

Curriculum Vitae
Zachary Easton Imel, PhD

CONTACT INFORMATION

Business Address: University of Utah
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EDUCATION

Fellowship **VA Puget Sound Health Care System (VAPSHCS), Seattle**
2009 – 2011 1660 South Columbian Way, Seattle, WA, 98108
 APA Accredited Psychology Fellowship
 Mental Illness Research, Education, and Clinical Center

Ph.D. **University of Wisconsin-Madison**
2003-2009 1000 Bascom Mall, 301 Education Building, Madison, WI, 53706
 Counseling Psychology; APA accredited

Internship **VA Puget Sound Health Care System (VAPSHCS), Seattle**
2008 – 2009 1660 South Columbian Way, Seattle WA 98108
 APA Accredited Psychology Internship Program

M.A. **University of Missouri-Columbia**
2001-2003 16 Hill Hall, Columbia, Missouri, 65211
 Major: Counseling Psychology

Bachelor of Arts **Westminster College**
1997-2001 501 Westminster Ave., Fulton, Missouri, 65251
 Majors: Psychology, Religious Studies; *Magna cum laude*.

POSITIONS

2016-Present *Associate Professor*, Department of Educational Psychology, Counseling Psychology Program, University of Utah, Salt Lake City, UT.

2016-Present *Adjunct Associate Professor*, Department of Psychiatry, School of Medicine, University of Utah, Salt Lake City, UT.

2019-Present *Director of Clinical Training*, Department of Educational Psychology, Counseling Psychology Program, University of Utah, Salt Lake City, UT.

2017-Present Co-Founder & Chief Psychotherapy Science Officer, Lyssn.io

2011-2016 *Assistant Professor*, Department of Educational Psychology, Counseling Psychology Program, University of Utah, Salt Lake City, UT.

- 2012-2016 *Adjunct Assistant Professor*, Department of Psychiatry, School of Medicine, University of Utah, Salt Lake City, UT.
- 2011-Present *Staff Associate*, University Counseling Center, University of Utah, Salt Lake City, UT.
- 2009-2011 *Postdoctoral Fellow*, Mental Illness Research, Education, and Clinical Center, VA Puget Sound Health Care System, Seattle; APA accredited.
- 2009-2011 *Acting Instructor*, Department of Psychiatry and Behavioral Sciences, School of Medicine and Public Health, University of Washington-Seattle.

LICENSURE

- 2018-Present Psychologist: State of Utah (#10593211-2501)

HONORS/AWARDS

- 2017 Presidential Scholar, University of Utah
- 2015 *Faculty Fellow*, University Research Committee, University of Utah.
- 2015 *Outstanding Research and Scholarship Award*, College of Education, University of Utah.
- 2014 *Early Career Award*, American Psychological Foundation/Division 29 (Psychotherapy).
- 2013 *Excellence in Teaching Award*, Presented by 3rd and 4th year Residents, Department of Psychiatry, School of Medicine, University of Utah.
- 2009 *Outstanding Graduate Student*, Counsel of Counseling Psychology Training Programs.
- 2009 *Graduate Student Research Award*, APA Division 17 Section for the Promotion of Psychotherapy Science for Imel, Malterer, McKay, & Wampold (2008).
- 2008 *Outstanding Psychotherapy Research Award*, APA Division 29 (Psychotherapy), for Baldwin, Wampold, and Imel (2007).
- 2008 *Vilas Travel Fellowship*, University of Wisconsin-Madison, Graduate School.
- 2007 *Hans H. Strupp Memorial Award*, North American Society for Psychotherapy Research.
- 2007 *John Rothney Award for Counseling Research*, Department of Counseling Psychology, University of Wisconsin-Madison.
- 2006 *Sol Garfield Memorial Award*, North American Society for Psychotherapy Research.
- 2004-2005 *Wakonse Teaching Fellow*, University of Wisconsin-Madison.
- 2001 *Member*, Alpha Chi National Honor Society
- 1997-2001 *Churchill Scholar*, Westminster College.

