# Curriculum Vitae Soha N. Garadat, Ph.D.

Professor of Audiology

Department of Audiology and Speech-Language pathology

A.T. Still University School of Osteopathic Medicine E-mail: s.garadat@ju.edu.jo

**CITIZENSHIP:** United States of America

#### **EDUCATION AND TRAINING**

| Institution  | Degree                     | Years     | Field of study                      | Mentor        |
|--|----------------------------|-----------|-------------------------------------|---------------|
| Kresge Hearing Research Institute,<br>University of Michigan, Ann<br>Arbor, MI | Postdoctoral<br>Fellowship | 2008-2011 | Psychophysics/<br>cochlear implants | Bryan Pfingst |
| University of Wisconsin-Madison,<br>Madison, WI                                | PhD                        | 2003-2007 | Audiology/physiology                | Ruth Litovsky |
| University of Wisconsin-Madison,<br>Madison, WI                                | MS                         | 2000-2002 | Audiology                           | NA            |
| Yarmouk University, Jordan   | B.A.                       | 1994-1998 | English language & literature       | NA            |

#### APPOINTMENT

- 01/2022- Present: Professor, Department of Hearing and Speech Sciences, The University of Jordan, Amman, Jordan.
- 12/2022- Present: Associate professor, A.T. Still University School of Osteopathic Medicine, AZ, USA.
- 2/2022- Present: Visiting scholar, Department Otolaryngology, University of Michigan, Ann Arbor, MI, USA.
- 1/2022-12/31/2022: Associate professor, School of Speech and Hearing Sciences, University of Southern Mississippi, MS, USA.
- 12/2015-12/2021: Associate professor, Department of Hearing and Speech Sciences, The University of Jordan, Amman, Jordan.
- 8/2017-8/2018: Visiting associate professor, Medical Audiology Sciences, American University of Beirut, Beirut, Lebanon.
- 4/2013-4/2018: Cochlear implant consultant, MED-EL, Innsbruck, Austria.
- 9/2011-11/2015: Assistant professor, Department of Hearing and Speech Sciences, The University of Jordan, Amman, Jordan.
- 12/2007-7/2008: Research associate/ associate lecturer, Department of communicative disorders. University of Wisconsin-Madison, WI, USA.
- 2003-2007: Research project assistant, Waisman Center, University of Wisconsin-Madison, WI, USA.

#### ADMINISTRATIVE EXPERIENCE

9/2020- 9/2021: Chair, Department of Hearing and Speech Sciences, The University of Jordan, Amman, Jordan.

9/2013-8/2015: Chair, Department of Hearing and Speech Sciences, The University of Jordan, Amman, Jordan.

### **PUBLICATIONS**

# Peer-Reviewed (\*corresponding author)

- 1. **Garadat, S.\*** (2023). Development and beta testing of serious game-based auditory training application to enhance perceptual learning of speech in cochlear implant recipients. American Journal of Audiology, 11:1-13. doi: 10.1044/2023 AJA-22-00194.
- 2. **Garadat, S.\***, & Almasri, N. A. (2023). Translation, adaptation, and validation of the Arabic version of the meaningful auditory integration scale. Cochlear implants international, 24(1), 35–42. DOI: 10.1080/14670100.2022.2141417
- 3. Almasri, N. A., & **Garadat, S.** (2022). Psychometric properties of the Arabic version of the meaningful use of speech scale (Arabic MUSS). Disability and rehabilitation, 1–7. https://doi.org/10.1080/09638288.2022.2148299
- 4. **Garadat, S.\*,** Colesa, D., Swiderski, D., Raphael, Y., Pfingst, B. (2022). "Estimating health of the implanted cochlea using psychophysical strength-duration functions and electrode configuration". *Hearing Research*. 414, 1084044. doi: 10.1016/j.heares.2021.108404.
- 5. Alkharabsheh, A., Aboudi, O., Abdulbaqi, K., Garadat, S. (2023) "The effect of wearing face mask on speech intelligibility in listeners with sensorineural hearing loss and normal hearing sensitivity". *International Journal of Audiology*. 62(4):328-333. doi: 10.1080/14992027.2022.2045366.
- 6. **Garadat, S.\***, Alkharabsheh, A., Almasri, N., Hagr, A. (2021). "Pediatric Arabic closed-set word recognition test: Development and evaluation of psychometric characteristics". *Journal of the American Academy of Audiology*. 32(8): 547-554.
- 7. Yousef, M., Theyab, R., **Garadat, S.**, Hagr, A. (2021). "Bilateral cochlear implantations in temporal bone fracture: A viable treatment option". *Laryngoscope*. 132(10), 2050-2055. doi: 10.1002/lary.29994.
- 8. Almomani, F., AlMomani, M., **Garadat, S.**, Alqudah, S., Kassab, M., Hamadneh, S., Rauterkaus, G., Gans, R. (2021). "Cognitive functioning in deaf children using cochlear implant". *BMC Pediatrics*, 21(1): 71.
- 9. Yousef, M. Mesallam, T., **Garadat, S.**, Almasaad, A., Alzhrani, F., Alsanosi, A, Hagr, A. (2021). "Audiologic outcome of cochlear implantation in children with cochlear nerve deficiency". *Otology & Neurotology*, 42(1): 38-46.
- 10. Albalawi, Y., Nidami, M., Almohawas, F., Hagr, A., **Garadat, S.\*** (2019). "Categories of auditory performance and speech intelligibility ratings in prelingually deaf children with bilateral implantation." *American Journal of Audiology*, 28(1): 62-68.

