides collaborative treatment on complex cases in conjunction with other dental specialties including Oral and Maxillofacial Surgery, Prosthodontics, and Periodontics.

The graduate program begins in early July and ends three years later at the end of the second week of June. It provides a comprehensive understanding of the science of craniofacial biology as well as its application to the various orthodontic techniques and methods in contemporary clinical practice. This program also provides experience in teaching orthodontics to undergraduate dental students as well as in the conduct and interpretation of research to partially fulfill the requirements for a Master of Science degree in orthodontics.

### Didactic Curriculum

The faculty involved in the education of the graduate students provide a well-rounded and robust education. Instruction in all orthodontic didactic courses is provided by specialists in Orthodontics and Dentofacial Orthopedics. These faculty have the necessary expertise in all areas of biomedical sciences in orthodontics including using sound principles of appliance design and Biomechanics, Biomaterials, Growth and Development, Cephalometrics, Research Design and Methods, Craniofacial Anomalies, Orthognathic Surgery, Interdisciplinary Treatment Planning, History of Orthodontics, etc. Resident education is supplemented where necessary in areas such as Anatomy, Bone Biology, Statistics, Periodontics, Psychology, Speech Pathology, Genetics, Pathology, Pediatrics, Jurisprudence, Preventive Dentistry, Public Health, Temporomandibular Disorders, as well as Pain and Anxiety Control by experts from other departments.

Instruction in the basic sciences core courses is provided by faculty who have both academic and research expertise in respective topics of these courses. Many of these faculty are renowned experts in their fields. This ensures that our students receive the most current and accurate information and well-rounded education from the most qualified authorities in each field, which helps provide needed foresight on upcoming discoveries with applications to clinical practice.

<http://www.dent.umich.edu/about-school/department/opd/curriculum>

## Clinical Education

Through courses, seminars, case conferences and clinical activities, our students learn a number of methods to provide comprehensive orthodontic treatment. These experiences provide the students the competencies to coordinate interdisciplinary treatment plans, treat interceptive cases, utilize dentofacial orthopedics, treat orthognathic surgical cases, provide all phases of orthodontic treatment, and care for craniofacial and cleft lip and palate patients using a variety of contemporary orthodontic techniques.

Approximately 53% of the student time or approximately 3,000 hours is allotted for providing clinical care to a broad spectrum of patients representative of those encountered in private practice. There is over 3100 square feet space dedicated for graduate orthodontic patient treatment in the Robert W. Browne Orthodontic Clinic. The department contains the full range of radiographic, biometric and data collecting facilities for both clinical use and research purposes.

All clinical instruction and supervision of orthodontic patients is provided by faculty who have specialty training in Orthodontics and Dentofacial Orthopedics. The vast majority of our clinical instruction is provided by faculty who have over ten years of experience and are certified by the American Board of Orthodontics. Multiple faculty are assigned to cover the clinic every day of the week. Patients are assigned to a graduate student and a single attending faculty to optimize continuity of learning and a consistent approach to treatment for that patient.

## Research

Research is an important and integral component of the program. The formal foundation of the research training is designed to foster curiosity and the ability to critically evaluate historical, current, and future literature. The students are exposed to formal courses in which to formulate research questions and hypotheses, to identify appropriate statistical tests, and to prepare optimal approaches to data presentation and scientific writing. The research experience culminates in each student producing a student generated, faculty supervised, masters thesis. Examples of ongoing and recently completed research projects include: 3D CBCT imaging analysis on airway and TMJ, biomarkers of TMJ osteoarthritis, central mechanism in chronic TMD pain and migraine, mechanisms of and treatment for craniosynostosis, tissue engineering for craniofacial bone defects, skeletal stem cells of the craniofacial complex, dental pulp stem cells, drug delivery system to control orthodontic tooth movement and use of 3D virtual reality in education.

Departmental research space and resources give students opportunity and access to conduct their projects. The department houses the University of Michigan Elementary and Secondary School Growth Study. This data has been utilized frequently for either clinical research investigations, or as a control sample for ongoing clinical research projects. The department also has an Orthodontic Imaging Laboratory for analysis and study of dental and craniofacial CBCT data sets. For basic science projects, the program faculty have dedicated wet laboratories. These laboratory facilities and equipment are used to perform experiments and to collect, analyze, organize, and report the data. The graduate students also have the access to additional research facilities and resources under guidance of mentors outside the department.

