



Robson Capasso

Associate Professor of Otolaryngology-Head and Neck Surgery (Sleep Surgery) at the Stanford University Medical Center

Otolaryngology - Head & Neck Surgery Divisions

CLINICAL OFFICES

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Bio

BIO

Robson Capasso is the Chief of Sleep Surgery, Associate Professor of Otolaryngology and Head and Neck Surgery at Stanford University School of Medicine and Global Advisor to Stanford Byers Center for Biodesign. His quite extensive and unique training includes training in Head and Neck Surgery, Neurosciences and Sleep Medicine.

Dr. Capasso has published extensively including book chapters, articles and original papers in peer-reviewed journals, and has been an investigator on pre-treatment evaluation, and surgical treatment of obstructive sleep apnea patients. Currently his research interests have a focus on clinical utilization of smartphone applications and consumer based devices for sleep disordered breathing, biomarkers for obstructive sleep apnea, pre-surgical evaluation and upper airway changes after surgery in obstructive sleep apnea sufferers.

The local and international recognition of his work is often associated with one of his favorite tasks: lecturing and trading knowledge nationally and internationally. He has been a mentor or supervisor to hundreds of medical students, residents, fellows or visiting scholars from more than 20 countries.

Dr Capasso has participated in several Stanford Biodesign and Lean Launchpad initiatives. It initiated as a fellowship mentor, leading to the development of projects in the Bay Area and Singapore, graduated as a Biodesign Faculty Fellow, and currently is a lecturer and mentor to Global Biodesign. His goal is to utilize this acquired experience to foster health innovation training of physician and engineers globally.

Dr Capasso is a currently a member of the Stanford Medical Leadership Academy, an initiative to foster the development of strategic initiatives that aims to develop innovative leadership across and outside departments at the School of Medicine and Stanford University.

CLINICAL FOCUS

- Sleep Surgery
- Otolaryngology

- Biodesign

ACADEMIC APPOINTMENTS

- Associate Professor - Med Center Line, Otolaryngology - Head & Neck Surgery Divisions
- Member, Bio-X
- Member, Stanford Center for Sleep Sciences and Medicine

ADMINISTRATIVE APPOINTMENTS

- Chief, Division of Sleep Surgery, Stanford University Department of Otolaryngology, Head and Neck Surgery, (2010- present)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, American Academy of Otolaryngology (2010 - present)
- Fellow, American Academy of Sleep Medicine (2011 - present)

PROFESSIONAL EDUCATION

- Board Certification: Sleep Medicine, American Board of Otolaryngology (2009)
- Board Certification: Otolaryngology, American Board of Otolaryngology (2018)
- Board Certification, Otolaryngology Head and Neck Surgery , American Board of Otolaryngology, Head and Neck Surgery (2018)
- Fellowship: Stanford University School of Medicine (2008) CA
- Medical Education: Universidade Federal Do Parana (1995) Brazil
- Fellowship: University of Miami Hospital and Clinics (2001) FL
- Residency: University of Miami (2007) FL
- Residency: Universidade Federal Do Parana (1999) Brazil

COMMUNITY AND INTERNATIONAL WORK

- <https://www.brazilatsiliconvalley.com>
- Global Advisor: Biodesign

LINKS

- Sleep Surgery Website: <http://med.stanford.edu/ohns/sleepsurgery/>
- Biodesign: <http://biodesign.stanford.edu/bdn/people/20062.jsp>
- Brazil at Silicon Valley: <https://www.brazilatsiliconvalley.com>
- Get a Second Opinion: <https://stanfordhealthcare.org/second-opinion/overview.html>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Clinically relevant outcomes for OSA Surgery.

Wearables and Digital Health Technologies for Sleep.

Innovative approaches for OSA Management.