11. Alzhrani, F., Alahmari, M., Al Jabr, I., **Garadat, S\*.,** Hagr, A. (2019). "Cochlear implantation in children with otitis media." *Indian Journal of Otolaryngology and Head & Neck Surgery*. 71(2): 1266-1271.

- 12. **Garadat**, S.\*, Abdul Baqui, K., Haj Tas, M. (2017). "The development of the University of Jordan speech word recognition." *International Journal of Audiology*. 56(6), 424-430.
- 13. Alrashidi, E., Almohawas, F. Hagr, A. **Garadat, S.\*** (2017). "The use of an illuminated retractor in cochlear implantation: A comparative retrospective study." *Annals of Saudi Medicine*. 37(2), 161-165.
- 14. Alzhrani, F., Mokhatrish, M., Al-Momani, M., Alsherhri, H., Hagr, A., **Garadat, S.\*** (2017). "Effectiveness of stapedotomy in improving hearing sensitivity for 53 otosclerotic patients: retrospective review." *Annals of Saudi Medicine*. 37(1), 499-505.
- 15. Hagr, A., **Garadat, S.\***, Hassan S, Malki, K., Al Ohali, Y., Al Ghamdi, N., Al Nafjan, A., Al Masaad, A., Al Hamid, S. (2016). "Effect of the Arabic computer rehabilitation program "Rannan" on sound detection and discrimination in children with cochlear implants". *Journal of the American Academy of Audiology*. 27(5): 380-7.
- 16. Pfingst, B., Zhou, N., Colesa, D., Watts, M., Strahl, S., Garadat, S., Schvartz-Leyzac, K., Budenz, C., Raphael, Y., Zwolan, T. (2015). "Importance of cochlear health for implant function." *Hearing Research*. 322, 77-88.
- 17. Hagr, A., **Garadat, S.\***, Al Mumani, M., Alsabellha, R., Almuhawas, FA. (2015). "Feasibility of one-day activation in cochlear implant recipients." *International Journal of Audiology*. 54(5), 323-8.
- 18. Alsabellha, R., Hagr, A., Al-Momani, M., **Garadat, S.\*** (2014). "Cochlear implant device activation and programming: 5 days postimplantation". *Otology & Neurotology*. 35(4), 130-4.
- 19. **Garadat, S.\***, Zwolan, T., Pfingst, B. (2013). "Using temporal modulation sensitivity to select stimulation sites for processor MAPs in cochlear implant listeners". *Audiology & Neurotology*. 18(4), 247-60.
- 20. Litovsky, R., Goupell, M., Godor, S., Grieco-Calub, T., Jones, G., **Garadat, S.**, Agrawal, S., Kan, A. Todd, A., Hess, C., Misurelli, S. (2012). "Studies on bilateral cochlear implants at the University of Wisconsin's Binaural Hearing and Speech Laboratory". *Journal of the American Academy of Audiology*. 23(6), 476-94.
- 21. **Garadat, S.**, Zwolan, T., Pfingst, B. (2012). "Across-site patterns of modulation detection: relation to speech recognition". *Journal of the Acoustical Society of America*. 131, 4030-4041.
- 22. Pfingst, B., Bowling, S., Colesa, D., **Garadat, S.**, Raphael, Y., Shibata, S., Strahl, S., Su, G., Zhou, N. (2011). "Cochlear infrastructure for electrical hearing". *Hearing Research*. 281, 65-73.
- 23. **Garadat**, S.\*, Pfingst, B. (2011). "Relationship between gap detection thresholds and loudness growth in cochlear implant users," *Hearing Research*. 275, 130-138.
- 24. **Garadat, S.**, Litovsky, R., Zeng, F-G. (2010). "Effect of simulated spectral holes on speech intelligibility and spatial release from masking under binaural and monaural listening" *Journal of the Acoustical Society of America*. 127, 977-989.

