

**SUSAN FAGER, PH.D., C.C.C.-S.L.P.**

**Director, Communication Center, Speech-Language Pathologist**

**Email:** sfager@madonna.org

**Phone:** 402.413.4506

**Office:**

Institute for Rehabilitation Science and Engineering, Room 6008

**Mailing Address:**

Institute for Rehabilitation Science and Engineering  
Madonna Rehabilitation Hospital  
5401 South Street  
Lincoln, NE 68506

**Education**

Ph.D. in Augmentative and Alternative Communication and Motor Speech Disorders (2008), University of Nebraska-Lincoln

M.S. Speech-Language Pathology (1997), University of Nebraska-Lincoln

B.S. (1995), University of Nebraska-Lincoln

**SELECTED ARTICLES AND BOOK CHAPTERS**

Cler MJ, Nieto-Castanon A, Guenther FH, Fager S, & Stepp CE (2016). Surface electromyographic control of a novel phonemic interface for speech synthesis. *Augmentative and Alternative Communication*, In press.

Fager SK, & Burnfield JM (2015). Speech recognition for environmental control: Effect of microphone type, dysarthria, and severity on recognition results. *Assistive Technology*, 27(4), 199-207.

Beukelman D, Gillespie L, Fager S (2013). Perceived attention allocation of listeners who transcribe the speech of speakers with traumatic brain injury. *Journal of Medical Speech Language Pathology*.

Koch Fager S, Burnfield JM (2013). Patients' experiences with technology during inpatient rehabilitation: opportunities to support independence and therapeutic engagement. Published online ahead of print, *Disability and Rehabilitation: Assistive Technology*.

Ball L, Fager S, Fried-Oken M (2012). Augmentative and alternative communication for people with progressive neuromuscular disease. *Physical Medicine and Rehabilitation Clinics of North America*, 23(3), 689-600.

Maeder McCarthy, J., Fager, S., Collins, K. & Beukelman, D. (2012). Representation of potential communication items in medical settings: An intervention note. *Augmentative and Alternative Communication*, 28(3), 190-195.

Fager, S., Bardach, L., Russell, S., & Higginbotham, J. (2012). Access to augmentative and alternative communication: New technologies and clinical decision-making. *Journal of Pediatric Rehabilitation Medicine*, 5, 53-61.

Fager, S., Beukelman, D., Fried-Oken, M., Jakobs, T., & Baker, J. (2012). Access interface strategies. *Assistive Technology*, 24, 25-33.

Fager, S., & Spellman, C. (2011). Augmentative and alternative communication intervention in children with traumatic brain injury and spinal cord injury. *Journal of Pediatric Rehabilitation Medicine*, 3, 269-277.

Beukelman, D., Fager, S., & Nordness, A. (2011). Communication support for people with ALS. *Neurology Research International*, Article ID 714693, 6 pages.

Fager, S., & Karantounis, R. (2011). AAC assessment and intervention in TBI. In K. Hux (Ed.). *Assisting survivors of traumatic brain injury*, 2nd Edition. (pp. 227-254), Austin, TX: Pro-ed.

Fager, S., Beukelman, D., Jakobs, T., & Hosom, J.P. (2010). Evaluation of a speech recognition prototype for speakers with moderate and severe dysarthria: A preliminary report. *Augmentative and Alternative Communication*, 26, 267-277.

Ball, L., Nordness, A., Fager, S., Kersch, K., Pattee, G., & Beukelman, D. (2010). Eye gaze access of AAC technology for persons with amyotrophic lateral sclerosis. *Journal of Medical Speech Language Pathology*, 18,11-23.

Nordness, A., Ball, L., Fager, S., Beukelman, D., & Patte, G. (2010). Late AAC Assessment for Individuals with Amyotrophic Lateral Sclerosis. *Journal of Medical Speech Language Pathology*, 18(1), 48-54.

Fager, S., & Spellman, C. (2011- in press). Augmentative and alternative communication intervention in children with traumatic brain injury and spinal cord injury. *Journal of Pediatric Rehabilitation Medicine*.

Fager, S., & Karantounis, R. (2010-accepted). AAC assessment and interventions in TBI. In K. Hux (Ed.). *Assisting survivors of traumatic brain injury*, 2nd Edition.(pp. 227-254), Austin, TX: Pro-ed.

