About Our Research

The faculty and staff of our lab are dedicated to high-level basic and clinical research and improving the health and quality of life of children and adults with swallowing disorders (also known as dysphagia). The research conducted in our lab focuses on the use of advanced imaging to understand the neural underpinnings of swallowing in the normal population and following neurological trauma or intervention, developing and evaluating new neurorehabilitation interventions for neurogenic dysphagia, and the development and validation of telehealth systems to test the effectiveness of providing swallowing rehabilitation from a distance.

Welcome to the 2019 Newsletter

The 2019 newsletter highlights the progress we made this past year in expanding our knowledge of swallowing function in adult and pediatric populations, and the directions we are taking in 2020!

1. Conferences and Presentations
2. Publications and Media
3. Grants and Awards
4. Support Our Research
5. I-EaT Research Clinic News
6. About our Team

Scan the code to access our lab website!
Conferences and Presentations in 2019

National Presentations (selected)

American Speech-Language-Hearing Association Convention, Orlando, FL

Dysphagia Research Society Meeting, San Diego, CA


Undergraduate Research Symposium, West Lafayette, IN

National Invited Lectures (selected)

American Speech-Language-Hearing Association Convention, Orlando, FL

Memorial Justine Joan Sheppard Conference, New York, NY

James Annual Dysphagia Conference, The Ohio State University

Dysphagia Research Society Meeting, San Diego, CA


BOOK CHAPTER
This year our lab received three research grants that will help us continue our exciting work on wearable sensors and dysphagia rehabilitation.

**NIH-NIBIB Trailblazer R21 Grant:** Development of mechanically compliant wearable monitoring systems for swallowing function and disorders (PIs: Malandraki and Lee)

**Purdue Research Foundation Trask Innovation Fund Award:** Tele-EaT sensors: Wearable technology for the management of dysphagia (PIs: Malandraki and Lee)

**SMART Consortium:** Intrinsically Stretchable and Flexible Electronic Polymer Sensors for Global Health. (PIs: Boudouris, Lee & Malandraki)

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### Grants and Awards Received by Lab Students

**Rachel Arkenberg**
- 2019 Indiana Lion's Club Research Award
- Frederick N. Andrews Doctoral Fellowship

**Carolina Smith**
- Purdue Doctoral Fellowship

**Jennine Bryan**
- Purdue Office of Undergraduate Research Scholarship

Jennine Bryan working on her OUR project on a simulated dysphagia patient

Rachel Arkenberg receiving the Indiana Lion's Club Award. Rachel is also an Andrews Fellow

Carey Smith is a Purdue Doctoral Fellow

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### Awards Received by Our Lab Director

- 2019 College of Health and Human Sciences Early Career Research Achievement Award, Purdue University
- 2019 NIH NIBIB R21 Trailblazer Award
- 2019 Ruth and M.D. Steer Outstanding Teacher Award, SLP Graduate Instructor, Department of Speech, Language, and Hearing Sciences, Purdue University

Dr. Malandraki receiving the 2019 HHS Early Career Award by Associate Dean, Dr. Huber
# Participate in a Current Study!

## NOW ACTIVELY RECRUTING FOR THE FOLLOWING STUDIES

### Swallowing and Speech Neurophysiology Study
This study focuses on examining the neural control of swallowing and speech in children diagnosed with hemiplegic cerebral palsy and age-matched typically developing children. At this time, we are recruiting typically developing children.

**Participants**
- 7 and 12 year old typically developing children

**Compensation**
- Families reimbursed w/ $30 with a potential of additional $50

**Contact**
- swallowinglab@purdue.edu
- or (765) 496-0207

### Swallowing and Wearable Sensors Study
Our current "wearable sensors study" is examining the development and use of novel wearable sensors in the treatment of swallowing. This work is in collaboration with Purdue BME (Dr. Lee's group).

**Participants**
- Adults with or without any swallowing difficulties ages 18-30 or 65-90

**Compensation**
- $30 for 2 visits (first visit: 90 minutes, second visit: 45 minutes)

**Contact**
- swallowinglab@purdue.edu
- or (765) 496-0207

### Aerodigestive Functions Study
The Aerodigestive study is a collaboration with the Purdue Motor Speech Lab (PI: Huber). The purpose of this study is to examine the relationship between the swallowing, and speech subsystems in both healthy young and older adults.