25. **Garadat**, S., Litovsky, R., Yu, G., Zeng, F-G. (2009). "Role of binaural hearing in speech intelligibility and spatial release from masking using vocoded speech," *Journal of the Acoustical Society of America*. 126, 2522-2535.

26. **Garadat, S.**, Litovsky, R. (2007). "Speech intelligibility in free field: Spatial unmasking in preschool children," *Journal of the Acoustical Society of America*. 121, 1047-1055.

## In preparation:

- 1. Garadat, S., Colesa, D., Swiderski, D., Jaradat, H., Raphael, Y., Pfingst, P. "Effect of Electrode Configuration on a Multipulse-integration Measure of Cochlear Health".
- 2. Jaradat, H., **Garadat**, **S.\*** "Current state of knowledge: Burden of unaddressed deafness and cost utility of cochlear implantation".
- 3. Almasri, N., Jaradat, H., Garadat, S. "Using the Pediatric Quality of Life Inventory (PedsQL) to assess the quality of life in children with cochlear implant".

#### Research Abstracts:

- 1. **Garadat, S.**, Colesa, D., Swiderski, D., Raphael, Y., Pfingst, B. Estimating cochlear health using phase duration and electrode configuration. 2021. Conference on implantable prosthesis.
- 2. Pfingst, B., Colesa, D., **Garadat, S.**, Swiderski, D., Raphael, Y. Detection thresholds and cochlear health-Effect of phase duration. 2021. Association for Research in Otolaryngology.
- 3. Pfingst, B., **Garadat, S.**, Zhou, N., Zwolan, T. Rehabilitation strategies based on across-site patterns of temporal acuity. 2013. Conference on Implantable Auditory Prostheses. Lake Tahoe, California, USA.
- 4. Pfingst, B., Raphael, Y., Colesa, D., Budenz, C., Watts, M., Su, G., Kabara, L., Strahl, S., Garadat, S., Zhou, N., Masterson, K. Effects of inner ear biology on cochlear implant function. 2012. Inner ear biology, Tubingen, Germany.
- 5. Pfingst, B., Raphael, Y., Colesa, D., Budenz, C., Watts, M., Su, G., Kabara, L., Strahl, S., **Garadat, S.**, Zhou, N., Masterson, K. In vivo assessment of the health of the implanted cochlea. 2012. Hearing preservation workshop. Toronto, Canada.
- 6. **Garadat, S.**, Zwolan, T., Pfingst, B. Speech recognition in cochlear implant users: Selection of sites of stimulation based on temporal modulation sensitivity. 2011. Conference on Implantable Auditory Prostheses.
- 7. **Garadat, S.**, Zwolan, T., Pfingst, B. Across-site patterns of modulation detection: relation to speech recognition. Association for Research in Otolaryngology. Abs. 213.
- 8. **Garadat, S.**, Thompson, C, Pfingst, B., 2010. Gap detection for pulsatile electrical stimulation: effect of carrier rate and stimulus level. Association for Research in Otolaryngology. Abs. 374.
- 9. **Garadat, S.**, Pfingst, B. Relation between temporal acuity and loudness growth in cochlear implant users. 2009. Conference on Implantable Auditory Prostheses. abs. A19.
- 10. **Garadat, S.**, Litovsky, R., Yu, G., Zeng, F-G., 2009. Effect of simulated spectral holes on speech intelligibility and spatial release from masking under binaural and monaural listening. Association for Research in Otolaryngology. Abs. 463.

11. **Garadat, S.**; Litovsky, R., Zeng, F-G, 2008. Cochlear implant modeling: Effect of spectral holes on speech intelligibility and spatial release from masking. Association for Research in Otolaryngology. Abs. 287.