BOOKS

- Wampold, B.E., & Imel, Z.E. (2015). *The Great Psychotherapy Debate*. (2nd ed.). New Jersey: Routledge.

PEER REVIEWED JOURNAL ARTICLES

56. Gibson, J.*, Atkins, D., Creed, T., Imel, Z.E., Georgiou, P., & Narayanan, S. (in press).

55. Soma, C.S.* , Baucom, B. R., Xiao, B.* , Butner, J. B., Hilbert, P., Narayanan, S., Atkins, D. C., & **Imel, Z. E.** (in press). Coregulation of therapist and client emotion during psychotherapy. *Psychotherapy Research*.
54. Goldberg, S. B., Flemotomos, N.* , Martinez, V. R.* , Tanana, M., Kuo, P.* , Pace, B. T.* , Villatte, J. L., Georgiou, P., Van Epps, J., **Imel, Z. E.**, Narayanan, S., & Atkins, D. C. (in press). Machine learning and natural language processing in psychotherapy research: Alliance as example use case. *Journal of Counseling Psychology*.
53. Park, J.* , Kuo, P.* , Merced, K.* , Lockwood, R.K., Tanana, M.J.* , Atkins, D.A., Tai-Seale, M., **Imel, Z.E.**, Smyth, P. (in press). Detecting Conversation Topics in Primary Care Office Visits from Transcripts of Patient-Provider Interactions. *Journal of the American Medical Informatics Association*.
52. Goldberg, S. B., Baldwin, S. A., Merced, K.* , Caperton, D.* , **Imel, Z.E.**, Atkins, D. C., & Creed, T. (in press). The structure of competence: Evaluating the factor structure of the Cognitive Therapy Rating Scale. *Behavior Therapy*.
51. Tanana, M.J.* , Soma, C.S.* , Srikumar, V., Atkins, D.C., & **Imel, Z.E.** (2019). Development and evaluation of ClientBot: A patient-like conversational agent to train basic counseling skills. *Journal of Medical Internet Research*, 21(7):e12529. doi: 10.2196/12529.
50. **Imel, Z.E.**, Pace, B.T.* , Soma, C.S.* , Tanana, M.* , Gibson, J.* , Hirsch, T., Georgiou, P.G., Narayanan, S., Atkins, D.A. (2019). Design feasibility of an automated, machine-learning based feedback system for motivational interviewing. *Psychotherapy*, 56, 318-328. doi: 10.1037/pst0000221.
49. Caperton, D.D.* , Atkins, D.C., & **Imel, Z.E.** (2018). Rating motivational interviewing fidelity from thin slices. *Psychology of Addictive Behaviors*, 32, 434-441.
48. Bryan, C.J., Baucom, B.R., Crenshaw, A.* , **Imel, Z.E.** Atkins, D.C., Clemans, T.A., ..., & Rudd, M.D. (2018). Associations of patient-rated emotional bond and vocally encoded emotional arousal among clinicians and acutely suicidal military personnel. *Journal of Consulting and Clinical Psychology*, 86, 372-383
47. Hallgren, K. A., Dembe, A.* , Pace, B. T.* , **Imel, Z.E.**, & Atkins, D.C. (2018). Variability in motivational interviewing adherence across sessions, providers, sites, and research contexts. *Journal of Substance Abuse Treatment*, 84, 30-41.
46. Zeber, J.E., Coleman, K.J., Fischer, H., Yoon, T., Ahmedani, B.K., Beck, A., Hubley, S., **Imel, Z.E.**, Rossom, R.C., Shortreed, S.M., Stewart, C., Waitzfelder, B.E., Simon, G.E. (2017). The impact of race and ethnicity on rates of return to psychotherapy for depression. *Depression and Anxiety*, 34, 1157-1163.
45. Pace, B.T.* , Baldwin, S.A., Dembe, A.* , Soma, T.* , & Atkins, D.C., & **Imel, Z.E.** (2017). A multivariate meta-analysis of motivational interviewing process and outcome. *Psychology of Addictive Behaviors*, 31, 524-533.
44. **Imel, Z.E.**, Caperton, D.D.* , Tanana, M.* , & Atkins, D. (2017). Technology enhanced human interaction in psychotherapy. *Journal of Counseling Psychology*, 64, 385-393. doi:

10.1037/cou0000213.

