

## IM RESEARCH REFERENCES

1. Alpiner, Neal. (2004). The role of functional MRI in defining auditory-motor processing networks. White paper presented at 65th Annual American Physical Medicine and Rehabilitation Conference, Phoenix, AZ.
2. Bartscherer, P. M., & Dole, P. E. (2005). Interactive Metronome training for a 9-year-old boy with attention and motor coordination difficulties. *Physiotherapy Theory and Practice*, 257-269.
3. Beckelhimer, S. C., Dalton, A. E., Richter, C. A., Hermann, V., & Page, S. J. (2011). Brief Report Computer-based rhythm and timing training in severe, stroke-induced arm hemiparesis. *American Journal of Occupational Therapy*, 65, 96-100.
4. Burpee, J., DeJean, V., Frick, S., Kawar, M., Koomar, M., Fischer, D.M. (2001). Theoretical and clinical perspectives on the Interactive Metronome (IM): A view from a clinical occupational therapy practice. *American Journal of Occupational Therapy*, 55(2), 163-166.
5. Cason, C. (2003). Learning problems and the left behind. White paper presented at the National Association of Elementary School Principals, Anaheim, CA.
6. Diamond, S. J. (2003). Processing speed and motor planning: the scientific background to the skills trained by Interactive Metronome technology. Unpublished white paper. Interactive Metronome.
7. Etra, J.L. (2006). The Effect of Interactive Metronome Training on Children's SCAN-C Scores. Nova Southeastern University. An Applied Dissertation Submitted to the Fischler School of Education and Human Services in Partial Fulfillment of the Requirements for the Degree of Doctor of Speech-Language Pathology.
8. Gorman, Patrick. (2003). Interactive Metronome- Underlying neurocognitive correlates of effectiveness. Unpublished white paper. Interactive Metronome.
9. Jacokes, Lee E. (2003). Pathways Center final statistical analysis. Unpublished white Paper. Pathway Learning Center, Chicago, IL, Interactive Metronome.
10. Jacokes, Lee E. (2003). Interactive metronome performance training of St. Thomas Aquinas high school. Unpublished white paper. Interactive Metronome.
11. Jones, LorRaine. (2004). Improving motor planning and sequencing to improve outcomes in speech and language therapy. 83rd Annual American Speech and Hearing Association, New Orleans, LA.
12. Kuhlman, Kristyn, Schweinhart, Lawrence J. (2002). Timing in child development. High/Scope Educational Research Foundation, Ypsilanti, MI: High/Scope Press.
13. Leisman, G. & Melillo, R. (2010). Effects of motor sequence training on attentional performance. *International Journal on Disability and Human Development* 9(4), 275-282.
14. Libkuman, T.M. & Otani, H. (2002). Training in timing improves accuracy in golf. *Journal of General Psychology*, 129(1), 77-96.
15. McGrew, K.S., Taub, G., Keith, T.Z. (2007). Improvements in interval time tracking and effects on reading achievement. *Psychology in the Schools*, 44(8), 849-863.
16. Nelson, L.A., MacDonald, M., Stall, C., & Pazdan, R. (2013, September 23). Effects of Interactive Metronome Therapy on Cognitive Functioning After Blast-Related Brain Injury: A Randomized Controlled Pilot Trial. *Neuropsychology*. Advance online publication. doi: 10.1037/a0034117.
17. Ritter, M., Colson, K.A., & Park, J. (2012). Reading Intervention Using Interactive Metronome in Children With Language and Reading Impairment: A Preliminary Investigation. *Communication Disorders Quarterly*, Published online September 28, 2012. <http://cdq.sagepub.com/content/early/2012/09/24/1525740112456422>
18. Sabado, J.J. & Fuller, D.R. (2008). A Preliminary Study of the Effects of Interactive Metronome Training on the Language Skills of an Adolescent Female With a Language Learning Disorder. *Contemporary Issues in Communication Science and Disorders*, 35, 65-71.
19. Shaffer, R. J., Jacokes, L.E., Cassily, J.F., Greenspan, S.I., Tuchman, R.F., & Stemmer Jr., P.J. (2001). Effect of Interactive Metronome rhythmicity training on children with ADHD. *American Journal of Occupational Therapy*, 55(2), 155-162.
20. Sommer, Marius and Ronnqvist, Louise. Improved motor-timing: effects of synchronized metronome training on golf shot accuracy. Department of Psychology, Umea University, Umea, Sweden. *Journal of Sports Science and Medicine* (2009) 8, 648-656.
21. Trujillo, L.G. (2013). A Collective Review of Completed Research Projects Evaluating the Effectiveness of the Interactive Metronome as an Occupational Therapy Intervention PO 5052. White paper presented at 2013 American Occupational Therapy Association Conference.

## SUPPORTING RESEARCH REFERENCES

1. American Associates, Ben-Gurion University of the Negev (2010, May 3). Hand-clapping songs improve motor and cognitive skills, research shows. *ScienceDaily*. Retrieved January 8, 2013, from <http://www.sciencedaily.com/releases/2010/04/100428090954.htm>
2. Ackerman, P. L., Beier, M. E., & Boyle, M. O. (2005). Working memory and intelligence: The same or different constructs? *Psychological Bulletin*, 131(1), 30-60.