Innovation in Sleep and Otolaryngology

Publications

PUBLICATIONS

- **Nasal function and CPAP compliance** *AURIS NASUS LARYNX*
Inoue, A., Chiba, S., Matsuura, K., Osafune, H., Capasso, R., Wada, K.
2019; 46 (4): 548–58
- **THE EFFECT OF SLEEPING POSITION ON THE EFFICACY OF HYPOGLOSSAL NERVE STIMULATION**
Chou, C., Poomkonsarn, S., Liu, S. Y., Capasso, R., During, E.
OXFORD UNIV PRESS INC.2019
- **The Role of the Revised Stanford Protocol in Today's Precision Medicine.** *Sleep medicine clinics*
Liu, S. Y., Awad, M., Riley, R., Capasso, R.
2019; 14 (1): 99–107
- **Tonsillectomy and Pharyngoplasty: Tissue-Preserving Techniques.** *Atlas of the oral and maxillofacial surgery clinics of North America*
Awad, M., Gouveia, C., Capasso, R., Liu, S. Y.
2019; 27 (1): 17–22
- **Non-steady State Modeling of the Ventilatory Depressant Effect of Remifentanyl in Awake Patients Experiencing Moderate-to-severe Obstructive Sleep Apnea** *ANESTHESIOLOGY*
Doufas, A. G., Shafer, S. L., Rashid, N., Kushida, C. A., Capasso, R.
2019; 130 (2): 213–26
- **The Effect of Sedating Agents on Drug-Induced Sleep Endoscopy Findings** *LARYNGOSCOPE*
Viana, A., Zhao, C., Rosa, T., Couto, A., Neves, D., Araujo-Melo, M., Capasso, R.
2019; 129 (2): 506–13
- **Drug-Induced Sleep Endoscopy and Surgical Outcomes: A Multicenter Cohort Study.** *The Laryngoscope*
Green, K. K., Kent, D. T., D'Agostino, M. A., Hoff, P. T., Lin, H., Soose, R. J., Boyd Gillespie, M., Yaremchuk, K. L., Carrasco-Llatas, M., Tucker Woodson, B., Jacobowitz, O., Thaler, E. R., Barrera, et al
2018
- **Nasal function and CPAP compliance.** *Auris, nasus, larynx*
Inoue, A., Chiba, S., Matsuura, K., Osafune, H., Capasso, R., Wada, K.
2018
- **An Extended Hackathon Model for Collaborative Education in Medical Innovation** *JOURNAL OF MEDICAL SYSTEMS*
Wang, J. K., Pamnani, R. D., Capasso, R., Chang, R. T.
2018; 42 (12)
- **Thirty-five alternatives to positive airway pressure therapy for obstructive sleep apnea: an overview of meta-analyses.** *Expert review of respiratory medicine*
Camacho, M., Chang, E. T., Neighbors, C. L., Noller, M. W., Mack, D., Capasso, R., Kushida, C. A.
2018; 12 (11): 919–29
- **The effect of aging on drug-induced sleep endoscopy findings** *LARYNGOSCOPE*
Zhao, C., Viana, A., Ma, Y., Capasso, R.
2018; 128 (11): 2644–50
- **An Extended Hackathon Model for Collaborative Education in Medical Innovation.** *Journal of medical systems*
Wang, J. K., Pamnani, R. D., Capasso, R., Chang, R. T.
2018; 42 (12): 239
- **Clinical Trials in Obstructive Sleep Apnea: Recognizing Trends and Future Opportunities.** *The Laryngoscope*
Singh, S. K., Gu, D., Capasso, R., Liu, S., Gouveia, C. J.
2018
- **Non-steady State Modeling of the Ventilatory Depressant Effect of Remifentanyl in Awake Patients Experiencing Moderate-to-severe Obstructive Sleep Apnea.** *Anesthesiology*