43. Perry, N.S.*, Baucom, K.J., Bourne, S., Butner, J., Crenshaw, A.O.*, Hogan, J.N.*, **Imel, Z.E.**, Wiltshire, T.J., & Baucom, B.R. (2017). Graphical Methods for Interpreting Longitudinal Dyadic Patterns from Repeated-Measures Actor-Partner Interdependence Models. *Journal of Family Psychology*. doi: 10.1037/fam0000293
42. Gaut, G.*, Steyvers, M., **Imel, Z.E.**, Atkins, D.C., Smyth, P. (2017). Automated global and localized content coding of psychotherapy transcripts using labeled topic models. *IEEE Journal of Biomedical and Health Informatics*, 21, 476-487.
41. Dunn, C., Darnell, D., Atkins, D.C., Hallgren, K., **Imel, Z.E.**, Bumgardner, K., Owens, M., & Roy-Byrne, P. (2016). Within-Provider Variability in Motivational Interviewing Integrity for Three Years after MI Training: Does Time Heal? *Journal of Substance Abuse Treatment*, 65, 74-82. <http://dx.doi.org/10.1016/j.jsat.2016.02.008>
40. Tanana, M.*, Hallgren, K., **Imel, Z.E.**, Atkins, D.C., & Srikumar, V. (2016). A comparison of natural language processing methods for automated coding of motivational interviewing. *Journal of Substance Abuse Treatment*, 65, 43-50. doi: 10.1016/j.jsat.2016.01.006
39. Xiao, B.*, Huang, C., **Imel, Z.E.**, Atkins, D.C., Georgiou, P., Narayanan, S.S. (2016b). A technology prototype system for rating therapist empathy from audio recordings in addiction counseling. *PeerJ Computer Science* 2:e59 <https://doi.org/10.7717/peerj-cs.59>
38. Xiao, B.*, **Imel, Z.E.**, Georgiou, P., Atkins, D.C., & Narayanan, S. (2016a). Computational Analysis and Simulation of Empathic Behaviors: A Survey of Empathy Modeling with Behavioral Signal Processing Framework. *Current Psychiatry Reports*, 18, 49. doi:10.1007/s11920-016-0682-5
37. Burrow-Sanchez, J., Martin, J.L., & **Imel, Z.E.** (2016). Applying for grant funding as a counseling psychologist: From thought to action. *The Counseling Psychologist*, 44, 479-524
36. Can, D.*, Marin, R., **Imel, Z.E.**, Georgiou, P.G., Atkins, D.C., & Narayanan, S.S. (2016). "It sounds like...": A natural language processing approach to detecting counselor reflections in Motivational Interviewing. *Journal of Counseling Psychology*, 63, 3, 343-350.
35. Xiao, B.*, **Imel, Z.E.****, Georgiou, P.G., Atkins, D.C., & Narayanan, S.S. (2015). "Rate my therapist": Automated detection of empathy in drug and alcohol counseling. PLOS ONE. DOI: 10.1371/journal.pone.0143055
34. Tao, K.W., Owen, J., Pace, B.T.*, & **Imel, Z.E.** (2015). A meta-analysis of multicultural competencies and psychotherapy process and outcome. *Journal of Counseling Psychology*. 62, 337-50. DOI: 10.1037/cou0000086.
33. Bryan, C.J., Griffith, J., Pace, B.T.*, Hinkson, K., Bryan, A., Clemans, T., & **Imel, Z.E.** (2015). Combat exposure and risk for suicidal thoughts and behaviors among military personnel and veterans: a systematic review. *Suicide and Life Threatening Behavior*, 45, 633-649. DOI: 10.1111/sltb.12163
32. Brown, H.*, Allred, H.*, Melling, A.*, Kelly, A.*, **Imel, Z.E.**, & Simon, G.E. (2015). Problems with using patient retention in the evaluation of mental health providers: Differences in type of dropout. *Psychiatric Services*, 66, 879-882. <http://dx.doi.org/10.1176/appi.ps.201400059>