3. Bank, P.J.M., Roerdink, M., & Peper, C.E. (2011). Comparing the efficacy of metronome beeps and stepping stones to adjust gait: steps to follow! *Experimental Brain Research*, 209, 159-169.
4. Barrett, L.F., Tugade, M.M., and Engle, R. (2004). Individual differences in working memory capacity and dual-process theories of the mind. *Psychological Bulletin*, 130(4), 553-573.
5. Baudouin, A., Vanneste, S., Isingrini, M., and Pouthas, V. (2006). Differential involvement of internal clock and working memory in the production and reproduction of duration: A study on older adults. *Acta Psychologica*, 121, 285-296.
6. Beauchet, O., Dubost, V., Aminian, K. et al. (2005). Dual-task-related gait changes in the elderly: Does the type of cognitive task matter? *Journal of Motor Behavior*, 37, 259-264.
7. Bedard, P. & Sanes, J.N. (2011). Basal ganglia-dependent processes in recalling learned visual-motor adaptations. *Experimental Brain Research*, 209, 385-393.
8. Ben-Pazi, H., Shalev, R.S., Gross-Tsur, V. and Bergman, H. (2006). Age and medication effects on rhythmic responses in ADHD: Possible oscillatory mechanisms? *Neuropsychologia*, 44, 412-416.
9. Ben-Shakhar, G. and Sheffer, L. (2001). The relationship between the ability to divide attention and standard measures of general cognitive abilities. *Intelligence*, 29: 293-306.
10. Bengtsson, S.L., Ullén, F., Ehrsson, H.H., Hashimoto, T., Kito, T., Naito, E., Forsberg, H., & Sadato, N. (2009). Listening to rhythms activates motor and premotor cortices. *Cortex*, 45, 62-71.
11. Bergeson, T.R. and Trehub, S.E. (2006). Infants' perception of rhythmic patterns. *Music Perception*, 23(4), 345-360.
12. Boets, B., Wouters, J, van Wieringen, A, and Ghesquiere, P. (2007). Auditory processing, speech perception and phonological ability in pre-school children at high-risk for dyslexia: A longitudinal study of the auditory temporal processing theory. *Neuropsychologia*, 45, 1608-1620.
13. Botzung, A., Denkova, E., and Manning, L. (2008). Experiencing past and future personal events: Functional neuroimaging evidence on the neural bases of mental time travel. *Brain and Cognition*, 66, 202-212.
14. Breier, J.I., Fletcher, J.M., Foorman, B.R., Klaas, P., and Gray, L.C. (2003). Auditory Temporal Processing in Children with Specific Reading Disability With and Without Attention Deficit/Hyperactivity Disorder. University of Texas, Houston. *Journal of Speech, Language, and Hearing Research*, 46, 31-42.
15. Bressler, S. L., & Menon, V. (2010). Large-scale brain networks in cognition: Emerging methods and principles. *Trends in Cognitive Sciences*, 14(6), 277-290.
16. Brewer, J. A., Worhunsky, P. D., Gray, J. R., Tang, Y., Weber, J., & Kober, H. (2011). Meditation experience associated with differences in default mode network activity and connectivity. *Proceedings of the National Academy of Sciences*, 108 (50), 20254-20259.
17. Brandler, S., & Rammsayer, T. H. (2003). Differences in mental abilities between musicians and non-musicians. *Psychology of Music*, 31(2), 123-138.
18. Buhusi, C., & Meck, W. (2005). What makes us tick? Functional and neural mechanisms of interval timing. *Nature Reviews: Neuroscience*, 6, 755-765.
19. Buonomano, D., & Karmarkar, U. (2002). How do we tell time? *Neuroscientist*, 8(1), 42-51.
20. Bush, G. (2010). Attention-deficity/hyperactivity disorder and attention networks. *Neuropsychopharmacology Reviews*, 35, 278-300.
21. Casey, B.J. and Durston, S. (2006). From Behavior to Cognition to the Brain and Back: What Have We Learned from Functional Imaging Studies of Attention Deficit Hyperactivity Disorder? *American Journal of Psychiatry*, 163, 6.
22. Castellanos, F. X., & Proal, E. (2012). Large-scale brain systems in ADHD: Beyond the prefrontal-striatal model. *Trends in Cognitive Sciences*, 16(1), 17-26.
23. Chabris, C.F. (2006). *Cognitive and Neurobiological Mechanisms of the Law of General Intelligence*. Integrating the Mind. Hove, UK: Psychological Press.
24. Chiappe, D., & MacDonald, K. (2005). The evolution of domain-general mechanisms in intelligence and learning. *The Journal of General Psychology*, 132(1), 5-40.

25. Chen, H.C., Schultz, A.B., Ashton-Miller, J.A. et al. (1996). Stepping over obstacles: Dividing attention impairs performance of old more than young adults. *Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, 51 (A), 116–122.
26. Chuderski, A., & Necka, E. (2012). The contribution of working memory to fluid reasoning: Capacity, control, or both? *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 38(6), 1689-1710.
27. Chun, M. M., Golomb, J. D., & Turk-Browne, N. B. (2011). A taxonomy of external and internal attention. *Annual Review of Psychology*, 62, 73-101.