- Doufas, A. G., Shafer, S. L., Rashid, N. H., Kushida, C. A., Capasso, R.
2018
- **Digital Health and Sleep-Disordered Breathing: A Systematic Review and Meta-Analysis.** *Journal of clinical sleep medicine : JCSM : official publication of the American Academy of Sleep Medicine*
Rosa, T., Bellardi, K., Viana, A. J., Ma, Y., Capasso, R.
2018; 14 (9): 1605–20
 - **YouTube as a source of information for obstructive sleep apnea** *AMERICAN JOURNAL OF OTOLARYNGOLOGY*
Singh, S. K., Liu, S., Capasso, R., Kern, R. C., Gouveia, C. J.
2018; 39 (4): 378–82
 - **Epithelial separation theory for post-tonsillectomy secondary hemorrhage: evidence in a mouse model and potential heparin-binding epidermal growth factor-like growth factor therapy** *EUROPEAN ARCHIVES OF OTO-RHINO-LARYNGOLOGY*
Beswick, D. M., Santa Maria, C., Ayoub, N. F., Capasso, R., Santa Maria, P.
2018; 275 (2): 569–78
 - **Publication trends and levels of evidence in obstructive sleep apnea literature.** *The Laryngoscope*
Gouveia, C. J., Zaghi, S., Awad, M., Camacho, M., Liu, S. Y., Capasso, R., Kern, R. C.
2018
 - **Integrating the Divided Nasal Cannula Into Routine Polysomnography to Assess Nasal Cycle: Feasibility and Effect on Outcomes** *JOURNAL OF CLINICAL SLEEP MEDICINE*
Scapuccin, M., Schneider, L., Rashid, N., Zaghi, S., Rosa, T., Tsuo, Y., Liu, S., Lazarini, P., Capasso, R., Ruoff, C.
2018; 14 (4): 641–50
 - **Genial tubercle advancement and genioplasty for obstructive sleep apnea: A systematic review and meta-analysis** *LARYNGOSCOPE*
Song, S. A., Chang, E. T., Certal, V., Del Do, M., Zaghi, S., Liu, S. Y., Capasso, R., Camacho, M.
2017; 127 (4): 984-992
 - **The state of academic sleep surgery: A survey of United States residency and fellowship programs.** *Laryngoscope*
Gouveia, C. J., Kern, R. C., Liu, S. Y., Capasso, R.
2017
 - **Sleep surgery tool: A medical checklist to review prior to operating.** *Journal of cranio-maxillo-facial surgery : official publication of the European Association for Cranio-Maxillo-Facial Surgery*
Camacho, M., Riley, R. W., Capasso, R., O'Connor, P., Chang, E. T., Reckley, L. K., Guilleminault, C.
2017; 45 (3): 381-386
 - **Impact of Continuous Positive Airway Pressure in Patients with Obstructive Sleep Apnea During Drug Induced Sleep Endoscopy.** *Clinical otolaryngology*
Torre, C., Liu, S. Y., Kushida, C. A., Nekhendzy, V., Huon, L., Capasso, R.
2017
 - **Sleep Surgery in the Elderly.** *Otolaryngology--head and neck surgery : official journal of American Academy of Otolaryngology-Head and Neck Surgery*
Gouveia, C. J., Cramer, J. D., Liu, S. Y., Capasso, R.
2017: 194599817691475-?
 - **Dexmedetomidine versus propofol during drug-induced sleep endoscopy and sedation: a systematic review.** *Sleep & breathing = Schlaf & Atmung*
Chang, E. T., Certal, V., Song, S. A., Zaghi, S., Carrasco-Llatas, M., Torre, C., Capasso, R., Camacho, M.
2017
 - **Tongue retaining devices for obstructive sleep apnea: A systematic review and meta-analysis.** *American journal of otolaryngology*
Chang, E. T., Fernandez-Salvador, C., Giambo, J., Nesbitt, B., Liu, S. Y., Capasso, R., Kushida, C. A., Camacho, M.
2017
 - **Introducing a new concept in obstructive sleep apnea: The continuum of treatment.** *Cranio : the journal of craniomandibular practice*
Certal, V., Camacho, M., Song, S. A., Capasso, R.
2017; 35 (1): 1-2
 - **Nocturnal Hypoxemia is Associated With Low Testosterone Levels in Overweight Males and Older Men With Normal Weight** *JOURNAL OF CLINICAL SLEEP MEDICINE*