Beukelman, D.R., Ball, L.J., & Fager, S. (2008). An AAC personnel framework: Adults with acquired complex communication needs. *Augmentative and Alternative Communication*, 24, 254-266.

Yorkston, K. M., Hakel, M., Beukelman, D. R., & Fager, S. (2008). Evidence for effectiveness of treatment of loudness, rate or prosody in dysarthria: A systematic review. *Journal of Medical Speech-Language Pathology*.

Beukelman, D., Fager, S., Ball, L., & Dietz, A. (2007). AAC for adults with acquired neurological conditions. *Augmentative and Alternative Communication*, 23, 230-242.

Fager, S.K., Doyle, M., & Karantounis, R. (2007). Traumatic brain injury. In Beukelman, D.R., Garrett, K.L., & Yorkston, K.M. Eds.), *Augmentative communication strategies for adults with acute or chronic medical conditions* (pp. 131-162). Baltimore: Brookes Publishing.

Culp, D., Beukelman, D.R., & Fager, S.K. (2007). Brainstem Impairment. In Beukelman, D.R., Garrett, K.L., & Yorkston, K.M. Eds.), *Augmentative communication strategies for adults with acute or chronic medical conditions* (pp. 59-90). Baltimore: Brookes Publishing.

Fager, S., Beukelman, D., Karantounis, R., and Jakobs, T. (2006). Use of Safe-Laser Access Technology to Train Head Movement in Persons with Severe Motor Impairment: A Series of Case Reports. *Augmentative and Alternative Communication*, 22 , 222-229.

Fager, S., Hux, K., Karantounis, R., & Beukelman, D. (2006). Augmentative and Alternative Communication Use and Acceptance by Adults with Traumatic Brain Injury. *Augmentative and Alternative Communication*, 22 , 37-47.

Fager, S. K., Green, J.R., Nip, I., & Hakel, M. (2006). Facial Kinematics of a Speaker with a Palatal Lift Following Brainstem Impairment. *Journal of Medical Speech-Language Pathology*, 14 (4), 235-240.

Beukelman, D., Hanson, E., Hiatt, E., Fager, S., & Bilyeu, D. (2005). AAC Technology Learning Part 3: Regular AAC Team Members. *Augmentative and Alternative Communication*, 21(3), 187-194.

Fager, S. & Beukelman, D.R. (2005). Individuals with Traumatic Brain Injury. In D.R. Beukelman & P. Mirenda (Eds.), *Augmentative and Alternative Communication: Supporting Children & Adults with Complex Communication Needs* (pp. 517-531). Baltimore, MA: Paul Brookes Publishing Co., Inc.

Hanson, E., Beukelman, D.R., Fager, S., & Ullman, C. (2004). Listener Attitudes Toward Speech Supplementation Strategies Used by Speakers with Dysarthria. *Journal of Medical Speech-Language Pathology*, 12 (4), 161-166.

Hakel, M., Fager, S., Beukelman, D.R., Green, J., & Marshall, J. (2004). Nasal Obturator for Velopharyngeal Dysfunction in Dysarthria: Technical Report on a One-Way Valve. *Journal of Medical Speech-Language Pathology*, 12(4), 155-159.

## SELECTED PRESENTATIONS

Fager S, Carrell T, & Beukelman DR (2016). Computer speech practice for dysarthria in early and late post-onset TBI.9th World Congress on NeuroRehabilitation, Philadelphia, PA. Presented May 12, 2016.

Light J, Fried-Oken M, McNaughton D, Jakobs T, Fager S, & Beukelman DR (2016). RERC on AAC: Overview of research, development, and training objectives. Assistive Technology Industry Association's annual convention. Presented February 4, 2016.

Fager SK, Beukelman DR, & Jakobs T (2015). Integrating speech recognition into AAC technology. American Speech Language Hearing Association's annual convention, Denver, CO. Presented November 12, 2015.

Fager SK, Beukelman DR, & Jakobs T (2015). Integrating speech recognition into AAC technology. Assistive Technology Industry Association's annual convention, Orlando, FL. Presented January 29, 2015.

Fager SK (2015). AT outcomes: Industry perspectives on data collection(Invited panelist). Assistive Technology Industry Association's annual convention, Orlando, FL. Presented January 29, 2015.