28. Cole, M. W., Yarkoni, T., Repovš, Anticevic, & Braver, T. S. (2012). Global connectivity of prefrontal cortex predicts cognitive control and intelligence. *The Journal of Neuroscience*, 32(26), 8988-8999.
29. Colflesh, J.H. & Conway, R.A. (2007). Individual differences in working memory capacity and divided attention in dichotic listening. *Bulletin & Review*, 14(4), 699-703.
30. Colom, R., Haier, R. J., Head, K., Alvarez-Linera, J., Quiroga, M. A., Shih, P. C., & Jung, R. E. (2009). Gray matter correlates of fluid, crystallized, and spatial intelligence: Testing the P-FIT model. *Intelligence*, 37(2), 124-135.
31. Colom, R., Rebello, I., Palacios, A., Juan-Espinosa, & Kyllonen, P. C. (2004). Working memory is (almost) perfectly predicted by *g*. *Intelligence*, 32, 277-296.
32. Conway, Andrew R.A., Kane, M.J., and Engle, R.W. (2003). Working memory capacity and its relation to general intelligence. *Trends in Cognitive Sciences*, 7(12), 547-552.
33. Conway, Andrew R.A., Kane, M.J., Bunting, M.F., Hambrick, D. Zach, Wilhelm, O., and Engle, R.W. (2005). Working memory span tasks: A methodological review and user's guide. *Bulletin & Review*, 12(5), 769-786.
34. Deary, I. J. (2012). Intelligence. *Annual Review of Psychology*, (63), 453-482.
35. Deary, I. J., Penke, L., & Johnson, W. (2010). The neuroscience of human intelligence differences. *Nature Reviews: Neuroscience*, 11, 201-211.
36. de Cheveigne, A. (2003). Time-domain auditory processing of speech. *Journal of Phonetics*, 31, 547-561.
37. Delgado, M.L. & Droit-Volet, S. (2007). Testing the representation of time in reference memory in the bisection and the generalization task: The utility of a developmental approach. *The Quarterly Journal of Experimental Psychology*, 60(6), 820-836.
38. Droit-Volet, S. (2013). Time perception in children: A neurodevelopmental approach. *Neuropsychologia*, 51, 220-234.
39. Droit-Volet, S. & Wearden, J. (2002). Speeding up an internal clock in children? Effects of visual flicker on subjective duration. *The Quarterly Journal of Experimental Psychology*, 55B(3), 193-211.
40. Droit-Volet, S., Wearden, J., and Delgado-Yonger, M. (2007). Short-term memory for time in children and adults: A behavioral study and a model. *Journal of Experimental Child Psychology*, 97(4), 246-264.
41. Eck, D. and Scott, S.K. (2005). New research in rhythm perception and production. *Music Perception*, 22(3), 365-369.
42. Edwards, V.T., Giaschi, D.E., Dougherty, R.F., Edgell, D., Bjornson, B.H., Lyons, C., and Douglas, R.M. (2004). Psychological indexes of temporal processing abnormalities in children with developmental dyslexia. *Developmental Neuropsychology*, 25(3), 321-354.
43. Engle, R. W. (2002). Working memory capacity as executive attention. *Current Directions in Psychological Science*, 11, 19-23.
44. Engle, R.W., Tuholski, S.W., Laughlin, J.E., and Conway, Andrew R.A. (1999). Working memory, short-term memory, and general fluid intelligence: A latent-variable approach. *Journal of Experimental Psychology, General*, 128(3), 309-331.
45. Eysenck, M. W., & Derakshan, N. (2011). New perspectives in attentional control theory. *Personality and Individual Differences*, 50, 955-960.
46. Farmer, M.E. & Klein, R.M. (1995). The evidence for a temporal processing deficit linked to dyslexia: A review. *Psychonomic Bulletin & Review*, 2(4), 460-493.
47. Faulkner, K.A., Redfern, M.S., Cauley, J.A., et al. (2007). Multitasking: Association between poorer performance and a history of recurrent falls. *Journal of the American Geriatrics Society*, 55 (4), 570-576.
48. Field, D. T. & Groeger, J.A. (2004). Temporal interval production and short-term memory. *Perception & Psychophysics*, 66(5), 808-819.
49. Fink, A & Neubauer, A.C. (2005). Individual differences in time estimation related to cognitive ability, speed of information processing and working memory. *Intelligence*, 33, 5-26.
50. Fortin, C. (1999). Short-term memory time interval production. *International Journal of Psychology*, 34(5/6), 308-316.
51. Fortin, C., Champagne, J, and Poirier, M. (2007). Temporal order in memory and interval timing: An interference analysis. *Acta Psychologica*, 126(1), 18-33.

52. Gildea, D.L. and Marusich, L.R. (2009). Contraction of Time in Attention-Deficit Hyperactivity Disorder. *Neuropsychology*, 23(2), 265-269.
53. Gray, R (2011). Links between attention, performance pressure, and movement in skilled motor action. *Current Directions in Psychological Science*, 20(5), 301-306.
54. Hall, M.D. & Blasko, D.G. (2005). Attentional interference in judgments of musical timbre: Individual differences in working memory. *The Journal of General Psychology*, 132(1), 94-112.