- Viana, A., Daflon, A., Couto, A., Neves, D., de Araujo-Melo, M., Capasso, R.
2017; 13 (12): 1395-1401
- **Static craniofacial measurements and dynamic airway collapse patterns associated with severe obstructive sleep apnoea: a sleep MRI study** *CLINICAL OTOLARYNGOLOGY*
Liu, S. Y., Huon, L., Lo, M., Chang, Y., Capasso, R., Chen, Y., Shih, T. T., Wang, P.
2016; 41 (6): 700-706
 - **Long-Term Outcomes of Radiofrequency Ablation of the Inferior Turbinates.** *Indian journal of otolaryngology and head and neck surgery : official publication of the Association of Otolaryngologists of India*
Means, C., Camacho, M., Capasso, R.
2016; 68 (4): 424-428
 - **Genial tubercle advancement and genioplasty for obstructive sleep apnea: A systematic review and meta-analysis.** *Laryngoscope*
Song, S. A., Chang, E. T., Certal, V., Del Do, M., Zaghi, S., Liu, S. Y., Capasso, R., Camacho, M.
2016
 - **Risk factors for sleep impairment in adult patients with chronic rhinosinusitis** *AURIS NASUS LARYNX*
Ando, Y., Chiba, S., Capasso, R., Okushi, T., Kojima, H., Otori, N., Wada, K.
2016; 43 (4): 418-421
 - **Variable Findings for Drug-Induced Sleep Endoscopy in Obstructive Sleep Apnea with Propofol versus Dexmedetomidine.** *Otolaryngology--head and neck surgery : official journal of American Academy of Otolaryngology-Head and Neck Surgery*
Capasso, R., Rosa, T., Tsou, D. Y., Nekhendzy, V., Drover, D., Collins, J., Zaghi, S., Camacho, M.
2016; 154 (4): 765-770
 - **Awake examination versus DISE for surgical decision making in patients with OSA: A systematic review.** *Laryngoscope*
Certal, V. F., Pratas, R., Guimaraes, L., Lugo, R., Tsou, Y., Camacho, M., Capasso, R.
2016; 126 (3): 768-774
 - **Epiglottis collapse in adult obstructive sleep apnea: A systematic review.** *Laryngoscope*
Torre, C., Camacho, M., Liu, S. Y., Huon, L., Capasso, R.
2016; 126 (2): 515-523
 - **Five-Minute Awake Snoring Test for Determining CPAP Pressures (Five-Minute CPAP Test): A Pilot Study.** *Sleep disorders*
Camacho, M., Ruoff, C. M., Kawai, M., Modi, R., Arbee, J., Hekmat, A., Robertson, M., Zaghi, S., Certal, V., Capasso, R., Kushida, C. A.
2016; 2016: 7380874-?
 - **Five-Minute Awake Snoring Test for Determining CPAP Pressures (Five-Minute CPAP Test): A Pilot Study** *Sleep Disorders*
Camacho, M., Ruoff, C. M., Kawai, M., Modi, R., Arbee, J., Hekmat, A., Robertson, M., Zaghi, S., Certal, V., Capasso, R., Kushida, C. A.
2016; 2016: 8
 - **Efficacy of Maxillomandibular Advancement Examined with Drug-Induced Sleep Endoscopy and Computational Fluid Dynamics Airflow Modeling** *OTOLARYNGOLOGY-HEAD AND NECK SURGERY*
Liu, S. Y., Huon, L., Iwasaki, T., Yoon, A., Riley, R., Powell, N., Torre, C., Capasso, R.
2016; 154 (1): 189-195
 - **Treatment of Snoring with a Nasopharyngeal Airway Tube.** *Case reports in medicine*
Camacho, M., Chang, E. T., Fernandez-Salvador, C., Capasso, R.
2016; 2016: 3628716-?
 - **Predictors of Nasal Obstruction: Quantification and Assessment Using Multiple Grading Scales.** *Plastic surgery international*
Camacho, M., Zaghi, S., Certal, V., Abdullatif, J., Modi, R., Sridhara, S., Tolisano, A. M., Chang, E. T., Cable, B. B., Capasso, R.
2016; 2016: 6945297-?
 - **Model for Prediction of Pediatric OSA: Proposal for a Clinical Decision Rule** *LARYNGOSCOPE*
Certal, V., Silva, H., Carvalho, C., Costa-Pereira, A., Azevedo, I., Winck, J., Capasso, R., Camacho, M.
2015; 125 (12): 2823-2827
 - **Lateral pharyngeal wall collapse associated with hypoxemia in obstructive sleep apnea.** *Laryngoscope*
Lan, M., Liu, S. Y., Lan, M., Modi, R., Capasso, R.