31. Lord, S.P., Can, D.*, Yi, M.S.K., Marín, R. A., Dunn, C.W., **Imel, Z.E.**, Georgiou, P., Narayanan, S., Steyvers, M., & Atkins, D. C. (2015). Advancing methods for reliably assessing motivational interviewing fidelity using the Motivational Interviewing Skills Code. *Journal of Substance Abuse Treatment, 49*, 50-57.
30. **Imel, Z.E.**, Sheng, E.*, Baldwin, S.A., & Atkins, D.C. (2015). Removing very low-performing therapists: A simulation of performance-based retention in psychotherapy. *Psychotherapy, 52*, 329-36. <http://dx.doi.org/10.1037/pst0000023>
29. Lord, S.P., Sheng, E.*, **Imel, Z. E.**, Baer, J.S., & Atkins, D.C. (2015). More than reflections: Empathy in motivational interviewing includes language style synchrony between counselor and client. *Behavior Therapy, 46*, 296-303.
28. **Imel, Z.E.**, Steyvers, M., Atkins, D.C. (2015). Computational Psychotherapy Research: Scaling up the evaluation of patient provider interactions. *Psychotherapy, 52*, 19-30. doi: <http://dx.doi.org/10.1037/a0036841>
27. Owen, J., Tao, K.W., **Imel, Z.E.**, Wampold, B.E., & Rodolfa, E. (2014). Addressing racial and ethnic microaggressions in therapy. *Professional Psychology: Research and Practice, 45*, 283-290.
26. Dunn, C.W., Darnell, D., Yi, M.S.K., Steyvers, M., Bumgardner, K., Lord, S.P., **Imel, Z.E.**, & Atkins, D.C. (2014). Should we trust our judgments about the proficiency of Motivational Interviewing counselors? A glimpse at the impact of low inter-rater reliability? *Motivational Interviewing: Treatment, Research, Implementation, and Policy, 1*, 38-41. doi: 10.5195/mitrip.2014.43
25. Atkins, D.C., Steyvers, M., **Imel, Z.E.**, & Smyth, P. (2014). Scaling up the evaluation of psychotherapy: evaluating motivational interviewing fidelity via statistical text classification. *Implementation Science, 9*, 49. doi:10.1186/1748-5908-9-49. PMCID: PMC4026152
24. **Imel, Z.E.**, Baldwin, S., Baer, J., Hartzler, B., Dunn, C.W., Rosengren, D., & Atkins, D.C. (2014). Evaluating therapist adherence in motivational interviewing by comparing performance with standardized and real patients. *Journal of Consulting and Clinical Psychology, 82*(3), 472-481. doi: <http://dx.doi.org/10.1037/a0036158>. PMCID: PMC4029916
23. Baldwin, S.A., **Imel, Z.E.**, Braithwaite, S., & Atkins, D.C. (2014). Analyzing multiple outcomes using multivariate multilevel models. *Journal of Consulting and Clinical Psychology, 82*(5), 920-30. doi: <http://dx.doi.org/10.1037/a0035628>.
22. **Imel, Z.E.**, Barco, J.S.*, Brown, H.*, Baucom, B.R., Baer, J.S., Kircher, J., & Atkins, D.C. (2014). The Association of Therapist Empathy and Synchrony in Vocally Encoded Arousal. *Journal of Counseling Psychology, 61*(1), 146-53. doi: 10.1037/a0034943. PMCID: PMC4133554
21. **Imel, Z.E.**, Laska, K., Jakupcak, M., & Simpson, T. (2013). Meta-analysis of dropout in treatments for post-traumatic stress disorder. *Journal of Consulting and Clinical Psychology, 81*(3), 394-404. doi: 10.1037/a0031474. PMCID: PMC3893277.
20. Hawkins, E.J., Malte, C.A., Grossbard, J., Saxon, A.J., **Imel, Z.E.**, & Kivlahan, D.K. (2013). Comparative Safety of Benzodiazepines and Opioids Among Veterans Affairs Patients with Posttraumatic Stress Disorder. *Journal of Addiction Medicine, 7*(5), 354-62. PMID: 24091764.