55. Hardy SE, MD, Perera S, Roumani YF, Chandler JM, and Studenski SA (2007). Improvement in Usual Gait Speed Predicts Better Survival in Older Adults. *Journal of the American Geriatrics Society*, 55:1727–1734.
56. Hari, R. & Renvall, H. (2001). Impaired processing of rapid stimulus sequences in dyslexia. *Trends in Cognitive Sciences*, 5(12), 525-532.
57. Hausdorff, J., Lowenthal, J., Herman, T., Gruendlinger, L., Peretz, C., & Giladi, N. (2007). Rhythmic auditory stimulation modulates gait variability in Parkinson's disease. *European Journal of Neuroscience*, 26, 2369–2375.
58. Haier, R. J. (2009). Neuro-intelligence, neuro-metrics and the next phase of brain imaging studies. *Intelligence*, 27, 121-123.
59. Haldemann, J., Stauffer, C., Troche, S. & Rammsayer, T. (2012). Performance on auditory and visual temporal information processing is related to psychometric intelligence. *Personality and Individual Differences*, 52(1), 9-14.
60. Hall, M.D. and Blasko, D.G. (2005). Attentional interference in judgments of musical timbre: Individual differences in working memory. *The Journal of General Psychology*, 132(1), 94-112.
61. Harrison (Eds.), *Contemporary intellectual assessment. Theories, tests, and issues* (p.136-202). New York. Guilford Press.
62. Haslum, M.N. & Miles, T.R. (2007) Motor performance and dyslexia in a national cohort of 10-year-old children. *Dyslexia*, 13, 257-275.
63. Helmbold, N., Troche, S., & Rammsayer, T. (2006). Temporal information processing and pitch discrimination as predictors of general intelligence. *Canadian Journal of Experimental Psychology*, 60(4), 294-306.
64. Helmbold, N., Troche, S., & Rammsayer, T. (2007). Processing of temporal and nontemporal information as predictors of psychometric intelligence: A structural-equation-modeling approach. *Journal of Personality*, 75(5), 985-1006.
65. Hirsh, I.J. & Watson, C.S. (1996). Auditory psychophysics and perception. *Annual Review of Psychology*, 47, 461-484.
66. Houghton, S., Durkin, K., Ang, R.P., Taylor, M.F., and Brandtman, M. (2011). Measuring Temporal Self-Regulation in Children With and Without Attention Deficit Hyperactivity Disorder: Sense of Time in Everyday Contexts. *European Journal of Psychological Assessment*, 27(2), 88-94.
67. Huey, E. D., Kreger, F., & Grafman, J. (2006). Representations in the human prefrontal cortex. *Current Directions in Psychological Science*, 15(4), 167-171.
68. Hunt, E. (2011). *Human intelligence*. Cambridge, NY: Cambridge University Press.
69. Ivry, R., Diedrichsen, J., Spencer, R., Hazeltine, E., and Semien, A. (2004). *A cognitive neuroscience perspective on bimanual coordination and interference*. In S.P. Swinnen & J. Duysens (Eds.), *Neuro-Behavioral Determinants of Interlimb Coordination: A Multidisciplinary Approach* (Chapter 9). New York: Springer Publishing.
70. Janata P, Grafton ST. (2006). Swinging in the brain: Shared neural substrates for behaviors related to sequencing and music. *Nature Neuroscience*, 6, 682–687.
71. Jantzen, K.J., Oullier, O., Marshall, M., Steinberg, F.L., & Kelso, J.A.S. (2007). A parametric fMRI investigation of context effects in sensorimotor timing and coordination. *Neuropsychologia*, 45, 673-684.
72. Jensen, A. R. (1982). Reaction time and psychometric *g*. In H. J. Eysenck (Ed.), *A model for intelligence* (pp. 93-132). New York: Springer.
73. Jensen, A. R. (1998). *The g factor: The science of mental ability*. Westport, CT: Praeger.
74. Jensen, A. R. (2006). *Clocking the mind: Mental chronometry and individual differences*. Amsterdam: Elsevier.
75. Jokić, C. S. & Whitebread, D. (2011). The Role of Self-Regulatory and Metacognitive Competence in the Motor Performance Difficulties of Children with Developmental Coordination Disorder: A Theoretical and Empirical Review. *Educational Psychology Review*, 23, 75-98.
76. Jung, R.E. & Haier, R.J. (2007). The Parieto-Frontal Integration Theory (P-FIT) of intelligence: Converging neuroimaging evidence. *Behavioral and Brain Sciences*, 30, 135-187.
77. Kane, M. J., Bleckley, M. K., Conway, A. R. A., & Engle, R. W. (2001). A controlled-attention view of working-memory capacity. *Journal of Experimental Psychology General*, 130(2), 169-183.
78. Kane, M.J. and Engle, R.W. (2002). The role of prefrontal cortex in working-memory capacity, executive attention, and general fluid intelligence: An individual-difference perspective. *Psychonomic Bulletin & Review*, 9(4), 637-671.

