

Curriculum Vitae

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NAME: Stanley Yung-Chuan Liu, MD, DDS, FACS

POSITION: Assistant Professor, Department of Otolaryngology

Fellow

Division of Plastic & Reconstructive Surgery, by courtesy

Director, Sleep Surgery Fellowship Stanford University School of Medicine

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EDUCATION

9/25/96 - 6/11/00 B.S. Biology Stanford University

Stanford, CA

8/28/02 – 6/17/07 D.D.S Dentistry U.C.S.F. School of Dentistry

San Francisco, CA

9/12/07 – 6/10/11 M.D. Medicine U.C.S.F. School of Dentistry

San Francisco, CA

Mentor: Carl Barrett, PhD

POSTDOCTORAL TRAINING

7/1/06 - 6/30/07

6/1/04 – 6/1/05 Scholar Howard Hughes Medical Institute National Institute of Health

(HHMI)

Advanced Training Clinical U.C.S.F. School of Medicine

Research

7/1/11 – 6/30/12 Intern General Surgery U.C.S.F. School of Medicine

San Francisco, CA

San Francisco, CA

7/1/07 – 6/30/13 Resident Oral & Maxillofacial Surgery U.C.S.F. School of Medicine

San Francisco, CA

7/1/13 – 6/30/14 Instructor Sleep Surgery Stanford School of Medicine

Stanford, CA

10/1/17 – 5/30/18 Fellow Biodesign Faculty Fellowship Stanford School of Medicine

Stanford, CA

FACULTY ACADEMIC APPOINTMENTS

6/2013 – 6/2014	Clinical Instructor	Sleep Surgery, Department of Otolaryngology	Stanford University School of Medicine Stanford, CA, USA
9/2014 – Present	Assistant Professor, (Medical Center Line)	Department of Otolaryngology	Stanford University School of Medicine Stanford, CA, USA
9/2015 – Present	Preceptor	Oculoplastic Surgery, Department of Ophthalmology	Stanford University School of Medicine Stanford, CA, USA
10/2019 – Present	Assistant Professor, by Courtesy	Department of Surgery, Division of Plastic & Reconstructive Surgery	Stanford University School of Medicine Stanford, CA, USA

CERTIFICATION

4/2018 – Present Diplomat, American Board of Oral & Maxillofacial Surgery

8/2020 – Present Fellow, American College of Surgeons

LICENSURE

2010 – Present California Dental License #59319

2012 – Present California Medical License # A122495

HOSPITAL APPOINTMENTS/AFFILIATIONS

Past

9/2015 – 9/2018 Veterans Affairs Hospital, Palo Alto, CA, USA

Current

6/2013 – Present Stanford Hospital and Clinics, Stanford, CA, USA

ADMINISTRATIVE APPOINTMENT

9/2014 – 10/2020	Co-Director, Sleep Surgery Fellowship	Department of Otolaryngology	Stanford University, Stanford, CA, USA
7/2019 – Present	Chief of Service	Maxillofacial Surgery	Stanford Hospital and Clinics, Stanford, CA, USA
10/2020 – Present	Director, Sleep Surgery Fellowship	Department of Otolaryngology	Stanford University, Stanford, CA, USA

COMMITTEE SERVICE

Department of Otolaryngology

2015 – 2016	Grand Rounds Committee	Member
2016 – 2017	Resident Research Symposium	Member
2016 – present	Resident Clinical Competency Committee	Member
2020 – present	Journal Club Committee	Member

School of Medicine

2018-19	Realizing Impro	vement through Tear	n Empowerment/RITE	Member

Stanford Hospital & Clinics

2020 – present Operating Room Medical Committee Member

National

2016 – 2018 Sleep Disorders Committee Member

American Academy of Otolaryngology

2016 – present History and Archives Member

American Academy of Otolaryngology

2018 – present Sleep Disorders Committee Consultant Member

American Academy of Otolaryngology

2018 – present North American Strasbourg Osteosynthesis Research Group Faculty

PROFESSIONAL SOCIETIES

2007 – present	American Association of Oral and Maxillofacial Surgery	Member
2014 – present	American Academy of Otolaryngology-Head&Neck Surgery	Member
2014 – present	International Society of Sleep Surgery	Member
2015 – present	World Sleep Society (Formerly WASM)	Member
2015 – present	American Academy of Sleep Medicine	Member
2019 – present	International Association of Oral & Maxillofacial Surgery	Member
2020 – present	American College of Surgeons	Fellow

EDITIORIAL ACTIVITIES

Section Editor

2019 – present Current Pulmonology Reports

Ad hoc Reviewer

2014 – present Sleep

2014 – present Otolaryngology – Head & Neck Surgery

2015 – present Sleep Medicine

2015 – present JAMA – Facial Plastic Surgery

2016 – present Angle Orthodontist

2016 – present Sleep Science and Practice

2017 – present Plos ONE

2017 – present Clinical Otolaryngology2019 – present Clinical Sleep Medicine

2019 – present Laryngoscope

HONORS AND AWARDS

2004	Howard Hughes Medical Institute – NIH Research Scholarship (Cloister Program)
2004	Bloc Travel Award, International Association Dental Research
2005	First Place, American Dental Association Student Research
2008	Dental Student Award, American Association of Oral & Maxillofacial Surgeons
2010	Lightowler Scholarship, UCSF School of Medicine,
2011	Research Summit Scholarship, Oral Maxillofacial Surgery Foundation

2012 Khosla International Scholarship, UCSF Department of Oral & Maxillofacial Surgery

2018 Invited Honorary Professor, Dept. of Otolaryngology, National Cheng Kung University, Taiwan

2018 Invited Honorary Professor, Dept. of Otolaryngology, Pok Oi Hospital, Hong Kong

RESEARCH AWARDS AND GRANTS

Completed

2002 - 03 The Peripheral Mechanisms of Oral Cancer Pain -- Developing a mouse model of human oral cancer pain

PI: Schmidt, BL, MD, DDS, PhD. Dept. Oral and Maxillofacial Surgery, UCSF

Funding: T35 DE 07103-26 Role: Student Researcher

2004 - 05 Analysis of mammalian silencing information regulator (SIRT) proteins during adipogenesis.

PI: Barrett, JC, PhD. National Cancer Institute, NIH, Bethesda, MD

Funding: Howard Hughes Medical Institute (HHMI)

Role: HHMI Medical Student Scholar

2016 – 17 SPG Neurostimulation in Cluster Patients

Clinical Trial Identifier: NCT02510729

PI: Barad, M, MD. Stanford University School of Medicine

Funding: Autonomic Technologies/ ATI Role: Sub-Principal Investigator

Ongoing

3/5/2020 – present Applying 3D Upper Airway Ultrasound Imaging to Clinical Diagnosis of OSA

PI: Kushida, C, MD, PhD. Stanford University School of Medicine

Funding: AmCad BioMed Corporation Role: Co-Principal Investigator

6/1/2020 – present Discovery Hubs and Network – Adjuvants

PI: Mark Davis, Co-PI: Brice Gaudilliere

Funding: Bill & Melinda Gates Foundation (GATES)

Role: Co-Investigator

Pending Review

2/2021 Impact of maxillary advancement and expansion on airway biomechanics and sleep apnea

PI: Garcia, G, PhD. Co-I: John Rhee, MD, MPH, Tucker Woodson, MD

Funding: R01 (NIH/NIDCR)
Role: Co-Principal Investigator

PEER REVIEWED ORIGINAL RESEARCH

1. Terris DJ, Hanasono MM, Liu YC.

Reliability of the Muller Maneuver and its Association with Sleep-disordered Breathing. *Laryngoscope*. 2000 Nov; 110(11):1819-23.

*Participated in data collection, analysis, and interpretation and manuscript review.

2. Eliez S, Barnea-Goraly N, Schmitt E, Liu Y, Reiss AL.

Increased Basal Ganglia Volumes in Velo-cardio-facial syndrome (deletion 22q11.2) *Biol Psychiatry*. 2002 Jul; 1;52(1): 68-70

*Participated in data collection, analysis, and interpretation and manuscript review.

3. Schmidt BL, Pickering V, **Liu S**, Quang P, Dolan J, Connelly ST, Jordan RCK.

Peripheral Endothelin A Receptor Antagonism Attenuates Carcinoma-induced Pain. *Eur J Pain*. 2007; 11:406-414. *Participated in data collection, analysis, and interpretation and manuscript review.

4. Dillon JK, Liu SY, Patel CM, Schmidt BL.

Identifying Risk Factors for Postoperative Cardiovascular and Respiratory Complications after Major Oral Cancer Surgery. *Head Neck*. 2011 Jan; 33(1):112-6.