19. **Imel, Z.E.**, Hubbard, R., Rutter, C., & Simon, G.E. (2013). Patient rated alliance as a measure of therapist performance in two clinical settings. *Journal of Consulting and Clinical Psychology, 81*(1), 154-165. PMID: 23231576.
18. Owen, J., **Imel, Z.E.**, Adelson, J., Wampold, & Rodolfa, E. (2012). 'No-show': Therapist Racial/Ethnic Disparities in Client Unilateral Termination. *Journal of Counseling Psychology, 59*, 314-20. PMID: 22352948
17. Hawkins, E., Malte, C., **Imel, Z.E.**, Saxon, A., & Kivlahan, D. (2012). Prevalence and Trends in Benzodiazepine use Among VA Patients with PTSD in VISN 20, 2003-2010. *Psychology of Addictive Behaviors, 142*, 154-61. PMID: 22305658.
16. Simon, G., **Imel, Z.E.**, Steinfield, B.J. (2012). Is dropout after a first psychotherapy visit always a bad outcome? *Psychiatric Services, 63*, 705-7. PMID: PMC3708593.
15. Hoerster, K.D., Malte, C.A., **Imel, Z.E.**, Ahmad, Z., Hunt, S.C., Jakupcak, M. (2012). Association between perceived barriers and prospective VA mental health care utilization among Iraq and Afghanistan War Veterans. *Psychiatric Services, 63*, 380-2. PMID: 22476304.
14. MacCoon, D.G., **Imel, Z.E.**, Rosenkranz, M.A., Sheftel, J.G., Weng, H.Y., Sullivan, J.C., Bonus, K.A., Stoney, C.M., Salomons, T.V., Davidson, R.J., Lutz, A. (2012). The validation of an active control intervention for Mindfulness Based Stress Reduction (MBSR). *Behaviour Research and Therapy, 50*, 3-12. PMID: PMC3257026.
13. **Imel, Z.E.**, Baldwin, S.A., Atkins, D., Owen, J., Baardseth, T., & Wampold, B.E. (2011). Racial/ethnic disparities in therapist effectiveness: A conceptualization and initial study of cultural competence. *Journal of Counseling Psychology, 58*, 290-298. PMID: 21534654.
12. **Imel, Z.E.**, Baer, J., Martino, S.M., Ball, S., Carroll, K. (2011). Mutual influence in therapist competence and adherence to motivational enhancement therapy. *Drug and Alcohol Dependence, 115*, 229-236. PMID: PMC3397170.
11. Owen, J., **Imel, Z.E.**, Tao, K.W., Wampold, B.E., & Rodolfa, E. (2010). Cultural ruptures in short-term therapy: Working alliance as a mediator between clients' perceptions of microaggressions and therapy outcomes. *Counseling and Psychotherapy Research.*
10. Wampold, B.E., **Imel, Z.E.**, Laska, K.M., Benish, S., Miller, S., Flückiger, C., Del Re, A.C., & Baardseth, T.P., & Budge, S. (2010). Determining what works in the treatment of PTSD. *Clinical Psychology Review, 30*, 923-933. doi:10.1016/j.cpr.2010.06.005. PMID: 20638168.
9. Jakupcak, M., Vannoy, S., **Imel, Z.E.**, Cook, J., Fontana, A., Rosenheck, R., McFall, M. (2010). Does PTSD moderate the relationship between social support and suicide risk in Iraq and Afghanistan War Veterans seeking mental health treatment. *Depression and Anxiety, 27*, 1001-1005. doi:10.1002/da.20722. PMID: PMC3038554.
8. Jakupcak, M., Cook, J., **Imel, Z.E.**, Fontana, A., Rosenheck, R., McFall, M. (2009). Posttraumatic Stress Disorder as a Risk Factor for Suicidal Ideation in Iraq and Afghanistan Combat Veterans. *Journal of Traumatic Stress, 22*, 303-306. doi:10.1002/jts.20423. PMID: 19626682.