79. Kane, M.J. and Engle, R.W. (2003). Working-memory capacity and the control of attention: The contribution of goal neglect, response competition, and task set to Stroop interference. *Journal of Experimental Psychology: General*, 132(1), 47-70.
80. Kane, M.J., Hambrick, D.Z., Tuholski, S.W., Wilhelm, O., Payne, T.W., and Engle, R.W. (2004). The generality of working memory capacity: A latent-variable approach to verbal and visuospatial memory span and reasoning. *Journal of Experimental Psychology: General*, 133(2), 189-217.
81. Kane, M. J., & McVay, J. C. (2012). What mind wandering reveals about executive-control abilities and failures. *Current Directions in Psychological Science*, 21(5), 348-354.
82. Kello, C.T. (2003). Patterns of timing in the acquisition, perception, and production of speech. *Journal of Phonetics*, 31, 619-626.
83. Kennedy Krieger Institute (2011, June 10). *Brain imaging study of preschoolers with ADHD detects brain differences linked to symptoms*.
84. Klein, R.M. & Farmer, M.E. (1995). Dyslexia and a temporal processing deficit: A reply to the commentaries. *Psychonomic Bulletin & Review*, 2(4), 515-526.
85. Koflet, M.J., Rapport, M.D., Bolden, J., Sarver, D.E., Raiker, J.S., and Alderson, R.M. (2011). Working memory deficits and social problems in children with ADHD. *Journal of Abnormal Child Psychology*, 39, 805-817.
86. Kraus, N. and Banai, K. (2007). Auditory-processing malleability. *Current Directions in Psychological Science*, 16(2), 105-110.
87. Kundu, B., Sutterer, D.W., Emrich, S.M., & Postle, B.R. (2013). Strengthened Effective Connectivity Underlies Transfer of Working Memory Training to Tests of Short-Term Memory and Attention. *The Journal of Neuroscience*, 33(20), 8705-8715.
88. Kwak, E. (2007). Effect of Rhythmic Auditory Stimulation on Gait Performance in Children with Spastic Cerebral Palsy. *Journal of Music Therapy*, XLIV (3), 198-216.
89. Kyllonen, P. C., & Christal, R. E. (1990). Reasoning ability is (little more than) working-memory capacity?! *Intelligence*, 14, 389-433.
90. Laasonen, M., Service, E., and Virsu, V. (2002). Crossmodal temporal order and processing acuity in developmentally dyslexic young adults. *Brain and Language*, 80, 340-354.
91. Larue, J. (2005). Initial learning of timing in combined serial movements and a no-movement situation. *Music Perception*, 22(3), 509-530.
92. Lewis, P. (2002). Finding the timer. *Trends in Cognitive Sciences*, 6(5), 195-196.
93. Lewis, P.A. (2006). Emotion, memory, and the perception of time. The University of Liverpool. Unpublished white paper.
94. Lewis, P. A., & Miall, R. C. (2006). Remembering the time: a continuous clock. *Trends in Cognitive Sciences*, 10(9), 401-406.
95. Lewis, P. & Walsh, V. (2005). Time perception: Components of the brains clock. *Current Biology*, 24, 389-391.
96. Lewis, P.A., Wing, A.M., Pope, P.A. Praamstra, P., and Miall, R.C. (2004). Brain activity correlates differentially with increasing temporal complexity of rhythms during initialization, synchronization, and continuation phases of paced finger tapping. *Neuropsychologia*, 42(10), 1301-1312.
97. Lutz, A., Slagter, H. A., Dunne J. D., & Davidson, R. J. (2008). Attention regulation and monitoring in meditation. *Trends in Cognitive Sciences*, 12(4), 164-169.
98. Madison, G., Forsman, L., Blom, Ö., Karabanov, A., and Ullén, F. (2009). Correlations between intelligence and components of serial timing variability. *Intelligence*, 37(1), 68-75
99. Martin, R.C. (1995). Heterogeneity of deficits in developmental dyslexia and implications for methodology. *Psychonomic Bulletin & Review*, 2(4), 494-500.
100. Mauk, M., & Buonomano, D. (2004). The neural basis of temporal processing. *Annual Review of Neuroscience*, 27, 207-340.
101. Maytyla, T., Carelli, M.G., and Forman, H. (2007). Time monitoring and executive functioning in children and adults. *Journal of Experimental Child Psychology*, 96, 1-19.
102. McAnally, K.I., Castles, A., and Stuart, G.W. (2003). Visual and auditory processing impairments in subtypes of developmental dyslexia: A discussion. *Journal of Developmental and Physical Disabilities*, 12(2), 145-156.
103. McAuley, J.D. & Miller, N.S. (2007). Picking up the pace: Effects of global temporal context on sensitivity to tempo of auditory sequences. *Perception & Psychophysics*, 69(5), 709-718.
104. McGrew, K. S. (2005). The Cattell-Horn-Carroll (CHC) theory of cognitive abilities. Past, present and future. In D. Flanagan, &
105. McGrew, K. (2006, Oct.). *The IM Effect. What is happening under the hood?* Invited presentation at the Interactive Metronome Professional Conference, Austin, TX.

106. McGrew, K. S. (2012, Oct.). *I think...therefore IM*. Keynote presentation at Interactive Metronome Professional Conference, San Antonio, Texas. [YouTube video of presentation available at <http://www.youtube.com/watch?v=XZ10YSay3Ww> ].