**Participants**
- Young adults aged 20-35 years and older adults aged 60-85 years.

**Compensation**
- $25 for Session 1
- $20 for Session 2

**Contact**
- snyder33@purdue.edu
- or (765) 494-6488

### Flavors Study
In collaboration with the Purdue Saliva, Perception, Ingestion and Tongues (SPIT) Lab (PI: Running) we explore flavors that may improve swallowing function.

**Participants**
- Patients with Parkinson disease, MCI, or Alzheimer disease >65 years of age

**Compensation**
- $20 for Session 1
- $20 for Session 2

**Contact**
- purduespit@gmail.com
- or (765) 496-3607

### Support Our Research
We always welcome donations that allow us to continue our high level research and clinical work. If you would like to donate, please contact us at swallowinglab@purdue.edu. Thank you!
The I-EaT Clinic

The Purdue I-EaT Clinic serves adult and pediatric patients with difficulties in swallowing (also known as dysphagia) that may have occurred, for example, as a result of a stroke, traumatic brain injury, treatment for head and neck cancer, or because of disorders/diseases such as Parkinson disease, cerebral palsy, inflammatory myopathies, multiple sclerosis, etc.

The in-house clinic features cutting-edge assessment and treatment equipment. Our clinical faculty include one of the best multidisciplinary teams of dysphagia experts in the state.

2019 I-EaT Clinic Updates

The Purdue I-EaT Clinic is led by our Clinical Director and Board Certified Specialist in Swallowing and Swallowing Disorders, Jaime Bauer Malandraki.

Here are some of our 2019 clinic updates:

- We provided comprehensive evaluations to more than 16 new patients and provided ongoing treatment to several of them.
- We conducted three free Interprofessional Health and Wellness Screening events for older adults in collaboration with the Nursing Center for Family Health.
- The Purdue I-EaT Clinic has been preparing for a medical SLP study abroad program in Greece in May 2020!

Purdue University's Dysphagia Study Group

Our lab is committed to serving the community by creating a support network for local clinicians. In the Purdue Dysphagia Study Group, clinicians are welcome to join discussions about clinical cases, recent research findings, and hot topics in dysphagia. To learn more, please contact the facilitators: Jaime Bauer-Malandraki and Dawn Wetzel.

Email: PurdueDysphagiaGroup@gmail.com.

Scan the code to access the clinic website!
About Our Team

Current Lab Team

**Director:**
Georgia A. Malandraki, PhD

**Core Doctoral Students:**
Rachel Arkenberg, MS
Carey Smith, MS

**Doc Students co-Mentored:**
Shie Kantor, MS
Anny Alvar, MS

**Research Associate:**
Barb Brown, MS, CCC-SLP

**Master's Student:**
Samantha Mitchell, BS

**Undergraduate Students:**
Jennine Bryan
Mackenzie Zorn
Nicole DeJong
Caroline Sarbieski

Additional 2019 Highlights
- Our first PhD student, Cagla Kantarcigil, graduated in 2019! Congratulations Dr. Kantarcigil!
- Dr. Malandraki joined the faculty of the Weldon School of Biomedical Engineering with a courtesy appointment.
- Dr. Malandraki became a faculty associate of the Purdue Center for Aging and Life Course and a core member of the new Purdue Mi-Bio team!

Newest Additions
This year we welcomed three new core lab members: Rachel Arkenberg, Carey Smith, and Caroline Sarbieski. Rachel and Carey are Ph.D. students and Caroline is an undergraduate student in SLHS.

Recent Alumni: Where are they now?

- **Cagla Kantarcigil:** Cagla is now a postdoctoral research fellow at Northwestern University in Chicago.
- **Paige Cornillie:** Paige graduated with an MS in SLP from Purdue and now works as an SLP at Children’s Therapy Corner in Michigan.
- **Katie Bolte:** Katie graduated with a BS from Purdue and joined our Master’s program cohort.