*Participated in data collection, analysis, and interpretation and manuscript review.

5. Chang, FCS, Chen YC, Huang F, Liu S, Chen ZC, Lo LJ, Chen PKT, Huang CS, Chen YR.

Management of Class III Malocclusion in Patients with Osteogenesis Imperfecta. *Journal of Taiwan Society of Plastic Surgery*. 2013 Sept; 22(3) 252-9.

*Participated in data collection, analysis, and interpretation and manuscript review.

6. Yang J, Liu SY, Hossaini-Zadeh M, Pogrel MA.

Brain abscess potentially secondary to odontogenic infection: case report.

Oral Surg Oral Med Oral Pathol Oral Radiol. 2014 Feb;117(2):e108-11.

*Participated in data collection, analysis, and interpretation and manuscript review.

7. Camacho M, Zaghi S, Certal V, Abdullatif J, Means C, Acevedo J, Liu S, Brietzke SE, Kushida CA, Capasso R.

Inferior Turbinate classification system, grades 1 to 4: Development and validation study.

Laryngoscope. 2015 Feb;125(2):296-302.

*Participated in data collection, analysis, and interpretation and manuscript review.

8. **Liu SYC**, Huon LK, Powell NB, Riley R, Cho HG, Torre C, Capasso R.

Lateral Pharyngeal Wall Tension after Maxillomandibular Advancement for Obstructive Sleep Apnea is a Marker for Surgical Success: Observations from Drug-induced Sleep Endoscopy.

J Oral Maxillofac Surg. 2015 Aug;73(8):1575-82

9. Camacho M, Liu SY, Certal V, Capasso R, Powell N, Riley R.

Large Maxillomandibular Advancements for Obstructive Sleep Apnea Syndrome: An Operative Technique. *J. Craniomaxillofac Surg.* 2015 Sept;43(7):1113-8

*Participated in data collection, analysis, and interpretation and manuscript review.

10. Lan MC, Liu SY, Lan MY, Modi R, Capasso R.

Lateral pharyngeal wall collapse is associated with hypoxemia in obstructive sleep apnea. *Laryngoscope*. 2015 Oct;125(10):2408-12

*Participated in data collection, analysis, and interpretation and manuscript review.

11. Liu SY, Huon LK, Iwasaki T, Yoon A, Riley R, Powell N, Torre C, Capasso R.

Efficacy of Maxillomandibular Advancement Examined with Drug-induced Sleep Endoscopy and Computational Fluid Dynamics Airflow Modeling. *Otolaryngology Head Neck Surg*. 2016 Jan;154(1):189-95

12. Torre C, Camacho M, Huon LK, Liu SY, Capasso R.

Epiglottis collapse in Adult Obstructive Sleep Apnea: A systematic Review. *Laryngoscope*. 2016 Feb;126(2):515-23 *Participated in data collection, analysis, and interpretation and manuscript review.

13. Camacho M, Dunn B, Torre C, Sasaki J, Gonzales R, Liu SY, Chan D, Certal V, Cable B.B.

Supraglottoplasty for Laryngomalacia with Obstructive Sleep Apnea: A Systematic Review and Meta-Analysis. *Laryngoscope*. 2016 May;126(5):1246-55

*Participated in data collection, analysis, and interpretation and manuscript review.

14. Volner K, Dunn B, Chang ET, Song SA, Liu SY, Brietzke S, O'Connor P, Camacho M.

Transpalatal Advancement Pharyngoplasty for Obstructive Sleep Apnea: a Systematic Review and Meta-Analysis. *Eur Arch Otorhinolaryngology*. June 11, 2016.

15. Song S, Wei J, Buttram J, Tolisano A, Chang E, Liu SY, Certal V, Camacho M

Hyoid Surgery Alone for Obstructive Sleep Apnea: A Systematic Review and Meta-Analysis. *Laryngoscope*. 2016 Jul; 126(7):1702-8

*Participated in data collection, analysis, and interpretation and manuscript review.

16. Vaezeafshar R, Liu SY, Sidell D.

Inferior Alveolar Nerve Hemangioma. *Laryngoscope*. 2016 Sep;126(9):2168-70.

*Participated in data collection, analysis, and interpretation and manuscript review.

17. Song SA, Chang ET, Certal V, Do MD, Zaghi S, Liu SY, Capasso RC, Camacho M.

Genial Tubercle Advancement and Genioplasty for Obstructive Sleep Apnea: A Systematic Review and Meta-Analysis. *Laryngoscope*. Aug 22, 2016.

*Participated in data collection, analysis, and interpretation and manuscript review.

18. Lee WJ, Hwang DH, Liu SY, Kim SJ.

Subtypes of Maxillomandibular Advancement Surgery for Patients with Obstructive Sleep Apnea. *J. Craniofacial Surgery*. Sept 9, 2016

*Participated in data collection, analysis, and interpretation and manuscript review.

19. Gouveia C, Qureshi H, Kern R, Liu SYC, Capasso R.

An Assessment of Online Information Related to Surgical Obstructive Sleep Apnea Treatment. *Sleep Science and Practice*. Accepted November 2016.

*Participated in data collection, analysis, and interpretation and manuscript review.

20. Liu SY, Huon LK, Shih TT, Chen YJ, Lo MT, Wang PC

Dynamic Upper Airway Collapse Observed from Sleep MRI: BMI-matched Severe and Mild OSA Patients. *Eur Arch Otorhinolaryngol.* 2016 Nov;273(11):4021-4026

21. Liu SY, Huon LK, Lo MT, Chang YC, Chen YJ, Shih TT, Capasso R, Wang PC.

Static Craniofacial Measurements and Dynamic Airway Collapse Patterns Associated with Severe Obstructive Sleep Apnea: A Sleep MRI Study. *Clin Otolaryngol*. 273:4021-4026. Nov 2016.

22. Huon LK, Liu SY, Camacho M, Guilleminault C.

The Association Between ophthalmologic diseases and obstructive sleep apnea: A Systematic Review and Meta-Analysis. *Sleep Breath*. 2016 Dec;20(4):1145-1154

*Participated in data collection, analysis, and interpretation and manuscript review.

23. Hsieh AM, Huon LK, Jiang HR, Liu SY

A Safe and Accurate Method for Perform Esthetic Mandibular Contouring Surgery for Far Eastern Asians. *Int J Oral Maxillofac Surg.* Epub 2016 Dec 16. Retracted May 2017.

* Participated in manuscript review. co-authors in Taiwan unable to agree on authorship and IRB approval led to volunteer retraction.

24. Camacho M, Dunn B, Torre C, Sasaki J, Gonzales R, Liu SY, Chan D, Certal V, Cable B.B.

Laser Assisted Uvulopalatoplasty (LAUP) for Obstructive Sleep Apnea: A Systematic Review and Meta-Analysis. Sleep. Accepted January 2017.

*Participated in data collection, analysis, and interpretation and manuscript review.

25. Chang ET, Fernandez-Salvador C, Giambo J, Nesbitt B, Liu SY, Capasso R, Kushida C, Camacho M.

Tongue retaining devices for obstructive sleep apnea: A systematic review and meta-analysis. American Journal of Otolaryngology. Accepted January 2017.

*Participated in data collection, analysis, and interpretation and manuscript review.

26. Gouveia C, Cramer JD, Liu SY, Capasso R.

Sleep Surgery in the Elderly: Lessons from the National Surgical Quality Improvement Program. Otolaryngology-Head & Neck Surgery. Accepted January 2017.

*Participated in data collection, analysis, and interpretation and manuscript review.

27. Liu SY, Huon LK, Zaghi S, Torre C.

An Accurate Method of Designing and Performing Individual-Specific Genioglossus Advancement. *Otolaryngol Head Neck Surg*. 2017 Jan;156(1) 194-197.

28. Gouveia C, Kern R, Liu SY, Capasso R.

The State of Academic Sleep Surgery: A Survey of United States Residency and Fellowship Programs. *Laryngoscope*. Accepted Feb 7th, 2017.

*Participated in data collection, analysis, and interpretation and manuscript review.

29. Gouveia CJ, Qureshi HA, Kern RC, Liu SY, Capasso R.

An assessment of online information related to surgical obstructive sleep apnea treatment. Sleep Science and Practice 2017 1:6

*Participated in data collection, analysis, and interpretation and manuscript review.