- 12. **Garadat, S.**, Litovsky, R., Yu, G., Zeng, F-G., 2007. Effect of spectral holes on speech intelligibility and spatial release from masking. Conference on Implantable Auditory Prostheses (CIAP), Abs. 33.
- 13. **Garadat, S.**, Litovsky, R., Yu, G., Neader, S., Zeng, F-G., 2006. Speech recognition and spatial release from masking under binaural and monaural vocoder simulations with variable number of frequency bands. Association for Research in Otolaryngology. Abs. 715.
- 14. Yu, G., Litovsky, R., **Garadat, S.**, Vidal, C., Holmberg, R., Zeng, F-G., 2006. Localization and precedence effect in normal hearing listeners using a vocoder cochlear implant simulation. Association for Research in Otolaryngology. Abs. 660.
- 15. **Garadat, S.**, Litovsky, R., 2005. Methods for evaluating bilateral advantages in children with cochlear implants and/or hearing aids. Conference on Implantable Auditory Prostheses (CIAP), Abs. 18.
- 16. **Garadat**, **S.**, Litovsky, R., 2005. Speech unmasking in free field in preschool children. Association for Research in Otolaryngology. Abs. 754.
- 17. O'Brien, M., **Garadat**, **S.**, Litovsky, R., 2004. Auditory function in children in noisy environments. Presented in the Undergraduate Research Symposium at UW-Madison.

#### **PRESENTATIONS**

- Arab cochlear implant conference, Dubai, United Arab Emirates. (2018). Instructional course. Invited speaker.
- 2nd Arab hearing health conference, Amman, Jordan. (2014). "Cochlear implant device activation and programming: early fitting results", Invited speaker.
- International Communication Disorders, Audiology and Neuro/Otology, Riyadh, Saudi Arabia. (2013). "Using psychophysical measures to optimize processor MAPs in cochlear implant users", invited speaker.
- Conference on Implantable Auditory Prostheses, Pacific Grove, CA. (2011). "Selection of sites of stimulation based on temporal modulation sensitivity", invited speaker.
- University of Utah, Salt Lake City, Utah. "Across-site patterns of modulation detection: relation to speech recognition", invited speaker.
- Lawrence Hawkins lectures, University of Michigan-Ann Arbor.
- Hearing, Balance, and Chemical Senses Forum, University of Michigan-Ann Arbor.
- Communicative disorders professional seminar, University of Wisconsin-Madison.
- Hearing and Donuts seminar/physiology department, University of Wisconsin-Madison.

#### **SERVICE**

• 07- Present: Member, AuD admissions committee, A.T. Still University School of Osteopathic Medicine. Arizona.

- 1/2021- Present: Member, Flexi grant review panel- Royal National Institute for Deaf People (RNID), UK.
- 9/2021: Coordinating committee member, Second Arab cochlear implant conference/ Dubai.
- 2021-Present: Member, International advisory board of Saudi Journal of ORL-HNS.
- 2017-Present: Editorial board member, Cochlear Implant International.
- 2016-Present: Editorial board member, Canadian Journal of Speech Language Pathology and Audiology.
- 2016-2017: Member, Audiology Licensure Board/ Ministry of health, Amman, Jordan.
- Ad-hoc reviewer
  - Acoustical Society of America
  - Hearing Research Journal
  - Ear and Hearing
  - Journal of American Academy of Audiology
  - The International Journal of Audiology
  - Journal of the association for research in otolaryngology
  - Journal of Otology and Rhinology
  - Cochlear Implant International
  - Frontiers in Digital Health
  - Scientific reports, Springer Nature
- Served as a member and head on several committees for the higher education accreditation commission/ Ministry of higher education, Amman, Jordan.
- Member on several Tenure Review Committees (Faculty of rehabilitation, University of Jordan).
- Panel reviewer, University of Wisconsin-Madison Vilas Award, 2006.

#### RESEARCH SUPPORT AND FELLOWSHIPS

- 1/2023- 6/2023 Mississippi Council on Developmental Disabilities Funds "Advocacy training for parents of children with hearing loss" Co-investigator. Total award: \$25,000
- 2019-2021 Deanship of academic research. University of Jordan- Amman. "Development and validation of Arabic battery of outcome measures for pediatric cochlear implant recipients". Garadat (PI). Total award: \$22,500.
- 2013-2015 Scientific research support fund. "Cochlear implantation: Relation between electrically evoked compound action potential and speech perception in young children". Garadat (PI). Total award: \$78,832.