2015; 125 (10): 2408-2412

- **Smartphone apps for snoring** *JOURNAL OF LARYNGOLOGY AND OTOTOLOGY*
Camacho, M., Robertson, M., ABDULLATIF, J., Certal, V., Kram, Y. A., Ruoff, C. M., Brietzke, S. E., Capasso, R.
2015; 129 (10): 974-979
- **Large maxillomandibular advancements for obstructive sleep apnea: An operative technique evolved over 30 years.** *Journal of cranio-maxillo-facial surgery*
Camacho, M., Liu, S. Y., Certal, V., Capasso, R., Powell, N. B., Riley, R. W.
2015; 43 (7): 1113-1118
- **Lateral Pharyngeal Wall Tension After Maxillomandibular Advancement for Obstructive Sleep Apnea Is a Marker for Surgical Success: Observations From Drug-Induced Sleep Endoscopy.** *Journal of oral and maxillofacial surgery*
Liu, S. Y., Huon, L., Powell, N. B., Riley, R., Cho, H. G., Torre, C., Capasso, R.
2015; 73 (8): 1575-1582
- **Myofunctional Therapy to Treat Obstructive Sleep Apnea: A Systematic Review and Meta-analysis.** *Sleep*
Camacho, M., Certal, V., Abdullatif, J., Zaghi, S., Ruoff, C. M., Capasso, R., Kushida, C. A.
2015; 38 (5): 669-675
- **Hypoglossal Nerve Stimulation in the Treatment of Obstructive Sleep Apnea: A Systematic Review and Meta-analysis** *LARYNGOSCOPE*
Certal, V. F., Zaghi, S., Riaz, M., Vieira, A. S., Pinheiro, C. T., Kushida, C., Capasso, R., Camacho, M.
2015; 125 (5): 1254-1264
- **2-Year Sleep Surgery and Medicine Fellowships for Otolaryngologists** *OTOLARYNGOLOGY-HEAD AND NECK SURGERY*
Camacho, M., Kushida, C. A., Capasso, R.
2015; 152 (4): 766-767
- **Maxillomandibular Advancement and Tracheostomy for Morbidly Obese Obstructive Sleep Apnea: A Systematic Review and Meta-analysis** *OTOLARYNGOLOGY-HEAD AND NECK SURGERY*
Camacho, M., Teixeira, J., Abdullatif, J., Acevedo, J. L., Certal, V., Capasso, R., Powell, N. B.
2015; 152 (4): 619-630
- **Inferior Turbinate classification system, grades 1 to 4: Development and validation study.** *Laryngoscope*
Camacho, M., Zaghi, S., Certal, V., Abdullatif, J., Means, C., Acevedo, J., Liu, S., Brietzke, S. E., Kushida, C. A., Capasso, R.
2015; 125 (2): 296-302
- **The Effect of Nasal Surgery on Continuous Positive Airway Pressure Device Use and Therapeutic Treatment Pressures: A Systematic Review and Meta-Analysis** *SLEEP*
Camacho, M., Riaz, M., Capasso, R., Ruoff, C. M., Guilleminault, C., Kushida, C. A., Certal, V.
2015; 38 (2): 279-?
- **Unattended sleep studies in pediatric OSA: A systematic review and meta-analysis.** *Laryngoscope*
Certal, V., Camacho, M., Winck, J. C., Capasso, R., Azevedo, I., Costa-Pereira, A.
2015; 125 (1): 255-262
- **Nasopharyngeal airway stenting devices for obstructive sleep apnoea: A systematic review and meta-analysis.** *journal of laryngology and otology*
Kumar, A. R., Guilleminault, C., Certal, V., Li, D., Capasso, R., Camacho, M.
2015; 129 (1): 2-10
- **The effect of nasal surgery on continuous positive airway pressure device use and therapeutic treatment pressures: a systematic review and meta-analysis.** *Sleep*
Camacho, M., Riaz, M., Capasso, R., Ruoff, C. M., Guilleminault, C., Kushida, C. A., Certal, V.
2015; 38 (2): 279-286
- **Limited palatal muscle resection with tonsillectomy: A novel palatopharyngoplasty technique for obstructive sleep apnea** *AURIS NASUS LARYNX*
Cho, K., Koo, S., Lee, J., Hong, S., Capasso, R., Roh, H.
2014; 41 (6): 558-562
- **Limited palatal muscle resection with tonsillectomy: a novel palatopharyngoplasty technique for obstructive sleep apnea.** *Auris, nasus, larynx*
Cho, K., Koo, S., Lee, J., Hong, S., Capasso, R., Roh, H.