30. Liu SY, Leno MB, Chen CT, Liao HT

Comparison of Functional Outcomes and Patient-reported Satisfaction Between Titanium and Absorbable Plates and Screws for Fixation of Mandibular Fractures: a One-year Prospective Study. *J Craniomaxillofac Surg.* 2017 May;45(5):704-709

31. Torre C, Capasso R, Zaghi S, Williams R, Liu SY.

High incidence of posterior nasal cavity obstruction in obstructive sleep apnea patients. *Sleep Science and Practice* 2017 1:8.

32. Liu SY, Lee PJ, Awad M, Riley R, Zaghi S.

Corrective Nasal Surgery After Maxillomandibular Advancement for Obstructive Sleep Apnea: Experience from 379 Cases. Otolaryngol Head Neck Surg. 2017 Jul;157(1) 156-159

33. Liu SY, Riley RW.

Continuing the Original Stanford Sleep Surgery Protocol from Upper Airway Reconstruction to Upper Airway Stimulation: Our First Successful Case. *J Oral Maxillofac Surg*. 2017 Jul;75(7):1514-1518

34. Liu SY, Guilleminault C, Huon LK, Yoon A.

Distraction Osteogenesis Maxillary Expansion (DOME) for Adult Obstructive Sleep Apnea Patients with High Arched Palate. *Otolaryngol Head Neck Surg*. 2017 Aug;157(2):345-348

35. Hong SO, Chen YF, Jung J, Kwon YD, Liu SY

Hypoglossal Nerve Stimulation for Treatment of Obstructive Sleep Apnea: A Primer for Oral and Maxillofacial Surgeons. *Maxillofac Plast Reconstr Surg.* 2017 Sep 25;39(1):27. doi: 10.1186/s40902-017-0126-0.

36. Yoon AJ, Zaghi S, Weitzman R, Ha S, Law CS, Guilleminault C, Liu SY.

Towards a Functional Definition of Ankyloglossia: Validating Current Grading Scales for Lingual Frenulum Length and Tongue Mobility in 1052 Subjects. *Sleep and Breathing*. 2017 Sept; 21(3):767-775.

37. Yoon A, Zaghi S, Ha S, Law C, Guilleminault C, Liu SY

Ankyloglossia as a risk factor for maxillary hypoplasia and soft palate elongation: a functional – morphological study. *Orthod Craniofac Res.* 2017 Nov;20(4):237-244.

38. Torre C, Liu SY, Kushida C, Nekhendzy V, Huon LK, Capasso R.

Impact of Continuous Positive Airway Pressure in Patients with Obstructive Sleep Apnea During Drug Induced Sleep Endoscopy. *Clin Otolaryngol.* 2017 Dec;42(6):1218-1223

39. Liu SY, Huon LK, Ruoff C, Riley RW, Strohl KP, Peng Z.

Restoration of Sleep Architecture after Maxillomandibular Advancement: Success Beyond the Apnea–Hypopnea Index. *Int J Oral Maxillofac Surg.* 2017 Dec;46(12):1533-1538

40. Noller NW, Guilleminault C, Gouveia CJ, Mack D, Vivian C, Abdulaatif J, Mangili S, **Liu SY**, Zaghi S, Camacho M. Mandibular Advancement for Adult Obstructive Sleep Apnea: A Systematic Review and Meta-analysis. *J Craniomaxillofac Surg*. 2017 Dec;45(12):2035-2040

*Participated in data collection, analysis, and interpretation and manuscript review.

41. Torre C, Zaghi S, Camacho M, Capasso R, Liu SY

Hypopharyngeal Evaluation in Obstructive Sleep Apnea with Awake Flexible Laryngoscopy: Validation and Updates to Cormack-Lehane and Modified Cormack-Lehane Scoring Systems. *Clin Otolaryngol*. 2018 Jun;43(3):823-827. doi: 10.1111/coa.13054.

42. Singh SK, Liu S, Capasso R, Kern RC, Gouveia CJ

Youtube as a Source of Information for Obstructive Sleep Apnea. *Am J Otolaryngol*. 2018 Jul - Aug;39(4):378-382. doi: 10.1016/j.amjoto.2018.03.024.

43. Scapuccin M, Schneider L, Rashid N, Zaghi S, Rosa T, Tsuo YA, Liu S, Lazarini P, Capasso R, Ruoff C. Integrating the Divided Nasal Cannula Into Routine Polysomnography to Assess Nasal Cycle: Feasibility and Effect on Outcomes. *J Clin Sleep Med*. 2018 Apr 15;14(4):641-650. doi: 10.5664/jcsm.7062.

44. Liu SY, Sidell D, Huon LK, Torre C

"Split to Save": Accessing Mandibular Lesions Using Sagittal Split Osteotomy with Virtual Surgical Planning. *Ear Nose Throat J.* 2018 Mar;97(3):91-96

45. Gouveia CJ, Zaghi S, Camacho M, Liu SYC, Capasso R, Kern RC

Publication Trends and Levels of Evidence in Obstructive Sleep Apnea Literature. *Laryngoscope*. 2018 Sep;128(9):2193-2199. doi: 10.1002/lary.27075.

*Participated in data collection, analysis, and interpretation and manuscript review.

46. Singh SK, Gu D, Capasso R, Liu S, Gouveia CJ

Clinical Trials in Obstructive Sleep Apnea: Recognizing Trends and Future Opportunities. *Laryngoscope*. 2019 Aug;129(8):1940-1944. doi: 10.1002/lary.27453.

*Participated in data collection, analysis, and interpretation and manuscript review.

47. Scapuccin M, Thamboo A, Rashid N, Aguiar T, Zaghi S, Liu S, Lazarin P, Capasso R

Transsphenoidal Pituitary Surgery Effects on Obstructive Sleep apnea in patients with Acromegaly: a Systematic Review and Meta-Analysis. *J Otolaryngol ENT Res.* 2018;10(6):306–310. DOI: 10.15406/joentr.2018.10.00368.

*Participated in data collection, analysis, and interpretation and manuscript review.

48. Awad M, Gouveia C, Zaghi S, Camacho M, Liu SY

Changing Practice: Trends in Skeletal Surgery for Obstructive Sleep Apnea. *J. Craniomaxillofac Surg.* 2018 Dec 18. pii: S1010-5182(18)30567-5. doi: 10.1016/j.jcms.2018.11.005.

*Participated in data collection, analysis, and interpretation and manuscript review.

49. Chang TI, Lee UK, Zeidler MR, Liu SY, Polanco JC, Friedlander AH

Severity of Obstructive Sleep Apnea is Positively Associated with the Presence of Carotid Artery Atheromas. *J Oral Maxillofac Surg.* 2019 Jan;77(1):93-99. doi: 10.1016/j.joms.2018.08.004.

*Participated in data collection, analysis, and interpretation and manuscript review.

50. Wang M, Liu SY, Zhou B, Li Y, Cui S, Huang Q

Effect of Nasal and Sinus Surgery in Patients With and Without Obstructive Sleep Apnea. *Acta Otolaryngol*. 2019 Feb 26:1-6. doi: 10.1080/00016489.2019.1575523.

51. Green KK, Kent DT, D'Agostino M, Hoff PT, Lin HS, Soose RJ, Gillespie MB, Yaremchuk KL, Carrasco-Llatas M, Woodson BT, Jacobowitz O, Thaler ER, Barrera JE, Capasso RC, **Liu SY**, Hsia J, Mann D, Meraj TS, Waxman JA, Kezirian EJ Drug-induced Sleep Endoscopy and Surgical Outcomes: A Multicenter Cohort Study. *Laryngoscope*. 2019 Mar;129(3):761-770. doi: 10.1002/lary.27655.

- 52. Williams R, Patel V, Chen YF, Tangbumrungtham N, Thamboo A, Most SP, Nayak JV, **Liu SY**The Upper Airway Nasal Complex: Structural Contribution to Persistent Nasal Obstruction. *Otolaryngology Head Neck Surg*. 2019 Jul;161(1):171-177. doi: 10.1177/0194599819838262.
- 53. Abdelwahab M, Yoon A, Okland T, Poomkonsarn S, Gouveia C, **Liu SY**Impact of Distraction Osteogenesis Maxillary Expansion (DOME) on Internal Nasal Valve in Obstructive Sleep Apnea. *Otolaryngol Head Neck Surg.* 2019 Aug;161(2):362-367. doi: 10.1177/0194599819842808.
- 54. Chen YF, Ko EC, Zaghi S, Yoon A, Williams R, Riley R, **Liu, SY**Optimizing Mandibular Sagittal Split of Large Maxillomandibular Advancement for Obstructive Sleep Apnea: Patient and Surgical Factors. *Clin Oral Investig*. 2019 Jul 22. doi: 10.1007/s00784-019-03017-5.
- 55. Lee UK, **Liu SY**, Zeidler MR, Tran HA, Chang TI, Friedlander AH
 Severe Obstructive Sleep Apnea With Imaged Carotid Plaque is Significantly Associated with Systematic Inflammation. *J Oral Maxillofac Surg.* 2019 Aug;77(8):1636-1642. doi: 10.1016/j.joms.2019.02.005.