7. **Imel, Z.E.**, Wampold, B.E., & Miller, S. (2008). Distinctions without a difference: A meta-analysis of psychological treatments for alcohol abuse. *Psychology of Addictive Behaviors*, 22, 533-543. doi:10.1037/a0013171. PMID: 19071978.
6. **Imel, Z.E.**, Baldwin, S.A., & MacCoon, D.G., & Bonus, K. (2008). Beyond the Individual: An investigation of group effects in a mindfulness based stress reduction program. *Psychotherapy Research*, 18, 735-742. doi:10.1080/10503300802326038. PMID: 18815948.
5. **Imel, Z.E.**, Malterer, M., McKay, K.M., & Wampold, B.E. (2008). A meta-analysis of psychotherapy and medication in unipolar depression and dysthymia. *Journal of Affective Disorders*, 110, 197-206. doi:10.1016/j.jad.2008.03.018.
4. Hoyt, W.T., **Imel, Z.E.**, Chan, F. (2008). Multiple regression and correlation techniques: Recent controversies and best practices. *Rehabilitation Psychology*, 53, 321-339. doi:10.1037/a0013021.
3. Benish, S.M., **Imel, Z.E.**, & Wampold, B.E. (2008). The relative efficacy of bona fide psychotherapies for treatment posttraumatic stress disorder: A meta-analysis of direct comparisons. *Clinical Psychology Review*, 28, 746-758. doi:10.1016/j.cpr.2007.10.005. PMID: 18055080.
2. Baldwin, S.A., Wampold, B.E., & **Imel, Z.E.** (2007). Untangling the alliance-outcome correlation: Exploring the relative importance of therapist and patient variability in the alliance. *Journal of Consulting and Clinical Psychology*, 75, 842-852. doi:10.1037/0022-006X.75.6.842. PMID: 18085902.
1. McKay, K.M., **Imel, Z.E.**, & Wampold, B.E. (2006). Psychiatrist effects in the psychopharmacological treatment of depression. *Journal of Affective Disorders*, 92, 287-290. doi:10.1016/j.jad.2006.01.020. PMID: 16503356.

PEER REVIEWED CONFERENCE PROCEEDINGS/WORKSHOPS***

13. Cao, J.*, Tanana, M., **Imel, Z.E.**, Poitras, E., Atkins, D.C., Srikumar, V. (2019) Observing Dialogue in Therapy: Categorizing and Forecasting Behavioral Codes. *In Proceedings of Association of Computational Linguistics (ACL)*.
12. Chen, Z.*, Singla, K.*, Gibson, J.*, Can, D.*, **Imel, Z.E.**, Atkins, D.C., Georgiou, P., & Narayanan, S. (May, 2019). Prediction of Therapist Behaviors in Addiction Counseling by Exploiting Class Confusions. In Proceedings of IEEE - International Conference on Acoustics, Speech and Signal Processing (ICASSP).
11. Hirsch, T., Soma, C.S.*, Merced, K.*, Kuo, P.B.*, Dembe, A.*, Caperton, D.*, Atkins, D.C., **Imel, Z.E.** (2018) "It's hard to argue with a computer:" Investigating Psychotherapists' Attitudes towards Automated Evaluation. In ACM Conference on Designing Interactive Systems, 559-571. doi: 10.1145/3196709.3196776.
10. Hirsch, T., Merced, K.*, **Imel, Z.E.**, Narayanan, S., Atkins, D. (2017). "Designing Contestability: Interaction Design, Machine Learning, and Mental Health," ACM Conference on Designing Interactive Systems (DIS'17), Edinburgh.
9. Gibson J., Can D., Xiao B., **Imel Z.E.**, Atkins D., Georgiou P., & Narayanan S. (September, 2016). A deep learning approach to modeling empathy in addiction counseling. Proceedings

of the Annual Conference of the International Speech Communication Association, INTERSPEECH. San Francisco, CA.