107. McGrew, K., & Vega, A. (2009). *The efficacy of rhythm-based (mental timing) treatments with subjects with a variety of clinical disorders: A brief review of theoretical, diagnostic, and treatment research*. Institute for Applied Psychometrics Research Report No. 9. St. Joseph, MN: Institute for Applied Psychometrics. [Available as PDF download at <http://www.iapsych.com/im/iaprr9.pdf> ].
108. McVay, J. C., & Kane, M. J. (2012). Drifting from slow to “D’ oh!”: Working memory capacity and mind wandering predict extreme reaction times and executive control errors. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *38*(3), 525-549.
109. Meck, W.H. and Benson, A.M. (2002). Dissecting the brain’s internal clock: How frontal – striatal circuitry keeps time and shifts attention. *Brain and Cognition*, *48*, 195-211.
110. Mesulam, M. M. (1990). Large-scale neurocognitive networks and distributed processing for attention, language, and memory. *Annals of Neurology*, *28*, 597-613.
111. Miyake, A., Friedman, N. P., Emerson, M. J., Witzki, A. H., & Howerter, A. (2000). The unity and diversity of executive functions and their contributions to complex “frontal lobe” tasks: A latent variable analysis. *Cognitive Psychology*, *41*, 49-100.
112. Miyake, Y., Onishi, Y., and Pöppel, E. (2004). Two types of anticipation in synchronization tapping. *Acta Neurobiologiae Experimentalis*, *64*, 415-426.
113. Nagy, Z., Westerberg, H., & Klingberg, T. (2004). *Journal of Cognitive Neuroscience*, *16*(7), 1227-1233.
114. Nanda, N.J., Rommelse, M.S., Oosterlaan, J., Buitelaar, J., Faraone, S.V., and Sergeant, J.A. (2007). Time reproduction in children with ADHD and their nonaffected siblings. *Journal of the American Academy of Child and Adolescent Psychiatry*, *46*, 5.
115. Nguyen, N. and Hawkins, S. (2003). Temporal integration in the perception of speech: Introduction. *Journal of Phonetics*, *31*, 279-287.
116. Nicholas, B., Rudrasingham, V., Nash, S., Kirov, G., Own, M.J., and Wimpory, D.C. (2007). Association of Per1 and Npas2 with autistic disorder: Support for the clock genes/social timing hypothesis. *Molecular Psychiatry*, *12*, 581-592.
117. Nobre, A. C., & O'Reilly, J. (2004). Time is of the essence. *Trends in Cognitive Sciences*, *8*(9), 387-389.
118. Palladino, P., Mammarella, N., and Vecchia, T. (2003). Modality-specific effects in the inhibitory mechanisms: The interaction of peripheral and central components in working memory. *Brain and Cognition*, *53*, 263-267.
119. Pashler, H., Johnston, J.C., and Ruthruff, E. (2001). Attention and performance. *Annual Review of Psychology*, *52*, 629-651.
120. Paul, S., Ada, L., & Canning, C. G. (2005). Automaticity of walking: Implications for physiotherapy practice. *Physical Therapy Reviews*, *10*, 15-23.
121. Penke, L., Maniega, S. M., Bastin, M. E., Valdés Hernández, M. C., Murray, C., Royle, N.A., Starr, J.M., Wardlaw, J.M., & Deary, I. J. (2012). Brain white matter tract integrity as a neural foundation for general intelligence. *Molecular Psychiatry*, *17*(10), 1026-1030.
122. Penton-Voak, I.S., Edwards, H., Percival, A., and Wearden, J.H. (1996). Speeding up and internal clock in humans? Effects of click trains on subjective duration. *Journal of Experimental Psychology*, *22*(3), 307-320.
123. Phillips-Silver, J. and Trainor, L.J. (2007). Hearing what the body feels: Auditory encoding of rhythmic movement. *Cognition*, *105*, 533-546.
124. Pictno, T.W., Stuss, D.T., Shallice, T., Alexander, M.P., and Gillingham, S. (2006). Keeping time: Effects of focal frontal lesions. *Neuropsychologia*, *44*, 1195-1209.
125. Posner, M. I., & Rothbart, M. K. (2007). Research on attention networks as a model for the integration of psychological science. *Annual Review of Psychology*, *58*, 1-23.
126. Pouthas, V. and Perbal, S. (2004). Time perception depends on accurate clock mechanisms as well as unimpaired attention and memory processes. *Acta Neurobiologiae Experimentalis*, *64*, 367-385.
127. Rakison, D. H., & Yermolayeva, Y. (2011). How to identify a domain-general learning mechanism when you see one. *Journal of Cognition and Development*, *12*(2), 124-153.
128. Rammsayer, T. (2001). Ageing and temporal processing of durations within the psychological present. *European Journal of Cognitive Psychology*, *13*, 549-565.
129. Rammsayer, T. (2002). Temporal information processing and basic dimensions of personality: differential effects of psychoticism. *Personality and Individual Differences*, *32*, 827-838.

130. Rammsayer, T. (2010). Differences in duration discrimination of filled and empty auditory intervals as a function of base duration. *Attention Perception & Psychophysics*, 72(6), 1591-1600.