## Service

Every other year, our residents organize and host the Graduate Orthodontic Residents Program (GORP) annual meeting in Ann Arbor. Residents are responsible for organizing the scientific program, manage logistics, provide entertainment venues, and obtain sponsorships donations from orthodontic exhibitors, the *American Association of Orthodontists* and its entities, and the *American Association of Orthodontists Foundation*. GORP began in 1989 as a means of bringing the orthodontists of the future together for a summer meeting, creating an environment to foster professional growth and interpersonal relationships among colleagues and representatives of the orthodontic industry.

<http://www.gorportho.com/>

## **Craniofacial and Special Care Orthodontics Fellowship**

This twelve month clinical fellowship train one orthodontist per year in the care of patients with craniofacial anomalies, syndromes, and associated special needs. The fellow evaluates and treats patients at the School of Dentistry and at the C.S. Mott Children's Hospital. This comprehensive program includes clinical, didactic, research, and service components. The fellow works closely with faculty, other fellows, graduate students, staff, patients, and patient families to understand the interdependent nature of craniofacial care. The Coghlan Family Craniofacial Fellowship Endowment has been established to provide support to an orthodontist who pursues the Craniofacial Fellowship.

<http://www.dent.umich.edu/admissions/graduate-programs/craniofacial-and-special-care-orthodontics-fellowship>

### **Faculty**

#### **Full Time Faculty**

Lucia H.S. Cevidanes, DDS, MS, PhD; Associate Professor, Director of Predoctoral Orthodontic Program  
<http://www.dent.umich.edu/about-school/department/opd/faculty-profile-dr-lucia-cevidanes>

Nan E. Hatch, DMD, PhD; Lysle E. Johnston, Jr. Collegiate Professor of Orthodontics, Chair of Orthodontics and Pediatric Dentistry, Co-Director of Orthodontics Research  
<http://www.dent.umich.edu/about-school/department/opd/faculty-profile-dr-nan-hatch>

Hera Kim-Berman, DDS, MMSc; Clinical Assistant Professor, Director of Graduate Orthodontic Program  
<http://www.dent.umich.edu/about-school/department/opd/faculty-profile-dr-hera-kim-berman>

Noriaki Ono, DDS, PhD; Assistant Professor, Co-Director of Orthodontics Research  
<http://www.dent.umich.edu/about-school/department/opd/faculty-profile-dr-noriaki-ono>

Wanida Ono, DDS, PhD; Assistant Professor, Director of Orthodontics for Pediatric Dentistry  
<http://www.dent.umich.edu/about-school/department/opd/faculty-profile-dr-wanida-ono>

#### **Part Time Faculty**

David M. Adams, DDS, MS; Adjunct Clinical Assistant Professor  
Fatima Ahmed, DMD, MS; Adjunct Clinical Lecturer  
Airton O. Arruda, DDS, MSD, MPH; Adjunct Clinical Assistant Professor  
Mary Barkley, DDS; Adjunct Clinical Assistant Professor  
Marsha L. Beattie, DDS, MS; Adjunct Clinical Assistant Professor  
Michael G. Behnan, DDS, MS; Adjunct Clinical Associate Professor  
Mark E. Berkman, DDS, MS; Adjunct Clinical Assistant Professor  
Roger L. Bookwalter, DDS, MS; Adjunct Clinical Associate Professor  
Donald R. Burkhardt, DDS, MS; Adjunct Clinical Assistant Professor  
Ulla K. Crouse, DDS, PhD; Adjunct Clinical Associate Professor  
Thomas R. Gebeck, DDS, MS; Adjunct Clinical Assistant Professor  
Thomas Gebeck, Jr., DDS, MS; Adjunct Clinical Assistant Professor  
Andre Haerian, DDS, MS, PhD; Adjunct Clinical Assistant Professor  
Eric D. Hannapel, DDS, MS; Adjunct Clinical Assistant Professor  
Gregory A. Hummon, DDS, MS; Adjunct Clinical Assistant Professor  
Joel M. Johnson, DMD, MS; Adjunct Clinical Assistant Professor  
Edwin Kwon, DDS, MS; Adjunct Clinical Lecturer  
Katherine A. Kelly, DDS, MS, PhD; Adjunct Clinical Assistant Professor  
Steven M. Lash, DDS, MS, FACD; Adjunct Clinical Associate Professor  
Laurie McNamara McClatchey, DDS, MS; Adjunct Clinical Assistant Professor  
Patrick J. Nolan, DDS, MS; Adjunct Clinical Assistant Professor  
Christopher A. Roberts, DDS, MS; Adjunct Clinical Associate Professor