 *Participated in data collection, analysis, and interpretation and manuscript review.
- 56. Hong SK, Millesi G, Poomkonsarn N, **Liu SYC**Upper airway stimulation as an alternative to maxillomandibular advancement for obstructive sleep apnoea in a patient with dentofacial deformity: case report with literature review. *Int J Oral Maxillofac Surg.* 2019 Dec 21. doi: 10.1016/j.ijom.2019.08.008.
- 57. Chang ET, Kwon Y, Jung J, Capasso R, Riley R, **Liu S**, Camacho CM
 Genial Tubercle Position and Genioglossus Advancement in Obstructive Sleep Apnea (OSA) Treatment: A Systematic Review. *Maxillofacial Plastic and Reconstructive Surgery*. 2019;41(1).
 *Participated in data collection, analysis, and interpretation and manuscript review.
- 58. Zaghi S, Valcu-Pinkerton S, Jabara M, Norouz-Knutsen L, Govardhan C, Moeller J, Sinkus V, Thorsen RS, Downing V, Camacho M, Yoon A, Hang WM, Hockel B, Guilleminault C, **Liu S**Lingual Frenuloplasty with Myofunctional Therapy: Exploring Safety and Efficacy in 348 Cases. *Laryngoscope Investigative Otolaryngology*. https://doi.org/10.1002/lio2.297
 *Participated in data collection, analysis, and interpretation and manuscript review.
- 59. Chan Jason YK, Holsinger CF, **Liu S**, Sorger JM, Azizan M, Tsang R
 Augmented Reality for Image Guidance in Transoral Robotic Surgery. *J of Robotic Surgery*. 2019 Sept 25. doi: 10.1007/s11701-019-01030-0
 *Participated in data collection, analysis, and interpretation and manuscript review.
- 60. Yoon A, Guilleminault C, Zaghi S, **Liu SY**Distraction Osteogenesis Maxillary Expansion (DOME) for Adult Obstructive Sleep Apnea Patients with Narrow Maxilla and Nasal Floor. *Sleep Medicine*. 2020 Jan;65:172-176. doi: 10.1016/j.sleep.2019.06.002
- 61. **Liu SY**, Hutz M, Poomkonsarn S, Chang CP, Awad M, Capasso R
 Palatopharyngoplasty Resolves Concentric Collapse in Patients Ineligible for Upper Airway Stimulation. *Laryngoscope*. 2020. Feb 28. doi: 10.1002/lary.28595
- 62. Hsu YB, Liu SYC, Lan MY, Huang YC, Tzeng IS, Lan MC
 Role of Rhinomanometry in the Prediction of Therapeutic Positive Airway Pressure for Obstructive Sleep Apnea, *Respir Res.* 2020; 21: 115. Published online 2020 May 13. doi: 10.1186/s12931-020-01382-4
 *Participated in data collection, analysis, and interpretation and manuscript review.

63. Kim SJ, Alnakhli WM, Alfaraj AS, Kim KA, Kim SW, Liu SY

Multi-perspective Clustering of Obstructive Sleep Apnea Towards Precision Therapeutic Decision Including Craniofacial Intervention, *Sleep Breath*. 2020 May 27. doi: 10.1007/s11325-020-02062-9

*Participated in data collection, analysis, and interpretation and manuscript review.

64. Calvo-Henriquez C, Capasso R, Chiesa-Estombia C, **Liu SY**, Martins-Neves S, Castedo E, O'Connor-Reina C, Ruano-Ravina A. Kahn S

The Role of Pediatric Maxillary Expansion on Nasal Breathing. A Systematic Review and Metaanalysis, *Int J Pediatr Otorhinolaryngol*. 2020 May 25. doi.org/10.1016/j.ijporl.2020.110139

*Participated in data collection, analysis, and interpretation and manuscript review.

65. Yoon, A., Abdelwahab, M., **Liu, S**. *et al.* Impact of rapid palatal expansion on the internal nasal valve and obstructive nasal symptoms in children. *Sleep Breath* (2020). doi.org/10.1007/s11325-020-02140-y *Participated in analysis, interpretation, and manuscript review.

66. Calvo-Henriquez C, Capasso R, Martinez-Capoccioni G, Rangel-chaves J, **Liu SY**, O'connor-Reina C, Lechien JR, Marin-Martin C

Safeness, Subjective and Objective Changes After Turbinate Surgery in Pediatric Patients. *Int J Pediatr Otorhinolaryngol* 2020 Aug;135:110128. doi: 10.1016/j.ijporl.2020.110128.

*Participated in analysis, interpretation, and manuscript review.

67. Liu SY, Riley RW, Yu MS

Surgical Algorithm for Obstructive Sleep Apnea: An Update. Clin Exp Otorhinolaryngol. 2020 Aug;13 (3):215-224. doi: 10.21053/ceo.2020.01053.

68. Yu MS, Ibrahim B, Riley RW, Liu SY

Maxillomandibular Advancement and Upper Airway Stimulation: Extrapharyngeal Surgery for Obstructive Sleep Apnea. *Clin Exp Otorhinolaryngol*. 2020 Aug;13(3):225-233. doi:10.21053/ceo.2020.01053.

69. Chang CP, Dierks E, Cheng A, Ma Y, Liu SY

Does the Lack of Sex Specific Apnea-Hypopnea Index Cutoff for OSA Impact Surgical Selection. *J Oral Maxillofac Surg*. Accepted Nov 2020

70. Iwasaki T, Yoon A, Guilleminault A, Yamasaki Y, Liu SY

How does distraction osteogenesis maxillary expansion (DOME) reduce severity of obstructive sleep apnea? *Sleep and Breathing, 2020, 24, 287–296.* doi.org/10.1007/s11325-019-01948-7

71. Howard J, Abdelwahab M, Poomkonsarn S, Awad M, Ma Y, Riley R, **Liu SY**.

Using a Single-Item Global Instrument to assess Quality of Life Change after Maxillomandibular Advancement Surgery: Strengths and Weaknesses. *Otolaryngol Head Neck Surg.* Pending Review October 2020.

72. Yoon A, Kim TK, Abdelwahab M, Nguyen M, Park J, Oh H, Pirelli P, Liu SY

Characterizing Changes in Maxillary Morphology Following Distraction Osteogenesis Maxillary Expansion (DOME) with Obstructive Sleep Apnea (OSA) Measures. *Angle Orthodontist*. Pending Review December 2020.

73. Abdelwahab M, Poomkonsarn S, Ren X, Awad M, Capasso R, Riley R, Most S, Liu SY.

A Comprehensive Strategy for Improving Nasal Outcomes after Large Maxillomandibular Advancement for Obstructive Sleep Apnea. *Facial Plastic Surgery & Aesthetic Medicine*. Accepted, Jan 2020.

PATENTS

1. System and Method for Design and Manufacture of Custom Face Mask During Covid Pandemic Serial No. 63/015,176, Filed Apr. 24, 2020 United States Provisional Patent

BOOK CHAPTERS

1. **Stanley Y.C. Liu, Phoebe Goode, Janice Lee.**

Surgical Care of the Hemifacial Microsomia Patient. *Current Therapy in Oral and Maxillofacial Surgery*, Edited by Bhageri, Bell and Khan. Saunders Elsevier, St. Louis, Missouri, 2011. Page 828-834.

2. Robert RC, Liu S, Patel C, Gonzalez M.

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Atlas Oral Maxillofacial Surg Clin N Am 2013; Vol 21:2.

3. Brian Bast, **Stanley Y.C. Liu**.

Anterior Mandible Fractures. *Atlas of Oral and Maxillofacial Surgery*, Edited by Tiwana and Kademani. Saunders Elsevier, St. Louis, Missouri, 2015. Page 680-687.

4. Stanley Y.C. Liu, Nelson B. Powell, Robert W. Riley.

Algorithm for Multilevel Treatment, the Riley, Powell, and Liu Stanford Experience.

Sleep Apnea and Snoring (Surgical and Non-surgical Therapy), Edited by Michael Friedman, Ofer Jacobowitz. Second Edition. Elsevier, 2020. Page 104-109.

5. Stanley Y.C. Liu, Nelson B. Powell, Robert W. Riley.

Maxillofacial Techniques in Obstructive Sleep Apnea.