• 2013-2014: Deanship of academic research. University of Jordan- Amman. "Development of speech audiometry in Jordanian Arabic for adults". Garadat (PI). Total award: \$9,889.

- 2009-2011: Ruth L. Kirschstein National Research Service Award Individual Fellowship (F32) DC010310-01 "Across-site patterns of modulation detection: relation to speech recognition". Garadat (PI). Total award: \$97,264.
- 2008-2009: Ruth L. Kirschstein National Research Service Award Institutional Research Training Grant (T32) DC00011.
- Ruth L. Kirschstein National Research Service Award Individual Fellowship (F31) DC008461-01A1 "Effect of binaural synchrony and spectral holes on performance in CI listeners" Garadat (PI). Not funded.

## **AWARDS**

- 2011 ASHA lessons for Success, Developing the Emerging Scientist, Baltimore, MD.
- 2011 Travel award, The Association for Research in Otolaryngology, Baltimore, MD.
- 2007 Travel award, The Association for Research in Otolaryngology, Baltimore, MD.
- 2007 Vilas travel fellowship, University of Wisconsin-Madison.
- 2007 Scholarship, Conference on Implantable Auditory Prostheses, Lake Tahoe, California.
- 2006 Vilas travel fellowship, University of Wisconsin-Madison.
- 2006 Frederic A. Gruber Memorial Scholarship, Communicative Disorders Department/ University of Wisconsin-Madison.
- 2005 Vilas travel fellowship, University of Wisconsin-Madison.
- 2005 Scholarship, Conference on Implantable Auditory Prostheses, Pacific Grove-California.

#### TEACHING EXPERIENCE

- A.T. Still University School of Osteopathic Medicine:
  - AUDE6450-Implantable Hearing Devices
  - AUDE 6140-Pediatric audiology
  - AUDE 7330 Ethics in Audiology
  - AUDE 6220 Tinnitus Hyperacusis & Misophonia evaluation and treatment
- Courses taught at the University of Sothern Mississippi:
  - SHS 601 Designs in research for speech and hearing
  - SHS 621 Hearing aids I
  - SHS 791 Research in speech and hearing sciences
  - SHS 710 Audiologic rehabilitation in adults
  - SHS 622 Hearing aids II
  - SHS 701 seminar in psychoacoustics
  - SHS 736 Pharmacology application in audiology
- Courses taught at the American University of Beirut (2017-2018):
  - MAUD 202 Basic Audiological Procedures

- MAUD 203 Pediatric Audiology
- MAUD 204 Acoustics, Psychoacoustics & Instrumentation
- ORLG 220 Screening procedures lab
- ORLG 230 Basic clinical procedures
- ORLG 240 Advanced clinical procedures Lab
- Courses taught at the University of Jordan (2011- present):
  - 1804231 Introduction to Audiology
  - 1804433 Hearing Aids
  - 1804401 Introduction to Cochlear Implant
  - 1804734 Aural Rehabilitation
  - 1804354 Observation in Audiology
  - 1804351 Practicum in Audiology- I
  - 1804356 Practicum in Audiology- II
- Courses taught at the University of Wisconsin-Madison (2008)
  - Communicative Disorders 851, Hearing Science II: Advanced Topics in Hearing and Balance
  - Guest lecturer at several AuD classes
- Research co-monitor to several undergraduate and AuD students at the University of Wisconsin- Madison.

# **CLINICAL EXPERIENCE**

| 1/20 | 23-present | Licensed clinical and dispensing audiologist, AFA Balance and Hearing Institute, Mesa AZ, USA.  |
|------|------------|---|
| 8/20 | 17-8/2018  | Clinical educator, American University of Beirut Medical Center, Beirut, Lebanon.   |
| 5/20 | 02-12/2002 | Intern, Dean Medical Center/Madison-Wisconsin: provided audiological evaluation; fitted and verified hearing aids.  |
| 9/20 | 01-4/2002  | Intern, Waisman Center/Central Wisconsin Center/UW clinic: Provided audiological evaluation (pure tone and otoacoustic emissions) for special need adult and pediatric populations.   |
| 12/2 | 000-5/2001 | Intern, Deaf Hearing and Sign Language Center/Detroit, MI: provided audiological evaluation; performed real ear measurements; fitted and verified hearing aids; and participated in community hearing screening and counseling. |

# **Professional Licensure & affiliations:**

- Dispensing audiologist in the State of Arizona, current.
- American Academy of Audiology- Member, current.