Thomas J. Robinson, DDS, MS; Adjunct Clinical Lecturer  
Sylvie Sarment - Adjunct Clinical Lecturer in Dentistry  
Lainie M. Shapiro, DDS, MS; Adjunct Clinical Lecturer  
Bradley Stieper, DDS, MS; Adjunct Clinical Assistant Professor  
Josephine C. Weeden, DDS, MS; Adjunct Clinical Assistant Professor  
Kristine S. West, DDS, MS; Adjunct Clinical Assistant Professor

### **Emeriti Faculty**

Eli V. Berger, Associate Professor Emeritus  
Richard L. Christiansen, Professor Emeritus and Former Dean  
Sondra M. Gunn, Assistant Professor Emeritus  
Richard A. Johnson, Clinical Professor Emeritus  
Lysle E. Johnston, Jr., Professor Emeritus and Former Chair  
James A. McNamara Jr., Professor Emeritus

## **Our Orthodontic Residents**



### **Recently Graduated Class of 2017**

**Xi Chen, DDS, PhD, MS**

Thesis Title: Maturation of dental pulp stem cell-derived blood vessels.

Research Advisor: Jacques Nör, DDS, MS, PhD

Xi was born in Nanchang, China. She completed her dental education at Sun Yat-Sen University in 2007. She earned her PhD degree in oral biology from the University of Minnesota in 2014. When not working, she enjoys travelling, hiking and watching movies. She recently received her orthodontic certificate and M.S. in Dentistry from the University of Michigan in June of 2017. In the future, she hopes to pursue academic orthodontics.

**Silja L. Furche, DMD, MS**

Thesis Title: "Three dimensional cone beam assessment of pharyngeal airway space in patients receiving mandibular advancement surgery with or without mandibular constriction"

Research Advisor: Scott Conley, DDS, MS

Silja was born in Erlangen, Germany. She studied dentistry at Universita di Siena and Ludwig Maximilians Universitaet Munich. She enjoys travelling the world, camping, hiking, meeting new people, reading, going to concerts and the opera. She recently received her orthodontic certificate and M.S. in Dentistry from the

University of Michigan in June of 2017. In the future she will either move back to Europe or stay in the United States for work. She maintains a strong interest in treating special needs and craniofacial anomaly patients.

**Scott Sakowitz, DMD, MS**

Thesis Title: "The Impact on Teaching and Student Learning using a 3-Dimensional Virtual Reality Patient Mode"

Research Advisor: Hera Kim-Berman, DDS, MMSC

Scott was born in Longwood, Florida. He earned his Bachelor's degree in Zoology at the University of Florida in 2010 and his DMD from the University of Pennsylvania in 2014. He recently received his orthodontic certificate and M.S. in Dentistry from the University of Michigan in June of 2017. He will be returning home to Florida, where he plans to start his own practice. He recently also had his first child with his wife, Marla, who he met at dental school.

**Inna Sydorak, DDS, MS**

Thesis Title: "Control of Orthodontic Tooth Movement by Polymer Microsphere Controlled Delivery of Osteoprotegerin in Sprague-Dawley Rats"

Research Advisor: Nan E. Hatch, DMD, PhD

Inna was born in the western part of Ukraine. Her family came to the USA in 2003. She earned her Bachelor's degree in Economics at Hunter College. In 2010 she graduated summa cum laude. After graduating college she went on to pursue her dental education at Columbia University from which she graduated in 2014. When she is not at lectures, library, or clinic, she stays at home reading books, outside jogging/running, traveling, or watching a good movie with friends. She recently received her orthodontic certificate and M.S. in Dentistry from the University of Michigan in June of 2017. She has since relocated to Chicago, IL to become an associate orthodontic practitioner.

**Sarah Syklawer Howle, DMD, MS**

Thesis Title: "The Role of Msx2 and Osx in Osteoblast Differentiation and Intramembranous Bone Formation of the Craniofacial Complex"

Research Advisor: Noriaki Ono, DDS, PhD

Sarah was born in San Diego, California, and raised in Dothan, AL. She earned her Bachelor's degree in Psychology from the University of South Alabama in 2010, and she completed her dental education at the University of Alabama-Birmingham in 2014. Outside of academics, she enjoys any outdoor activity, running, traveling, drawing and painting. She recently received her orthodontic certificate and M.S. in Dentistry from the University of Michigan in June of 2017. She is pursuing private practice in Florida.