Fager S, Beukelman DR, Carrell T, Bates S, Dinslage T (2014). Speech recognition as a practice tool for a speaker with TBI and dysarthria.International Conference on Motor Speech Disorders, Sarasota, FL.

Fager S, Beukelman D, Carrell T, Dinslage T, & Bates S (2013). Speech recognition as a speech practice tool for dysarthria.American Speech Language Hearing Association's annual convention, Chicago, IL.

Ball L, & Fager S (2013).AAC for individuals with neuromuscular disease(Invited presentation). American Speech Language and Hearing Association's annual convention, Chicago, IL.

Fager S, & Garrett K (2013). Stimulation, structured, and compensatory AAC interventions for severe brain injury(Invited presentation). Pennsylvania Speech Language and Hearing Association's annual convention. Harrisburg, PA. Presented April 5, 2013.

Beukelman DR, Fager S, King J, & Hu K (2013). AAC for adults with acquired neurological conditions: Today & tomorrow (Invited presentation). American Speech Language and Hearing association's annual convention. Atlanta, GA. Presented November 16, 2012.

Fager S, Beukelman D, & Jakobs T. Simplifying AAC for patients with critical medical conditions: Safe-laser keyboard and speech buttons. , Presented at the International Society of Augmentative and Alternative Communication 2012 in Pittsburgh, PA.

Fager S, Beukelman D, Jakobs T, & Hosom JP. Supplemented speech recognition for dysarthria: Evaluation of phase 2 prototype. , International Society of Augmentative and Alternative Communication 2012 in Pittsburgh, PA.

Fager S, Ledoux J, & Beukelman D. Evaluating preferred AAC strategies for patients in longer-term health care

hospitals. , International Society of Augmentative and Alternative Communication 2012 in Pittsburgh, PA.

Fager, S., Beukelman, D., Jakobs, T., & Hosom, P. Supplemented Speech Recognition for Dysarthria. Presented at the Conference on Motor Speech 2012 in Santa Rosa, CA.

Fager, S., Beukelman, D., Jakobs, T., & Hosom, P. Supplemented speech recognition for individuals with dysarthria. American Speech Language and Hearing Association Annual Convention 2011 in San Diego, CA.

Fager, S. New access technology for individuals with severe physical limitations using AAC. American College of Rehab Medicine 2011 in Atlanta, GA.

Fager, S., & Rodgers, K. Continuum of Communication Options in ALS. Nebraska Speech Language Hearing Association's Annual Convention 2011 in Kearney, NE.

Fager, S. Transitioning to eye gaze access. Presented at RESNA's Annual Convention 2011 in Toronto.

Garrett, K., Karantounis, R., & Fager, S. Communication interventions for individuals with severe-profound brain injuries. Presented at the American Speech Language Hearing Associations Annual Convention 2010 in Philadelphia, PA.

Fager, S., Beukelman, D., Jakobs, T., & Ewing, B. Simplifying AAC for people with critical medical conditions. Presented at the American Speech Language Hearing Associations Annual Convention 2010 in Philadelphia, PA.

Fager, S., Beukelman, D., Jakobs, T., Ternus, T., & Schley, H. New AAC access strategy: Gesture-enhanced word prediction. Presented at the American Speech Language Hearing Associations Annual Convention 2010 in Philadelphia, PA

Fager, S. Management of motor speech disorders in adults. Presented at the South Dakota Speech, Language, and Hearing Association Annual Conference 2010.

Hosom, J.P., Jakobs, T., Baker, A., & Fager, S. Automatic Speech Recognition for Assistive Writing in Speech Supplemented Word Prediction. Presented at InterSpeech 2010 in Makuhari, Japan.

Fager, S., Beukelman, D., Jakobs, T., & Hosom, P. Supplemented Speech Recognition for Individuals with Dysarthria: Preliminary Results. Presented at RESNA's annual convention 2010 in Las Vegas.

Fager, S., Beukelman, D., & Jakobs, T. Duration and Variability in Speakers with Dysarthria and Traumatic Brain Injury Presented at the Conference on Motor Speech 2010 in Savannah.

Fager, S., Jakobs, T., & Beukelman, D. Supporting Communication of Individuals with Minimal Movement. Presented at ATIA's annual convention 2010 in Orlando.

Fager, S., Beukelman, D.R., & Jakobs, T. Supporting Communication of Individuals with Minimal Movement. Presented at RESNA's annual convention 2009 in New Orleans.