Sleep Apnea and Snoring (Surgical and Non-surgical Therapy), Edited by Michael Friedman, Ofer Jacobowitz. Second Edition. Elsevier, 2020. Page 330-337.

6. **Stanley Y.C. Liu**, Audrey Yoon, Christian Guilleminault

Maxillary Distraction Osteogenesis with Palatal Implants

Sleep Apnea and Snoring (Surgical and Non-surgical Therapy), Edited by Michael Friedman, Ofer Jacobowitz. Second Edition. Elsevier, 2020. Page 344-348.

7. **Stanley Y.C. Liu**, Christian Guilleminault, Audrey Yoon

Distraction Osteogenesis with Maxillary Expansion (DOME) for Adult OSA.

Current Concepts in Sleep Surgery, Edition 1, Edited by Thomas Verse, Thieme, 2019. Page 239-242.

8. Liu SY, Awad M, Riley R, Capasso R

The Role of the Revised Stanford Protocol in Today's Precision Medicine.

Sleep Med Clin. 2019 Mar;14(1):99-107. doi: 10.1016/j.jsmc.2018.10.013.

9. Stanley Y.C. Liu

Sleep Surgery: From Reconstruction to Restoration and Re-education.

Atlas Oral Maxillofac Surg Clin North Am. 2019 Mar;27(1):xi. doi: 10.1016/j.cxom.2018.12.001.

10. Gupta RJ, Kademani D, Liu SY

Upper Airway (Hypoglossal Nerve) Stimulation for Treatment of Obstructive Sleep Apnea.

Atlas Oral Maxillofac Surg Clin North Am. 2019 Mar;27(1):53-58. doi: 10.1016/j.cxom.2018.11.004.

11. Liu SY, Awad M, Riley RW.

Maxillomandibular Advancement: Contemporary Approach at Stanford.

Atlas Oral Maxillofac Surg Clin North Am. 2019 Mar;27(1):29-36. doi: 10.1016/j.cxom.2018.11.011.

12. Awad M, Gouveia C, Capasso R, Liu SY

Tonsillectomy and Pharyngoplasty: Tissue Preserving Techniques.

Atlas Oral Maxillofac Surg Clin North Am. 2019 Mar;27(1):17-22. doi: 10.1016/j.cxom.2018.11.005.

13. Liu SY, Wayne Riley R, Pogrel MA, Guilleminault C

Sleep Surgery in the Era of Precision Medicine.

Atlas Oral Maxillofac Surg Clin North Am. 2019 Mar;27(1):1-5. doi: 10.1016/j.cxom.2018.11.012.

14. Liu SY-C, May AM, Mehra R

Chapter 122: Sleep Disordered Breathing: Therapy

Murray and Nadel's Textbook of Respiratory Medicine, 7th Edition. 2020. Elsevier (in press)

15. Stanley Y.C. Liu, Allen Huang

Hypoglossal Nerve Stimulation. *Atlas of Oral and Maxillofacial Surgery*, Edition 2, Edited by Tiwana and Kademani. Saunders Elsevier, St. Louis, Missouri, 2020 (in press)

16. Stanley Y.C. Liu, Courtney Chou

New Chapter: Skeletal Sleep Surgery – GGA, DOME, MMA. Bailey's Textbook of Otolaryngology. 2020. (in press).

17. Stanley Y.C. Liu, Mohamed Abdelwahab

Skeletal Considerations in Upper Airway Stimulation. *Upper Airway Stimulation*, Edited by De Vries and Clemens. 2020. (in press)

BOOKS

1. Stanley Y.C. Liu, Rui P. Fernandez

Sleep Surgery, Atlas of the Oral and Maxillofacial Surgery Clinics. Volume 27. Elsevier. March 2019.

INVITED ARTICLES

1. Stanley Y.C. Liu

Let's Slice and DISE: Drug-induced Sedation Endoscopy for Dynamic Airway Evaluation in Patients with Obstructive Sleep Apnea. *The California Journal of Oral & Facial Surgery*. Vol 17, issue 1, Spring 2015

2. Stanley Y.C. Liu, Rishi Gupta

Sleep Surgery, Advances in Oral & Maxillofacial Surgery. *California Dental Association Journal*. Accepted Oct 2020. (*in press*).

DIGITAL PUBLICATIONS

1. Stanley Y.C. Liu

Hypopharyngeal Approaches to Obstructive Sleep Apnea http://www.enttoday.org/article/hypopharyngeal-approaches-obstructive-sleep-apnea/3/, ENT Today, Nov 16th 2016

2. Stanley Y.C. Liu S

When is snoring worth worrying about? A Q&A with a Stanford sleep surgeon http://scopeblog.stanford.edu/2016/12/28/when-is-snoring-worth-worrying-about-a-qa-with-a-stanford-sleep-surgeon/, SCOPE, Stanford Medicine, Dec 28th 2016

3. Stanley Y.C. Liu

Surgery for Sleep Apnea

https://www.consultant360.com/podcast/pulmonology/sleep-apnea/stanley-liu-md-surgery-sleep-apnea. *Pulmonology Consultant 360 Podcast*.

4. Stanley Y.C. Liu

Maxillomandibular Advancement Surgery for Obstructive Sleep Apnea. https://www.headmirror.com/podcast/2020/3/14/maxillomandibular-advancement-surgery-for-obstructive-sleep-apnea Headmirror Podcast for Otolaryngology residents and medical students. August 14th 2020

PRESENTATIONS, NATIONAL & REGIONAL

01/2015	Sleep Medicine Conference, School of Medicine, Stanford, CA A Junior Surgeon's Approach to Facial Skeletal Surgery for OSA			
10/2015	Dept. of Otolaryngology, Northwestern University, Chicago, IL <u>Grand Rounds</u> : Skeletal Surgery for Obstructive Sleep Apnea in the Era of Precision Medicine			
03/07/16	Sleep and Dreams, Stanford University, Stanford, CA Sleep and Dreams: A Surgical Perspective			
04/08/16	Dept. of Otolaryngology, Kaiser Permanente Northern California, Oakland, CA Grand Rounds : Surgical Management of Obstructive Sleep Apnea			
05/23/16	Sleep and Dreams, Stanford University, Stanford, CA Sleep and Dreams: from Student to Surgeon			
06/22/16	Dept. of Otolaryngology, University of California – San Francisco, San Francisco, CA <u>Grand Rounds</u> : From Phased to Precision: An Update to the Stanford Sleep Surgery Protocol			
09/2016	American Academy of Otolaryngology Annual Meeting, San Diego, CA 1. Sleep Apnea Surgery: A to Z (Instructional course) 2. Assessment and Treatment of Hypopharyngeal Obstruction in OSA (Mini-seminar) 3. A Novel Technique for Adult Maxillary Expansion using Micro-implants Mentored Presentations: 1. Sleep Surgery in the Elderly: Lessons from the NSQIP Database (Chris Gouveia, MD) 2. The Current State of Academic Sleep Surgery in the United States (Chris Gouveia, MD) 3. Impact of Adenotonsillectomy on Co-morbid Pediatric ADHD and OSA (Anne Huon, MD) 4. Corrective Nasal Surgery after MMA: Experience from 385 Cases (Michael Awad, MD)			
10/20/16	American College of Surgeons Clinical Congress, Washington, DC Panelist: Predictors of Surgical Success for Obstructive Sleep Apnea			
02/04/17	Course in Clinical Polysomnography and Sleep Medicine, The School of Sleep Medicine, Inc., Palo Alto, CA Sleep Surgery at Stanford: Coming Full Circle			
3/3-4/17	2 nd Academy of Applied Myofunctional Science Congress, Chicago, IL Reconstruction, Restoration, Re-education: Revitalizing Sleep Surgery			
03/05/17	Sleep and Dreams, Stanford University, Stanford, CA What Can Giraffes and Elephants Teach us about Sleep Surgery?			
04/05/17	Step Up to Introductory and Advanced Sleep Dentistry Continuum, Columbus, OH Reconstruction, Restoration, Re-education: An Approach to Sleep Surgery			
05/04/17	American Society of Dental Anesthesiology: 2017 Annual Scientific Session, Fort Lauderdale, FL 1. Let's "Slice and DISE": Drug-induced Sleep Endoscopy 2. When Sleep Surgery Meets DISE: Hypoglossal Nerve Stimulation			
07/22/17	Mini-Sleep Residency, University of Pacific, San Francisco, CA Towards a Patient-Centered Approach in Sleep Surgery			