**Taylor Usitalo, DDS, MS**

Thesis Title: "3D Hyoid Bone Position & Airway Changes Using Cone Beam Computed Tomography in Patients Receiving Mandibular Setback Surgery +/- Maxillary Advancement for Correction of Class III Malocclusion"

Research Advisor: R. Scott Conley, DMD

Taylor was born in Hancock, Michigan and grew up in Lake Linden, MI in the Upper Peninsula. He completed his BS degree at Michigan Technological University in 2008. He received his DDS from the U of M. Taylor is a talented singer and enjoys time with his partner, friends and family. He recently received his orthodontic certificate and M.S. in Dentistry from the University of Michigan in June of 2017. Taylor will be practicing orthodontics in the greater Albuquerque/Santa Fe area of New Mexico.

**Natalie Yang, DDS, MS**

Thesis Title: "Impact of COMT genotypes and haplotypes on  $\mu$ -opioid system binding in healthy subjects and chronic TMD patients"

Research Advisor: Alexandre DaSilva, DDS, DMedSc

Natalie was born in Chicago, Illinois. She completed her accelerated dental program at University of the Pacific, where she received concurrent B.A. in Applied Sciences and D.D.S. degrees in 2014. In her free time, she loves to travel, eat, and spend time with family. She recently received her orthodontic certificate and M.S. in Dentistry from the University of Michigan in June of 2017. Natalie is returning to California to pursue private practice orthodontics.

**Soumya Vasantha**, BDS, MS: 2017 Craniofacial Fellow

Soumya was born in Bangalore, India. She earned her Bachelor's of Dental Surgery Degree from Rajiv Gandhi University in 2002 and her Master Degree from Saveetha University, Chennai in April 2011. She has been working for Christian Medical College Hospital, Vellore since June 2011. After the completion of her fellowship year, Soumya is returning to her position in Vellore to focus on the orthodontic treatment of craniofacial patients.

**Class of 2018**

**Sarah J. Baxter**, DDS

Research Title: Histomorphometric investigation of the PDL and alveolar bone responses to orthodontic force during inhibition of osteoclast mediated bone resorption by local injection of OPG in Sprague-Dawley rats.

Research Advisor: Dr. Nan Hatch

Sarah was born and raised in a suburb of Indianapolis, Indiana called Zionsville. She attended UNC-Chapel Hill for two years before transferring to Indiana University and graduated in late 2010 with a Biology degree. After getting married in May 2011, she moved to Ann Arbor to begin dental school and graduated with her DDS degree in 2015. Her husband Niel was also born and raised in Zionsville. He is finishing up his PhD in Microbiology at UM. They live on the west side of Ann Arbor with their two cats. Sarah enjoys home improvement projects, decorating, fine dining, ultimate Frisbee, NFL football (go Colts!), and beach vacations.

**Lauren C. Ehardt**, DDS

Research Title: Long-term Stability and Condylar Remodeling Following Mandibular Advancement

Research Advisor: Dr. Lucia Cevidanes

Lauren Ehardt grew up in Rochester, Michigan. She graduated from the University of Michigan with a B.S. in Biomedical Engineering. She went on to earn her DDS degree from the University of Michigan and was inducted into Omicron Kappa Upsilon for her outstanding performance as a dental student. In her free time Lauren enjoys trying out new recipes, traveling, and staying active. She also bleeds Maize and Blue and loves spending time with family and friends.

**Gregory L. Sencak**, DMD

Research Title: 3-dimensional analysis of condylar position changes using cone beam computed tomography in patients receiving mandibular advancement, mandibular setback, or maxillary surgery.

Research Advisor: Dr. R. Scott Conley

Greg was born and raised in Pittsburgh, PA where he attended North Hills High School. In high school, Gregory was a three-sport varsity letterman (basketball, tennis, cross country). He attended The University of Pittsburgh for his undergraduate education where he majored in biology and earned a BS in Combined Sciences. He was accepted as an Early Admission candidate into Pitt's dental school where he graduated with a DMD. Outside of the classroom, he enjoys the outdoors and playing a variety of sports.