131. Rammsayer, T. & Altenmüller, E. (2006). Temporal information processing in musicians and nonmusicians. *Music Perception*, 24(1), 37-47.
132. Rammsayer, T. & Brandler, S. (2002). On the relationship between general fluid intelligence and psychophysical indicators of temporal resolution in the brain. *Journal of Research in Personality*, 36, 507-530.
133. Rammsayer, T. & Brandler, S. (2007). Performance on temporal information processing as an index of general intelligence. *Intelligence*, 35(2), 123-139.
134. Rammsayer, T., Hennig, J., Haag, A., & Lange, N. (2001). Effects of noradrenergic activity on temporal information processing in humans. *Quarterly Journal of Experimental Psychology, Section B: Comparative and Physiological Psychology*, 54B, 247-258.
135. Rammsayer, T. & Troche, S. J. (2010a). Effects of age and the relationship between response time measures and psychometric intelligence in younger adults. *Personality and Individual Differences*, 48(1), 49-53.
136. Rammsayer, T. & Troche, S. (2010b). Sex differences in the processing of temporal information in the sub-second range. *Personality and Individual Differences*, 49(8), 923-927.
137. Rammsayer, T. & Ulrich, R. (2001). Counting models of temporal discrimination. *Psychonomic Bulletin and Review*, 8(2), 270-277.
138. Randolph, C. (1998). *RBANS manual*: San Antonio, TX: The Psychological Corporation.
139. Rao, S.M., Mayer, A.R., and Harrington, D.L. (2001). The evolution of brain activation during temporal processing. *Nature Neuroscience*, 4(3), 317-323.
140. Rey, V., De Martino, S., Espesser, R., and Habib, M. (2002). Temporal processing and phonological impairment in dyslexia: Effect of phoneme lengthening on order judgment of two consonants. *Brain and Language*, 80, 576-591.
141. Rhemtulla, M. & Tucker-Drob, E.M. (2011). Correlated longitudinal changes across linguistic, achievement, and psychomotor domains in early childhood: evidence for a global dimension of development. *Developmental Science*, 14(5), 1245-1254.
142. Richards & Berninger. (2007). Having right timing 'connections' in brain is key to overcoming dyslexia. National Institute of Child Health and Human Development. Back to Eurek Alert.
143. Ridderikhoff, A., Peper, C.E., & Beek, P.J. (2008). Attentional loads associated with interlimb interactions underlying rhythmic bimanual coordination. *Cognition*, 109, 372-388.
144. Risko, E. F., Anderson, N., Sarwal, A., Engelhardt, M., & Kingstone, A. (2012). Everyday attention: Variation in mind wandering and memory in a lecture. *Applied Cognitive Psychology*, 26, 234-242.
145. Resch, J., May, B., Tomporowski, P., et al. (2011). Balance performance with a cognitive task: A continuation of the dual-task testing paradigm. *Journal of Athletic Training*, 46, 170-175.
146. Rosenbaum, D.A. (2002). Time, space, and short-term memory. *Brain and Cognition*, 48, 52-65.
147. Santos, A., Joly-Pottuz, B., Moreno, S., Habib, M., and Besson, M. (2007). Behavioural and event-related potentials evidence for pitch discrimination deficits in dyslexic children: Improvement after intensive phonic intervention. *Neuropsychologia*, 45, 1080-1090.
148. Sayala, S., Sala, J.B., and Courtney, S.M. (2006). Increased neural efficiency with repeated performance of a working memory task is information-type dependent. *Cerebral Cortex*, 16, 609-617.
149. Schooler, J. W., Smallwood, J., Christoff, K., Handy, T. D., Reichle, E. D., & Sayette, M. A. (2011). *Trends in Cognitive Sciences*, 15(7), 319-326.
150. Schulte-Körne, G. Deimel, W., Bartling, J., and Remschmidt, H. (1999). The role of phonological awareness, speech perception, and auditory temporal processing for dyslexia. *European Journal of Child & Adolescent Psychiatry*, 8(3), 28-34.
151. Sedlmeier, P., Eberth, J., Schwarz, M., Zimmermann, D., Haerig, F., Jaeger, S., & Kunze, S. (2012). The psychological effects of meditation: A meta-analysis. *Psychological Bulletin*, 138(6), 1139-1171
152. Shamma, S. (2003). Physiological foundations of temporal integration in the perception of speech. *Journal of Phonetics*, 31, 495-501.
153. Shaywitz, B.A., Shaywitz, S.E., Pugh, K.R., Mencl, W.E., Fulbright, R.K., Skudlarski, P., Constable, R.T., Marchione, K.E., Fletcher, J.M., Lyon, G.R., and Gore, J.C. (2002). Disruption of posterior brain systems for reading in children with developmental dyslexia. *Society of Biological Psychiatry*, 52, 101-110.
154. Stankov, L., Danthiir, V., Williams, L.M., Pallier, G., Roberts, R.D., and Gordon, E. (2006). Intelligence and the tuning-in of brain networks. *Learning and Individual Differences*, 16, 217-233.