09/23/17	California Sleep Society, 10 th Annual Education Symposium, Burlingame, CA Contemporary Sleep Surgery Protocol: Updates with Maxillary Expansion, MMA, and Hypoglossal nerve stimulation
10/13/17	Division of Sleep Medicine, Department of Psychiatry & Behavioral Sciences, Stanford University School of Medicine, Stanford, CA <u>Grand Rounds:</u> Precision Sleep Surgery: Reconstruction, Restoration, and Re-education
11/17/17	Head and Neck Surgical Associates, Portland, Oregon Past, Present, to Precision: Designer Sleep Surgery
11/20/17	Dept. of Anesthesia, Stanford University School of Medicine, Stanford, CA Grand Rounds: Frankenstein@200: Breathing & Beauty with Virtual Surgical Planning
2/12/18	Pursuit Study Club, Mountain View, California Past, Present, Precision: Evolution of the Stanford Sleep Surgery Protocol
2/24/18	Advanced Practices in Sleep Medicine, hosted by University of California, Davis, Las Vegas, Nevada 1. Decision-making in Sleep Surgery: Beyond the Anatomy 2. How to Manage Pitfalls in Sleep Apnea Surgery
3/7/18	Sleep and Dreams, Stanford University, Stanford, CA Surgery for Obstructive Sleep Apnea: Lessons Learned from Anthropology and the Giant Panda
5/14/18	Sleep and Dreams, Stanford University, Stanford, CA The Stanford Sleep and Dreams: Sleep Surgery
6/23/18	53 rd Annual Colonel Burke Memorial Dental Symposium, Monterey, CA Designing the Airway for Better Sleep
7/20/18	Common Problems in the ENT Patient, CE, Stanford Health Care, Stanford, CA Sleep Apnea and Medical-Surgical Interventions
9/15/18	Mini-Sleep Residency, University of Pacific, San Francisco, CA Sleep Surgery: Decision with Precision
9/22/18	Pediatric Dental Sleep Medicine Symposium: An Interdisciplinary Team Approach, Tufts University, Boston, MA Sleep Surgery: What did We Learn from Kids?
10/8-9/18	American Academy of Otolaryngology Annual Meeting, Atlanta, GA 1. What's New in OSA Management in 2018: Pros and Cons: Part 1 (Panelist: Pro DISE) 2. What's New in OSA Management in 2018: Pros and Cons: Part 2 (Panelist: Pro Skeletal Surgery) Mentored Presentations 1. DOME for the Treatment of OSA (Tyler Okland, MD) 2. Maxillary Skeletal Parameters Associated with Persistent Nasal Obstruction (Michael Awad, MD) 3. Is Narrow Maxilla Associated with Complete Concentric Collapse? (Eric Thuler, MD)
10/13/18	2018 Head and Neck Surgery Symposium – Kaiser Permanente Southern California, Fashion Island, California 1. Advances in Obstructive Sleep Apnea (OSA) Diagnosis and Surgical Management part 1: Diagnosis

2. Advances in Obstructive Sleep Apnea (OSA) Diagnosis and Surgical Management part 12: Treatment Options

10/25/18	Santa Clara Dental Society, San Jose, California Designing the Airway for Better Sleep: What I Learned from Maxillary Expansion
11/2/18	Sleep Medicine Rounds, Stanford University, California Designing the Airway for Better Sleep: From Reconstruction to Restoration and Re-education
1/14/19	41st Annual Marx Oral & Maxillofacial Pathology Reconstruction Course, San Francisco, California Sleep Surgery in the Era of Precision Medicine
1/30/19	Sleep and Dreams, Stanford University, Stanford, California
3/16/19	42 nd Annual Meeting, National Association for Medical Direction of Respiratory Care, Sonoma, California Surgical Approach to OSA: From Reconstruction to Restoration
5/16/19	Eye, Ear, Nose, Throat Innovation Course, Stanford, California Disease State and Existing Solutions
6/22-23/19	Pediatric Dental Sleep Medicine Symposium: An Interdisciplinary Team Approach, Tufts University, Boston Sleep Surgery: A Developmental Perspective
7/22/19	Department of Otolaryngology and Department of Oral & Maxillofacial surgery. Oregon Health Sciences University, Portland, Oregon <u>Grand Rounds</u> : Sleep Surgery, From Reconstruction to Restoration
9/13-14/19	Orthopreneur Summit 2019, Dallas, Texas Sleep Surgery: From Reconstruction to Restoration & Re-education
1/16/20	Chan-Zuckerberg Biohub Sleep Symposium, San Francisco, California Sleep Surgery Beyond Reconstruction and Restoration
1/29/20	Sleep and Dreams, Stanford University, Stanford, California
7/25/20	Dental Sleep Medicine Mini-Residency, Tufts University, Boston, MA (Virtual) Sleep Surgery
10/10/20	Spear Education, Scottsdale, Arizona (Virtual) Sleep Surgery: Restoring Missed Milestones in Airway Development
10/23-25/20	Snoring and Sleep Disordered Breathing Evaluation and Management, Harvard University School of Medicine, Harvard, Massachusetts, USA (Virtual) Faculty Lecture: Optimizing Maxillomandibular Advancement Panelist: Hypoglossal Nerve Stimulation: Advances and Pitfalls
11/23/20	Trauma Conference, Dept of Otolaryngology, Stanford University
12/3/20	Guest Lecturer, Dept of Orthodontics, University of California-San Francisco (UCSF) Faculty Lecture: Sleep Surgery
1/5/21	Dept. of Surgery, Stanford University School of Medicine, Stanford, CA <u>Grand Rounds</u> : Surgery for Sleep Apnea: Restoring Missed Milestones in Facial and Airway Development

4th Network of Asia-Pacific Sleep Specialists, Kuala Lumpur, Malaysia 10 / 2014 1. Review of Sleep Apnea Surgery Bite, Breathing, and Beauty: Conundrums of Facial Skeletal Surgery 03 / 2015 10th Sleep Respiration Forum, Ansan, South Korea Bite, Breathing, and Beauty: Considerations of Facial Skeletal Surgery 03/2015 6th World Association of Sleep Medicine, Seoul, South Korea 1. Surgical Mini-implant Assisted Maxillary Expansion (Instructional Course) 2. Maxillomandibular Advancement for Obstructive Sleep Apnea – the Name Tells Half the Story 3. Static Hyoid Position and Dynamic Lateral Pharyngeal Wall Collapse Predict OSA Severity: Observations Based on Sleep MRI 05 / 2015 Colombian Association of Otorhinolaryngology, Head & Neck, Maxillofacial Surgery and Aesthetic Surgery (ACORL), Barranquilla, Colombia 1. Surgery first- Cirgia ortognatica sin ortodoncia previa 2. Planeamiento virtual para cirugia esqueletica en SAHOS 3. Cirugia asistida por miniimplantes para expansion rapida de paladar: MMA para la nariz? 4. Avance maxilomandibular. LA importancia de la rotacion angular 5. Predictores dinamicos y estaticos de la severidad del SAHOS 6. Endoscopia del sueno y analisis computarizado de analisis de flujo" Caracterizacion de la via aerea antes de MMA 7. Respiracion y belleza en cirugias condrofaciales y esqueleticas" Advance geniogloso y genioplastia de avance. Cual es la diferencia?" 11/2015 4th Snoring & Sleep Apnea Surgery Course, Singapore General Hospital, Singapore 1. Virtual Surgical Planning for Skeletal Sleep Surgery: When is it Useful? 2. MMA as Skeletal-Palatopharyngoplasty (S-PPP): Observations from DISE and CFD 03/10/16 4th International Pediatric Sleep Apnea Association Congress (IPSA), Taipei, Taiwan Mini-implant Assisted Surgical Rapid Maxillary Expansion in Late Teenagers 7th International Sleep Surgery Society Meeting (ISSS), Sao Paolo, Brazil 04/15/16 Dynamic Upper Airway Changes after MMA: What Matters the Most? 05/13/16 Visiting Professorship, Cathay General Hospital, Taipei, Taiwan Past, Present, to Precision: The Stanford Surgical Approach to OSA 41st Japanese Society of Sleep Research Conference, Tokyo, Japan 07/08/16 The Evolution of the Stanford Approach to Sleep Surgery 10/2016 6th Network of Asia-Pacific Sleep Specialists, Manila, Philippines Sleep Apnea Surgery in the Era of Precision Medicine: Pre-Surgical Evaluation 2. Sleep Apnea Surgery in the Era of Precision Medicine: The Stanford Surgical Experience 10/22-23/16 12th Annual Meeting of the Taiwan Academy of Facial Plastic and Reconstructive Surgery, Taipei, Taiwan 1. **Keynote**: Balancing Bite, Breathing, and Beauty in Facial Skeletal Surgery 2. Live Surgical Demonstration: Functional Genioplasty 11/4/16 101th Taiwan Otolaryngology Society Annual Meeting, Linkou, Taiwan **Keynote**: What is New with the Stanford Sleep Surgery Protocol? 1/3-5/17 1st ACE Forum on Orthognathic Surgery, Taichung, Taiwan Airway Stabilization in Sleep Surgery: From Reconstruction to Stimulation