**Sara D. Schutte**, DDS

Research Title: Analysis of craniofacial morphology and bone fusion following TNAP lentiviral gene therapy in Crouzon FGFR2<sup>C342Y/+</sup> mice on BALB/c and C57BL6/J genetic backgrounds

Research Advisor: Dr. Nan Hatch

Sara was born in Raleigh, North Carolina. Her family currently lives in the Shenandoah Valley of Virginia. She graduated from the University of Virginia in 2011, where received degrees in Biology and Spanish Literature. She earned her D.D.S. degree at Virginia Commonwealth University in Richmond, Virginia. Her hobbies include horseback riding, scuba diving, hiking, canoeing, and reading. She also loves trivia of any kind, and it is one of her life goals to be a contestant on "Jeopardy!"

**Brandon S. Shoukri**, DDS

Research Title: Integrating Clinical, Imaging and Biological Markers of TMJ Osteoarthritis

Research Advisor: Dr. Lucia Cevidanes

Brandon is from West Bloomfield, MI. He attended Brother Rice High School in Birmingham, MI. He graduated from Wayne State University with a B.S. degree in Nutrition and Food Science, and then

received his D.D.S. degree from the University of Michigan. Brandon enjoys golfing, reading... and he is a HUGE Red Wings fan.

**Taylor Nic Snider, DMD, MS**

Research Title: Quantification of craniofacial defects in Tgfr2 conditional knockout mice using micro-computed tomography

Research Advisor: Dr. Yuji Mishina

Nic is from Scant City, Alabama. He received a BS (06') and MS (07') in Math from the University of Alabama at Birmingham, and subsequently completed dental training in 2012 at Boston University. Afterwards, he completed a research fellowship at the National Institutes of Health. Nic enjoys walking around Ann Arbor, relaxing around the Huron river, crock pot recipes, and the French language.

**Kyle Taylor, DDS**

Research Title: Three-Dimensional Evaluation of the Skeletal and Dental Effects of Three Orthopedic Protocols for the Treatment of Class II Malocclusions

Research Advisor: Dr. Lucia Cevidanes

Kyle was born and raised in Flint, MI. He received a BS in Movement Science from the University of Michigan and did his dental training at the University of Michigan, School of Dentistry. His main non-academic interests include music, cooking and fitness. Sports are a huge interest with favorite teams being Manchester United FC, Chicago Bulls, and all things Michigan Athletics. It is also worth stating Kyle loves Nike, dogs, and frozen yogurt.

**Marilia Yatabe, DDS, PhD: 2018 Craniofacial Fellow**

Marilia Graduated from the São Paulo State University (Brazil) in 2006 with a DDS in Dentistry, in 2010 as Orthodontist, and received her PhD in 2016. She subsequently completed a Post-doc fellowship, also in Brazil. While at Michigan, she hopes to focus her research on alveolar bone graft and maxillary growth in patients with cleft but is also open to new challenges in the Craniofacial Anomalies topic. She is looking forward to spending this next year with her husband and 7 year old daughter in Ann Arbor to enjoy a year of wonderful experiences. Her hobbies include movies, volleyball, and spending time with family.

**Class of 2019**

**Julia Kim, MS, DMD**

Research Title: Lineage Tracing of FGFR3 Gene in Calvaria, Spheno-occipital Sychondrosis, and Mandible of Transgenic Mice

Research Advisor: Dr. Noriaki Ono

Julia was born in Seoul, Korea and immigrated to the US during her middle school years. She grew up in Fullerton, California. She earned a BA degree in Molecular Cell Biology from University of California, Berkeley and a MA degree in Medical Science at Boston University. Julia then received her DMD degree from Tufts University School of Dental Medicine. At Tufts, her research projects evaluated micro leakage under composite restorations and orthodontic brackets. Julia got married this year!

**Allison Greenberg, DDS**

Research Title: Genetics and Biomarkers of Migraines

Research Advisor: Dr. Alex DaSilva

Allison was born and raised in Delmar, NY where she graduated from Bethlehem Central High School. She received her B.A. in Economics from Binghamton University, graduating Summa Cum Laude and Phi Beta Kappa. Allison received her DDS degree with Distinction in Research from Stony Brook, School of Dental Medicine. In her free time, she is an avid tennis player, enjoys running, traveling and spending time with her family and friends.