155. Stemmer, P. J. (2001). *American Journal of Occupational Therapy*, 55 (22), 155-161.

156. Smallwood, J. (2010). Why the global availability of mind wandering necessitates resource completion: Reply to McVay and Kane (2010). *Psychological Bulletin*, 136(2), 202-207.
157. Spencer, R.M.C., Zelaznik, H.N., Diedrichsen, J., and Ivry, R.B. (2003). Disrupted timing of discontinuous but not continuous movements by cerebellar lesions. *Science*, 300(5624), 1437-1442.
158. Tallal, P. and Gaab, N. (2006). Dynamic auditory processing, musical experience, and language development. *Trends in Neurosciences*, 29(7), 382-390.
159. Thomson, J.M., Fryer, B., Maltby, J., and Goswami, U. (2006). Auditory and motor rhythm awareness in adults with dyslexia. *Journal of Research in Reading*, 29(3), 334-348.
160. Tierney, A. & Kraus, N. (2013) The Ability to Move to a Beat Is Linked to the Consistency of Neural Responses to Sound. *The Journal of Neuroscience*, 331(38), 14981-14988.
161. Toga, A. W., Clark, K. A., Thompson, P. M., Shattuck, D. W., & Van Horn, J. D. (2012). Mapping the human connectome. *Neurosurgery*, 71(1), 1-5.
162. Toplak, M.E., Rucklidge, J.J., Hetherington, R., John, S.C.F., and Tannock, R. (2003). Time perception deficits in attention deficit/hyperactivity disorder and comorbid reading difficulties in child and adolescent samples. *Journal of Child Psychology and Psychiatry*, 44(6), 888-903.
163. Trainor, L.J., Gao, X., Lei, J., Lehtovaara, K. & Harris, L.R. (2009). The primal role of the vestibular system in determining musical rhythm. *Cortex*, 45, 35-43.
164. Ullén, F., Forsman, L., Blom, Ö., Karabanov, A., and Madison, G. (2008). Intelligence and variability in a simple timing task share neural substrates in the prefrontal white matter. *The Journal of Neuroscience*, 28(16), 4238-4243.
165. Ulrich, R., Nitschke, J., & Rammsayer, T. (2006). Crossmodal temporal discrimination: Assessing the predictions of a general pacemaker-counter model. *Perception & Psychophysics*, 68(7), 1140-1152.
166. Unsworth, N. McMillan, B. D., Brewer, G. A., & Spillers, G. J. (2012). *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 38(6), 1765-1772.
167. Unsworth, N., Schrock, J.C., and Engle, R.W. (2004). Working memory capacity and the antisaccade task: individual differences in voluntary saccade control. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 30(6), 1302-1321.
168. Valdios, S., Bosseane, M.L., and Tainturier, M.J. (2004). The cognitive deficits responsible for developmental dyslexia: Review of evidence for a selective visual attentional disorder. *Dyslexia*, 10, 339-363.
169. van den Heuvel, M. P., Kahn, R. S., Goñi, & Sporns, O. (2012). High-cost, high-capacity backbone for global brain communication. *Proceedings of the National Academy of Sciences*, 109(28), 11372-11377.
170. Virsu, V., Lahti-Nuutila, P., and Laasonen, M. (2003). Crossmodal temporal processing acuity impairment aggravates with age in developmental dyslexia. *Neuroscience Letters*, 336, 151-154.
171. Volz, H.-P., Nenadic, I., Gaser, C., Rammsayer, T., Häger, F., & Sauer, H. (2001). Time estimation in schizophrenia: A fMRI study at adjusted levels of difficulty. *NeuroReport*, 12, 313-316.
172. Wearden, J.H. (2008). Slowing down an internal clock: Implications for accounts of performance on four timing tasks. *The Quarterly Journal of Experimental Psychology*, 61(2), 263-274.
173. Wechsler, D. (2008). *Wechsler Adult Intelligence Scale—Fourth Edition: Technical and interpretive manual*. San Antonio, TX: NCS Pearson.
174. Whitney, P., Arnett, P.A., Driver, A., and Budd, D. (2001). Measuring central executive functioning: What's in a reading span? *Brain and Cognition*, 45, 1-14.
175. Wimpory, D. (2002). Social timing clock genes and autism: A new hypothesis. *Journal of Intellectual Disability Research*, 46(4), 352-358.
176. Yeatman, J. D., Dougherty, R. F., Ben-Shachar, M., & Wandell, B. A. (2012). Development of white matter and reading skills. *Proceedings of the National Academy of Sciences*, 109(44), 2045-3053.
177. Yogeve G, Giladi N, Peretz C, Springer S, Simon ES, and Hausdorff JM (2005). Dual tasking, gait rhythmicity, and Parkinson's disease: Which aspects of gait are attention demanding? *European Journal of Neuroscience*, 22, 1248–1256.
178. Zakay, D. & Block, R.A. (2004). Prospective and retrospective duration judgments: An executive-control perspective. *Acta Neurobiologiae Experimentalis*, 64, 319-328.
179. Zanto, T.P., Large, E.W., Fuchs, A., and Scott, J.A. (2005). Gamma-band responses to perturbed auditory sequences: Evidence for synchronization of perceptual processes. *Music Perception*, 22(3), 531-547.