Fager, S.K., Beukelman, D.R., Jakobs, T.E., & Ullman, C. Duration and Variability of Dysarthric Speech in TBI. Presented at the American Speech Language Hearing Association national convention 2008 in Chicago.

Nordness, A., Ball, L., Fager, S., & Beukelman, D. Identifying Factors Affecting Delayed AAC Referrals for Individuals with ALS. Presented at the American Speech Language Hearing Association national convention 2008 in Chicago.

McCarthy, J., Fager, S., & Beukelman, D.R. Dynamic Capture & Representation of Visual Content in Medical Settings. Presented at the American Speech Language Hearing Association national convention 2008 in Chicago.

Fager, S., Beukelman, D.R., Jakobs, T. Head Tracking for Persons with Minimal Movement: A Case Study. Presented at the American Speech Language Hearing Association national convention 2007 in Boston, MA.

Fager, S., Beukelman, D.R., Jakobs, T. Augmented Speech Recognition for Severe Dysarthria- Initial Pilot Study Results. Presented at the American Speech Language Hearing Association national convention 2007 in Boston, MA.

Fager, S., Beukelman, D.R., Culp, D. Brainstem Impairment: Supporting Communication at all Stages of Recovery. Presented at the American Speech Language Hearing Association national convention 2007 in Boston, MA.

Fager, S. AAC for persons with Brainstem Impairment. Presented at the American Speech Language Hearing Association national convention 2006 in Miami, FL.

Fager, S., Green, J., Beukelman, D.R., Hakel, M. Facial Kinematics of Speaker With Palatal Lift Following Brainstem Impairment. Presented at the Conference on Motor Speech Disorders 2006 in Austin, TX.

Fager, S., Beukelman, D.R., Karantounis, R., Jakobs, T. Use of Safe-Laser

Technology to Train Head Movement in LIS. Presented at the American Speech Language Hearing Association national convention 2005 in San Diego, CA.

Fager, S., Green, J., Beukelman, D.R., Hakel, M. Facial Kinematics of Speaker With Palatal Lift Following Brainstem Impairment. Presented at the American Speech Language Hearing Association national convention 2005 in San Diego, CA.

Fager, S., Green, J., & Beukelman, D., Orofacial Kinematics in a Complex Clinical Presentation. Presented at the American Speech-Language Hearing Association national convention 2004 in Philadelphia, PA.

Fager, S., Hux, K., & Beukelman, D. AAC Acceptance and Use with 25 Adults with TBI. Presented at the American Speech-Language Hearing Association national convention 2004 in Philadelphia, PA.

Fager, S., Hux, K., Karantounis, R. & Beukelman, D. AAC Acceptance and Use for Persons with TBI. Presented at the Nebraska Speech, Language, Hearing Association, October, 2004.

Fager, S., Beukelman, D., & Jakobs, T. (2004). Safe Laser Access System: An innovative AAC treatment option for LIS. Presented at the Nebraska Speech, Language, Hearing Association, October, 2004.

Hanson, L., Beukelman, D., Fager, S., & Ullman, C. (2004). Listener attitudes toward speech supplementation strategies used by survivors of TBI. Presented at the Speech Motor Control Conference, March, 2004.

Hakel, M., Beukelman, D., Fager, S., Green, J., & Marshall, J. (2004). Nasal Obturation for velopharyngeal dysfunction in dysarthria: Technical report on a one-way valve. Presented at the Speech Motor Control Conference, March, 2004.

Fager, S., Beukelman, D., & Ball, L. New AAC Interfaces. Presented at the American Speech-Language Hearing Association national convention 2003 in Chicago, IL.

Fager, S. Transitional Issues in TBI and AAC. Presented at the American Speech-Language Hearing Association national convention 2003 in Chicago, IL.

Fager, S. AAC Intervention in Severe TBI. Presented at the Nebraska AAC Conference 2003 at Mahoney State Park, Nebraska.

Fager, S., Beukelman, D. & Hakel, M. Communication Intervention for Persons with Brainstem Involvement. Pre-

sented at the American Speech-Language Hearing Association national convention 2002 in Atlanta, Georgia.

Beukelman, D., Fager, S., & Jakobs, T. Voice Access System- Using Residual Speech Sounds to Control Assistive Technology. Presented at the American Speech-Language Hearing Association national convention 2002 in Atlanta, Georgia.