**Margaret Anderson, DDS**

Research Title: Reconstruction of Large Alveolar Defects Using Stem Cell Therapy with 3D Bioprinted Scaffolds

Research Advisor: Dr. Darnell Kaigler

Margaret is from Whitehouse, Ohio and attended the University of Notre Dame, where she completed a B.S. in 2012. Then she attended the University of Michigan, School of Dentistry where she obtained her DDS in 2016. Margaret has five siblings, all of whom have graduated from or currently attend U of M. Therefore, she enjoys watching and attending Michigan sporting events with her family. She also likes being outside, traveling, and running.

**Jessica Grimmer, DDS**

Dental School: University of Michigan School of Dentistry

Research Title: Investing the Role of Cranial Progenitor Cells in Crouzon Craniosynostosis

Research Advisor: Dr. Nan Hatch

Jessica is from Grand Blanc, Michigan. She received her B.A. from the University of Michigan with a major in Spanish and a minor in Gender and Health. She then received her DDS from the University of Michigan, School of Dentistry. In her non-school time, she enjoys being outdoors, traveling around Michigan and beyond, and following Michigan sports!

**Katherine Alexandra Pischke-Thomas, DDS**

Research Title: The Three Dimensional Accuracy and Stability of 3D Printed Models Utilizing Various Methods of Printing and Different Materials

Research Advisor: Dr. Hera Kim-Berman

Alex was born and raised in Georgia. A die-hard Clemson tiger, she received her bachelor's degree in Animal and Veterinary Science and a minor in Business Administration. Clemson was also where she met her husband Zack. Alex attended the Medical University of South Carolina for dental school in Charleston, SC. An equestrian enthusiast, Alex also loves hunting and fishing, all animals (especially her two dogs), working out and meeting new people.

**Alexis Omer, DDS**

Research Title: Mandibular Condylar Stump Remodeling Characteristics Following Simultaneous Condylectomy and Orthognathic Surgery in Patients with Osteoarthritis

Research Advisor: Dr. Lucia Cevidanes

Lexi is from East Lansing, Michigan and a diehard Spartan fan (please don't hold it against me!). She received her B.S. degree from DePaul University in Chicago, Illinois. She moved back to the Great Lake State to attend dental school at the University of Michigan. In her free time she enjoys spending time with friends and family, running and playing tennis, being outdoors, and working on her skills in the kitchen!

**Spencer Crouch, DDS**

Research Title: Local vs. Systemic Tissue Nonspecific Alkaline Phosphatase (TNAP) Roles in Bone Progenitor Cell Differentiation

Research Advisor: Dr. Nan Hatch

Spencer grew up near the water in Traverse City, Michigan and attended Western Michigan University (WMU) for his undergraduate studies majoring in Biomedical Sciences and minoring in Chemistry and General Business. Following WMU, he married his high school sweetheart Ashley and received his DDS degree from the University of Michigan, School of Dentistry. In his free time he enjoys camping, backpacking, cooking/eating, traveling to new places, watching movies, and relaxing with friends.

**Class of 2020**

**Michael Fogge, DDS**

Michael is originally from northeastern Pennsylvania. He earned a B.S. in molecular biology with a specialization in biochemistry from the University of Pittsburgh in 2013 before entering directly into dental school at Columbia University, where he recently received his D.D.S. Most of his previous research experience was centered on tissue engineering, specifically the integration of stem cells into 3D-printed bio-scaffolds for osseous regeneration. He is interested in regenerative medicine as well as the mechanisms underlying the development of craniofacial anomalies. In Michael's free time he enjoys woodworking, collecting antique books, and experimenting with cooking French and Japanese cuisine.



**Craig McMullen, DDS**

Craig is from Hillsdale, Michigan. He graduated from Michigan State University with a B.S. in 2012. He then attended the University of Michigan for dental school and received his D.D.S. in 2017. During dental school he assisted with research on the effects of the Carriere device on class II patient outcomes. In residency he would like to continue research on the device, exploring either its effects on class III patients or soft tissues. Craig's hobbies include working out, traveling, being near the water and attending sporting events, such as Tigers' games.

**Joshua Padovano, DMD, PhD**

Josh is from a small town about one hour southwest of Chicago, called Morris. He lived in Chicago for eleven years and completed his bachelor's in bioengineering, Ph.D. in Oral Sciences and D.M.D. degrees, all at the University of Illinois at Chicago. His research interests are in the fields of biomaterials, bone biology and biomechanics with an emphasis on translational applications. In his free time, Joshua enjoys running, biking, golfing, traveling, cooking, listening to music or catching up with friends and family!