04/30/17

China Otolaryngology Association Annual Meeting, Shanghai, China

- 1. **Keynote**: Past, Present, to Precision: the Stanford Sleep Surgery Algorithm
- 2. Seeing the Great Lateral Pharyngeal Wall of OSA with CPAP, MMA, and UAS

05/05/17

8th International Sleep Surgery Society (ISSS), Los Angeles, CA

MMA as First Line Treatment for OSA: Pros and Cons

Mentored Presentations:

- 1. Hardware Removal After Maxillary Mandibular Advancement (MMA) for Obstructive Sleep Apnea (OSA): 23 years of experience from 379 cases. (Michael Awad, MD)
- 2. Distraction Osteogenesis Maxillary Expansion (DOME) for Adult Obstructive Sleep Apnea Patients with Narrow and High Arched Palate (Audrey Yoon, DDS, MS)
- 3. Which Surgical and Polysomnographic Factors Correlate with Favorable Mandibular Fracture and Fixation Patterns in Patients with Obstructive Sleep Apnea Undergoing Maxillomandibular Advancement? (Yufeng Chen, DDS)
- 4. Maxillomandibular Advancement With Maxillary Segmental Osteotomy To Improve Facial Balance: Does it Work? (Catherine Hong, DDS)
- 5. Restricted Tongue Mobility and Ankyloglossia are Associated with Maxillary Hypoplasia and Soft Palate Elongation (Soroush Zaghi, MD)
- 6. Impact of Adenotonsillectomy on Disorder Pharmacotherapy in Children with Adenotonsillar Hypertrophy (Anne Huon, MD)

06/22/17

Annual Meeting of the Puerto Rico Otolaryngology Society, Dr. Jose T. Pico Lectureship, San Juan, Puerto Rico

Keynote: Reconstruction, Restoration, and Re-education: Sleep Surgery in the Era of Precision Health

07/28-29/17

III Simpósio Internacional de Ortodontia e Cirurgia Ortognática do Hospital Samaritano de São Paulo, São Paulo, Brazil

- 1. Past, Present, and Precision: Evolution of Stanford Sleep Surgery
- 2. Maxillomandibular Advancement and Hypoglossal Nerve Stimulation: What We Learned

08/25-26/17

5th Snoring & Sleep Apnea Surgery Course, Singapore General Hospital, Singapore Updating the Stanford Experience: GGA, MMA, Hypoglossal Nerve Stimulation, and Introducing DOME

10/8-10/17

World Sleep Congress, Prague, Czech Republic

- 1. Distraction osteogenesis maxillary expansion (DOME) for adult OSA Patients (course instructor)
- 2. Reconstruction to Restoration and Re-education: Myofunctional Therapy as a Missing Link in Sleep Surgery (course instructor)
- 3. MMA after Maxillary Expansion (symposium panelist)
- 4. Distraction osteogenesis maxillary expansion (DOME) for adolescents, Pros and Cons (symposium panelist)
- 5. Designer Sleep Surgery (symposium panelist)

10/22/17

5th Guangzhou Sleep Medicine Congress, Shenzhen, China

MMA: What it is, and is not

11/3/17

56th Congress of the Korean Association of Maxillofacial Plastic Reconstructive Surgeons, Seoul National University, Seoul, South Korea

Designer Sleep Surgery: Stanford Style

11/11/17

Quebec Society of Maxillofacial Surgery Annual Meeting, Montreal, Canada

Past, Present, to Precision: Evolution of Sleep Surgery at Stanford

12/2/17

Karl Storz Visiting Professorship, The Hong Kong Society of Otorhinolaryngology, Head and Neck Surgery, Hong Kong

Airway Design for Sleep Surgery: Surgical Solutions for Obstructive Sleep Apnea

2nd Congress of Asian Society of Sleep Medicine, Seoul, South Korea 3/23/18 1. To Expand, to Advance, and to Inspire: Contemporary Approaches to Sleep Surgery Missed Milestones in Pediatric OSA Care: Can Surgery Help? 4/7/18 9th International Sleep Surgery Society (ISSS), Munich, Germany Symposium Chair: Maxillomandibular Advancement Mentored Presentations: Biomechanical and Stress Distribution Effects of Maxillary Expansion Methods, SARPE, MARPE, DOME (Yufeng Chen, DDS) Combining MMA and Upper Airway Stimulation: When and Why? (Sophia Hsu, MD) 9th Singapore Allergy and Rhinology Conference, Singapore 5/2-3/18 1. Sleep Surgery: Updated Stanford Protocol 2. Sleep Surgery: Refractory Sleep Apnea 6/30/18 10th Chinese Sleep Research Society Conference, Harbin, China Keynote: Designer Sleep Surgery with Emphasis on Skeletal Surgery and Neurostimulation 7/25-26/18 Encontro Internacional Em Medicina Do Sono, Sao Paulo, Brazil 1. Quando Indicar o AMM? 2. Que Esperar Para Os Proximos Anos? 13th Asian Congress of Oral and Maxillofacial Surgery, Taipei, Taiwan 11/7-10/18 Sleep Surgery: Decision by Precision Mentored Presentations 1. Optimizing Efficacy of Upper Airway Stimulation with Skeletal Surgery for Severe OSA (Grace K.J. Chen, DDS) 2. Why and When does MMA Work Best? (Allen Huang, DDS, MD) 3. Rapid Return to Function after MMA for OSA: Optimizing Sagittal Split Osteotomy (Yufeng Chen, 12/16/18 2nd International Scientific Orthodontic Forum: Science to Chairside, Seoul, South Korea Designing the Airway for Better Sleep Impact of DOME on Combined Procedures: MMA, TORS, Hypoglossal Nerve Stimulation 1/19/19 The Hong Kong College of Otorhinolaryngologists, Cricket Club, Hong Kong Keynote: Sleep Surgery: Putting It Altogether 4/25-26/19 Co-Chair, Singapore Sleep Allergy and Rhinology Conference Sleep Workshop, Singapore 1. The Role of MMA in Today's Stanford Sleep Surgery Protocol Cadaveric Demonstration and Dissection: Skeletal Surgery 5/11/19 10th International Sleep Surgery Society (ISSS), New York City, New York MMA with Adjunctive Procedures

6/8-2/19 33rd Annual Meeting, SLEEP (Associated Professional Sleep Societies), San Antonio, Texas, USA

Keynote: Sleep Surgery: From Past and Present to Precision

Mentored Presentations

- 1. The Relationship Between Continuous Positive Airway Pressure Treatment in Obstructive Sleep Apnea Syndrome and Sensorineural Hearing Loss: A Prospective Cohort Study (Jessie Chao-Yun Chi, MD)
- 2. Upper Airway Stimulation: Who are the Patients Really Going for it? (Sasikarn Poomkonsarn, MD)
- 3. Upper Airway Stimulation: Titration Beyond the Attended Polysomnography (Emmanuel During, MD)
- 4. The Effect of Sleeping Position on the Efficacy of Hypoglossal Nerve Stimulation (Courtney Chou, MD)

6/14/19 25th Spanish Congress of Oral and Maxillofacial Surgery, Seville, Spain

Keynote: Sleep Surgery: From Past, Present, to Precision

7/13/19 10th Chinese Sleep Medicine Congress, Taiyuan, China

Keynote: Sleep Surgery: From Reconstruction to Restoration

Mentored Presentations

- 1. Histopathological and Morphologic Risk Factors Of the Maxillary Sinus in OSA Patients Undergoing MMA (Sasikarn Poomkonsarn, MD)
- 2. Improving Outcome with Skeletal and UPPP Surgery in OSA Patients (Young-Eun Jung, DDS, MS)
- 3. Pattern Recognition: Using DISE for Targeted MMA (Allen Huang, DDS, MD)

8/14-16/19 Shanghai Jiatong University Otorhinolaryngology Institute, International OSA Summit at the Sixth People's Hospital, Shanghai, China

- 1. How to Best Combine Skeletal, Soft Tissue, and Upper Airway Stimulation
- 2. Applying Stanford Biodesign Concepts
- 9/21-24/19 World Sleep 2019, Vancouver, Canada