2014; 41 (6): 558-562

- **Airway changes in obstructive sleep apnoea patients associated with a supine versus an upright position examined using cone beam computed tomography** *JOURNAL OF LARYNGOLOGY AND OTOTOLOGY*
Camacho, M., Capasso, R., Schendel, S.
2014; 128 (9): 824-830
- **Snoring exclusively during nasal breathing: a newly described respiratory pattern during sleep** *SLEEP AND BREATHING*
Hsia, J. C., Camacho, M., Capasso, R.
2014; 18 (1): 159-164
- **Tracheostomy as treatment for adult obstructive sleep apnea: a systematic review and meta-analysis.** *Laryngoscope*
Camacho, M., Certal, V., Brietzke, S. E., Holty, J. C., Guillemainault, C., Capasso, R.
2014; 124 (3): 803-811
- **Management of obstructive sleep apnea in adults.** *Annals of internal medicine*
Capasso, R., Kezirian, E., Jacobowitz, O., Weaver, E. M.
2014; 160 (5): 367
- **In reference to redefining successful therapy in obstructive sleep apnea: A call to arms.** *The Laryngoscope*
Certal, V., Camacho, M., Capasso, R.
2014
- **Reviewing the Systematic Reviews in OSA Surgery** *OTOLARYNGOLOGY-HEAD AND NECK SURGERY*
Certal, V., Nishino, N., Camacho, M., Capasso, R.
2013; 149 (6): 817-829
- **Improved sleep MRI at 3 tesla in patients with obstructive sleep apnea.** *Journal of magnetic resonance imaging*
Shin, L. K., Holbrook, A. B., Capasso, R., Kushida, C. A., Powell, N. B., Fischbein, N. J., Pauly, K. B.
2013; 38 (5): 1261-1266
- **Comprehensive review of surgeries for obstructive sleep apnea syndrome** *BRAZILIAN JOURNAL OF OTORHINOLARYNGOLOGY*
Camacho, M., Certal, V., Capasso, R.
2013; 79 (6): 780-788
- **Phase of nasal cycle during sleep tends to be associated with sleep stage** *LARYNGOSCOPE*
Kimura, A., Chiba, S., Capasso, R., Yagi, T., Ando, Y., Watanabe, S., Moriyama, H.
2013; 123 (8): 2050-2055
- **Surgical Therapy of Obstructive Sleep Apnea: A Review** *NEUROTHERAPEUTICS*
Carvalho, B., Hsia, J., Capasso, R.
2012; 9 (4): 710-716
- **The effect of continuous positive airway pressure on middle ear pressure** *LARYNGOSCOPE*
Lin, F. Y., Gurgel, R. K., Popelka, G. R., Capasso, R.
2012; 122 (3): 688-690
- **Sleep Medicine Clinical and Surgical Training during Otolaryngology Residency: A National Survey of Otolaryngology Residency Programs** *OTOLARYNGOLOGY-HEAD AND NECK SURGERY*
Shen, T., Shimahara, E., Cheng, J., Capasso, R.
2011; 145 (6): 1043-1048
- **Caregiver Reports of Sleep Problems in Non-Hispanic White, Hispanic, and African American Patients with Alzheimer Dementia** *JOURNAL OF CLINICAL SLEEP MEDICINE*
Ownby, R. L., Saeed, M., Wohlgenuth, W., Capasso, R., Acevedo, A., Peruyera, G., Sevush, S.
2010; 6 (3): 281-289
- **Endoscopic resection of inverted papilloma: University of Miami experience** *Meeting of the American-Rhinologic-Society*
Kaza, S., Capasso, R., Casiano, R. R.
OCEAN SIDE PUBLICATIONS INC.2003: 185-90