**Katherine Beard, DDS**

Katherine is originally from Portland, Michigan. She graduated from the University of Michigan in 2013 with a B.S. in general biology, and also earned her D.D.S. from the University of Michigan, School of Dentistry in 2017. She plans to pursue her M.S. research project with Dr. Wanida Ono, studying root and PDL formation and tooth eruption. Last July, Katherine married her high school sweetheart, Ben. They are now expecting their first child. Katherine's hobbies include reading, fitness, baking, and spending time with family. She is proud to be a Michigan lifer. Go Blue!

**Lauren Sytek, DDS**

Lauren was born and raised in northeast Michigan with two younger brothers and a very lethargic cat. After graduating high school, she moved to Grand Rapids, MI where she earned her B.S. in biology from Aquinas College. She then spent a few months at home before heading to Ann Arbor to study dentistry at the University of Michigan. During dental school Lauren's research focused on using intra-oral scanners to detect early signs of tooth wear. As she begins the orthodontic program, she is excited to learn what research opportunities are available, to try something new. With her husband, Lauren enjoys kayaking, bonfires, and attempting DIY projects around our farmhouse.

**William R. Bates, DMD**

William was born and raised in "Rocket City," Huntsville, AL. After graduating from Grissom High School in 2008, he took off to "The Magic City," Birmingham, AL to attend the University of Alabama at Birmingham (UAB). He graduated from the UAB School of Business with a B.S. in Accounting in 2012, and from the UAB School of Dentistry with a D.M.D. in 2017. Will married his wife, Kathryn, in December 2016, and they have one golden dog-ghter together, named Roux. His hobbies include outdoor activities with his family, dad jokes, running, playing golf, and following Dave Matthews Band around the country.

**Emmanouil Emmanouil, BDS**

Manos is from Athens, Greece, He is a graduate of Kings College London Dental School, where he received his B.D.S. in 2014. Following graduation, Manos stayed in London as a dental foundation dentist in an NHS practice. He then spent the past two years working in a private pediatric dental practice in his hometown of Athens, Greece. While in Michigan, he would like to become involved with research areas involving craniofacial disorders, due to his previous exposure with patients with special needs - both in practice and through volunteer work. Sports that he enjoys include soccer and show jumping which he used to do competitively on a national level. Manos loves travelling and getting to know and work with people from all over the world; which he does through volunteer work, working in practice, or participating in international congresses.

## 2017 Resident Achievements

**Fouad Ebrahim** (class of 2016): AAO Graber Award of Special Merit for student research

**Xi Chen** (class of 2017): Charley Schultz Award at AAO, 2<sup>nd</sup> place in basic science

**Inna Sydorak** (class of 2017): Dentsply Sirona Orthodontic Research Award, 2<sup>nd</sup> place

**Sarah Syklawer** (class of 2017): Lindsey O. Kesling Orthodontic Resident Scholarship Award, Sponsored by TP Orthodontics and GLAO

**Brandon Shoukri** (class of 2017): 2017 CDABO Resident Case Display at AAO, Honorable Mention

**Kyle Taylor** (class of 2018): Lindsey O. Kesling Orthodontic Resident Scholarship Award, Sponsored by TP Orthodontics and GLAO

**Michael Fogge** (class of 2020): University of Michigan Rackham Merit Fellowship, a highly competitive award that provides financial and social support to an incoming student for a record of superior academic achievement, demonstration of sustained commitment to diversity and community service. Michael is the first generation in his family to graduate from a four year college.

## Alumni Support and Scholarships

- Robert W. Browne Endowed Professorship in Orthodontics
- Drs. Thomas M. and Doris Graber Endowed Professorship in Dentistry
- James E. Harris Collegiate Professorship in Orthodontics
- Lysle E. Johnston Jr. Collegiate Professorship in Orthodontics
- Joseph and Louise Ada Jarabak Visiting Lectureship
- Robert G. Aldrich Graduate Orthodontic Scholars
- Eli V. and Joanna Berger Endowed Orthodontic Student Fellowship
- Dr. James A. McNamara Endowed Orthodontic Student Fellowship
- Dr. Richard A. Johnson Endowed Orthodontic Student Fellowship
- Coghlan Family Craniofacial Graduate Fellowship
- James E. Harris Graduate Orthodontics Endowed Scholarship
- Christiansen, Dr. Richard and Nancy, Orthodontic Scholarship
- Greenberger, Dr. Robert S. and Renee, Endowed Orthodontic Student Scholarship
- Lyons, Dr. Richard M., Endowed Orthodontic Resident Fellowship
- Lyons Family Endowed Orthodontic Resident Fellowship
- Abraham, Dr. Robert A. and Bellva Y., Orthodontic Scholarship
- University of Michigan Orthodontic Fund for Excellence – supports student research
- The Richard A. Johnson Wolverine Fund – supports student travel to meetings

## Continuing Education

### Moyers Symposium

The Department of Orthodontics and Pediatric Dentistry initiated the Moyers Symposium in 1973, which is co-sponsored by the University of Michigan Center for Human Growth and Development on an annual basis. This is one of the most preeminent clinical research symposium in our profession.