Symposium Chair, S47: From Past, Present, to Precision: Contemporary Sleep Surgery

Panelists: Clemens Heiser, MD (Germany), Nico de Vries, MD (The Netherlands), Olivier Vanderveken, MD

(Belgium), Peter Baptista, MD (Spain), Stanley Liu, MD (USA)

Contemporary Skeletal Surgery

11/2-3/19 7th World Chinese ENT Symposium, Macau

Keynote: Beyond the Comfort Zone: Update to Key Sleep Surgical Procedures

2/14-15/20 Inspiration by Integration, Discourse on Sleep-Disordered Breathing, Melbourne, Australia

Course Chair Sleep Surgery (2 days, 4 lectures)

2/23-25/20 7th Annual International Obstructive Sleep Apnea Surgery Course (OSAS), Orlando, Florida, USA

Teaching Faculty Cadaveric Dissection

Lectures:

- 1. Hard Palate: From Arch to DOME
- 2. MMA
- 9/19-10/10/20 11th Singapore Sleep Allergy and Rhinology Conference Sleep Workshop, Singapore (Virtual)

Co-Chair

- 1. Invited, organized, moderated 16 faculty talks, 24 oral presentations from 16 countries over 4 days (Virtual)
- 2. Lecture: What is Sleep Surgery
- 9/13/20 International Association of Paediatric Dentistry (Virtual)

Faculty Lecture: Better Sleep, Better Breathing - It's Never Too Early

11/5/20 KAO (Virtual)

12/13/20 4th International Scientific Orthodontic Forum, Kyung Hee University, Seoul, Korea (Virtual)

Faculty Lecture: Expansion of the Maxilla as the Foundation of Sleep Surgery

VISITING PROFESSORSHIPS

9/4-7/18 National Cheng Kung University, Tainan, Taiwan

- 1. Otolaryngology Grand Rounds: Designing the Airway for Better Sleep
- 2. Medical School Grand Rounds
- 3. Biodesign Workshop for Faculty
- 4. Sleep Medicine Conference Keynote: When MMA meets UAS

1/17-18/19 Pok Oi Hospital Board of Directors, Hong Kong

- 1. Introduction to Sleep Surgery Algorithm
- 2. Skeletal Surgery: The Past, Present, and Precision
- 3. Hypoglossal Nerve Stimulation: the Basics
- 4. Hypoglossal Nerve Stimulation: Its Role in Sleep Surgery

Mentored Presentations:

- 1. Skeletal Surgery: Hong Kong Experience (Jeni Ho, DDS)
- 2. Box Surgery with Precision: DOME and Genio (Michael Awad, MD)
- 3. Hypoglossal Nerve Stimulation: Interesting Case Studies (Sasikarn Poomkonsarn, MD)

11/1-2/19 Chinese University of Hong Kong, Hong Kong

Sleep Symposium and Live Surgery Instruction (VSP-Genio, DOME)

PREDOCTORAL STUDENTS MENTORED

Dates	Name	Program or School	Faculty role	Current position
2011 - 2013	Brian Lee	UCSF Clinical	Project: Long-term follow- up of sleep disordered	Attending Surgeon, Maxillofacial surgery
	Translational Researc	h Award	breathing associated with orthognathic surgery	
2014 – 2016	Grace Hyunje Cho	Stanford MedScholars Fellowship	Project: Use of Novel Static and Dynamic Imaging Assessment to Phenotype Patients with OSA	Resident, Dermatology, Stanford University

RESIDENTS MENTORED

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Dates	Name	Program or School	Faculty role	Current position
7/2015- 6/2016	Ryan Williams, MD	Resident, PGY 4, Otolaryngology, Stanford University	Project: Persistent nasal obstruction after nasal surgery in patients with narrow maxilla	Attending Surgeon, Otolaryngology, Resident, Oral & Maxillofacial Surgery, Harvard School of Medicine
4/2017 – present	Tyler Okland, MD	Resident, PGY 2, Otolaryngology, Stanford University	Project: Outcome of nasal breathing after distraction osteogenesis maxillary expansion (DOME)	Resident, PGY 4, Otolaryngology, Stanford University
9/2019 – present	Javier Howard MD	Resident, PGY 1, Otolaryngology, Stanford University	Project: Quality of Life after Maxillomandibular Advancement	Resident, PGY 2, Otolaryngology, Stanford University

CLINICAL FELLOWS MENTORED

Dates	Name	Position while Mentored	Faculty role	Current position
9/2014 – 6/2015	Carlos Torre, MD	Sleep Surgery	Supervised Fellowship	Assistant Professor,
		Clinical Instructor		Otolaryngology; Chief,
				Sleep Surgery and
				Medicine, U. of Miami

7/2015 – 6/2016	Soroush Zaghi, MD	Sleep Surgery Clinical Instructor	Supervised Fellowship	Attending Surgeon, Otolaryngology, Private Practice, Los Angeles
7/2016 – 6/2017	Ryan Williams, MD	Sleep Surgery Clinical Instructor	Supervised Fellowship	Attending Surgeon, Otolaryngology, Resident, Oral & Maxillofacial Surgery, Harvard School of Medicine
7/2017 – 6/2018	Chris Gouveia, MD	Sleep Surgery Clinical Instructor	Supervised Fellowship	Attending Surgeon, Otolaryngology, Kaiser Permanente Santa Clara
7/2018 – 6/2019	Michael Awad, MD	Sleep Surgery Fellow (GME)	Supervised Fellowship	Assistant Professor, Otolaryngology; Chief, Sleep Surgery, Northwestern University
7/2019 – 6/2020	Badr Ibrahim, MD	Sleep Surgery Fellow (GME)	Supervised Fellowship	Attending Surgeon Otolaryngology, Montreal, Canada
7/2020 – present	Courtney Chou, MD	Sleep Surgery Fellow (GME)	Supervised Fellowship	Stanford Sleep Surgery Fellow (GME)
9/2020 – present	Mohammed Abdelwahab, MD	Sleep Surgery Clinical Instructor	Supervised Fellowship	Stanford Sleep Surgery Clinical Instructor

VISITING RESEARCH SCHOLARS MENTORED

Dates	Name	Position while Mentored	Mentoring role	Current position
6/2015 – 5/2016	Pi-Jun, Lee, MD	Visiting Scholar, Stanford School of Medicine	Academic and Research Advisor	Assistant Professor, Plastic & Reconstructive Surgery, NCKU, Taiwan
6/2015 – 5/2016	Peng Zhe, MD	Visiting Scholar, Stanford School of Medicine	Academic and Research Advisor	Assistant Professor, Plastic & Reconstructive Surgery, Beijing University Hospital
8/2016 – 6/2017	Yu-Feng, Chen, DDS	Visiting Scholar, Stanford School of Medicine	Academic and Research Advisor	Clinical Instructor, OMFS Kaohsiung Medical University, Taiwan
7/2018 – 7/2019	Sasikarn Lin Poomkonsarn, MD	Visiting Scholar, Stanford School of Medicine	Academic and Research Advisor	Assistant Professor, Otolaryngology, Raj Hospital, Bangkok, Thailand
10/2018 – 9/2019	Xiaotong Ren, MD	Visiting Scholar, Stanford School of Medicine	Academic and Research Advisor	Attending Surgeon, Otolaryngology, Longgang Hospital, Shenzhen, China

9/2019 – 6/2020	Corissa Chang, DDS	Visiting Scholar, Stanford School of Medicine, Recipient of First Place Res	Academic and Research Advisor ident Research for AAOMS	Medical Student / OMFS resident, University of Pennsylvania School of Medicine
10/2019 – present	Myeong Sang Yu, MD, PhD	Visiting Scholar, Stanford School of Medicine	Academic and Research Advisor	Associate Professor, Otolaryngology, Ulsan Medical University, Seoul, S. Korea
1/2020 – 1/2021	Wu Hao, MD	Visiting Scholar, Stanford School of Medicine	Academic and Research Advisor	Attending Surgeon, Otolaryngology, Anjen Hospital, Beijiing, China
1/2020 – 1/2021	Qiao Lian Yu, MD	Visiting Scholar, Stanford School of Medicine	Academic and Research Advisor	Attending Surgeon, Otolaryngology, Longgang Hospital, Shenzhen, China

OBSERVERS HOSTED

From 2014 to present, I have hosted 34 otolaryngologists with interest in sleep surgery at the resident, fellow, and faculty levels. They come from the U.S. and 17 other countries.

Additionally, I have hosted 60 trainees and specialists of sleep medicine, orthodontics, maxillofacial surgery, and plastic surgery from the U.S. and 12 other countries.