**The 45<sup>th</sup> Annual Moyers Symposium**  
**The University of Michigan**  
**March 3-4, 2018**

**Effective, Efficient and Personalized Orthodontics: Patient-centered approaches and innovations.**

The concept of patient centered orthodontics is not new. Yet with the push for faster treatment times, there can be a tendency for a “one size fits all” approach. This can lead to successful orthodontic treatment of some, but not all patients. It is timely therefore to update our knowledge of patient tailored orthodontic diagnosis and

treatment strategies that foster consistently ideal functional and esthetic occlusions for every patient. The goal of the 45<sup>th</sup> Annual Moyers Symposium is to provide participants with contemporary information regarding new developments in personalized dentistry and orthodontics. Speakers with a wide variety of expertise will present contemporary customized treatment methods for improved patient outcomes and practitioner satisfaction including incorporation of 3D imaging diagnostic techniques, contemporary soft and hard tissue analyses, computer-aided treatments, utilization of temporary anchorage devices, and the potential use of biomarkers for improved patient centered diagnoses and efficiency of orthodontic practice.

In addition, the 43<sup>rd</sup> Conference on Craniofacial Research (the Presymposium) will be held on the Friday before the Moyers Symposium, on March 2, 2018 in the 4<sup>th</sup> Floor Amphitheater of the Horace H. Rackham Building. The Presymposium conference will feature presentations by speakers and time for discussion of presented topics on goals of and methods for precision dentistry, patient centered orthodontics, and relevant craniofacial research. There is no pre-registration and no charge for attending the Presymposium. You are encouraged to attend both meetings.

As in previous years, the Annual Moyers Symposium honors the late Dr. Robert E. Moyers, Professor Emeritus of Dentistry and Founding Director of the University of Michigan, Center for Human Growth and Development. *Of importance this year, the 45<sup>th</sup> Symposium also honors Dr. Jim McNamara for his 50 years of service to the university, department, program and profession.* Please join us at the symposium; and at the “Big House” for a reception in honor of this emeritus faculty member, and all of our alumni and friends.

### Jarabak Lecture

The Jarabak Lecture started in 1985 with Dr. William Proffit presenting the initial lecture. The Department of Orthodontics and Pediatric Dentistry sponsors the Jarabak Lecture. Over the years, master clinicians have been invited to speak each year. The 32<sup>nd</sup> Jarabak Lecture topic was on “Biomechanical Principles and Applications in Clear Aligner Treatment.”

## Photos



On the 50 yard line at the Big House. **Go Blue!**



**Class of 2020** (Top row) Manos Emmanouil, Craig McMullen, Michael Fogge, Josh Padovano (Bottom row) Katie Beard, Will Bates, Lauren Sytek.



**GORP 2015** (Top row) Nic Snider, Sarah Baxter, Sara Schutte, Lauren Ehardt, Brandon Shoukri, Chis Roberts (AAO Trustee and UoM faculty member), Andrew Havron, Taylor Usitalo, Greg Sencak, Silja Furche, Scott Sakowitz (Bottom row) Claire Fadore, Sarah Syklawer Howle, Brittany Hazard Fischer, Dina Salman, Natalie Yang, Xi Chen, Fouad Ebrahim, Inna Sydorak.



**2017 AAO meeting in San Diego with Class of 2019** (Julia Kim, Allison Greenberg, Alex Pischke-Thomas, Lexi Omer, Jessica Grimmer, Maggie Anderson, Spencer Crouch).



**Tweed Foundation with Class of 2016** (Claire Fedore, Edwin Kwon, Andrew Havron, Dina Salman, Fouad Ebrahim, Brittany Hazard Fischer, Jessica Pongetti) and faculty (Phil Warren, Greg Hummon).



**Team Bucket Challenge!**