7. Xiao B., Can D., Gibson J., **Imel Z.E.**, Atkins D., Georgiou P., & Narayanan S. (September, 2016). Behavioral coding of therapist language in addiction counseling using recurrent neural networks. Proceedings of the Annual Conference of the International Speech Communication Association, INTERSPEECH. San Francisco, CA.
6. Tanana, M.*, Dembe, A.*, Soma, C.S.*, Atkins, D.C., **Imel, Z.E.**, & Srikumar, V. (June, 2016). Is Sentiment in Movies the Same as Sentiment in Psychotherapy? Comparisons Using a New Psychotherapy Sentiment Database. *Paper presented at Conference of the North American Chapter of the Association for Computational Linguistics HLT, Computational Linguistics and Clinical Psychology Workshop (CLPsych), San Diego, CA.*
5. Tanana, M.*, Hallgren, K. **Imel, Z.E.**, Atkins, D.C., Smyth, P., & Srikumar, V. (June, 2015). Recursive Neural Networks for Coding Therapist and Patient Behavior in Motivational Interviewing. *Paper presented at Conference of the North American Chapter of the Association for Computational Linguistics HLT, Computational Linguistics and Clinical Psychology Workshop (CLPsych), Denver, CO.*
4. Gibson, J.*, Grey, G., Hirsch, T., **Imel, Z.E.**, Narayanan, S., & Atkins, D.A. (May, 2016). Developing an Automated Report Card for Addiction Counseling: The Counselor Observer Ratings Expert for MI (CORE-MI). ACM Computer Human Interaction (CHI), Mental Health Workshop. San Jose, CA.
3. Xiao, B.*, **Imel, Z.E.**, Atkins, D., Georgiou, P., & Narayanan, S. (September, 2015). Analyzing Speech Rate Entrainment and Its Relation to Therapist Empathy in Drug Addiction Counseling. *Paper presented at Interspeech, Dresden, Germany.*
2. Chakravarthula, S.N.*, Xiao, B.*, **Imel, Z.E.**, Atkins, D., Georgiou, P., & Narayanan, S. (September, 2015). Assessing Empathy using Static and Dynamic Behavior Models based on Therapist's Language in Addiction Counseling. *Paper presented at Interspeech, Dresden, Germany.*
2. Xiao, B.*, Bone, D., Van Segbroeck, M., **Imel, Z.E.**, Atkins, D.C., Georgiou, P.G., & Narayanan, S.S. (September, 2014). Modeling therapist empathy through prosody in drug addiction counseling. *Paper presented at Interspeech, Singapore.*
1. Xiao, B.*, Georgiou, P.G., **Imel, Z.E.**, Atkins, D., & Narayanan, S.S. (September, 2013). Modeling therapist empathy and vocal entrainment in drug addiction counseling. *Paper presented at Interspeech, Lyon, France.*

***** Peer Reviewed Conference Proceedings/Workshops are brief full text articles that are broadly considered publications in Engineering.**

BOOK CHAPTERS

8. Wampold, B.E., Baldwin, S.A., grosse Holtforth, M., & **Imel, Z.E.** (2017). There are therapist effects but what characterizes effective therapists? In L. Castonguy & C. Hill (Eds.). Therapist Effects. Washington DC: APA.

7. Baldwin, S.A., & Imel, Z.E. (2013). Therapist Effects: Findings and Methods. In M.J. Lambert, (Ed.), *Bergin and Garfield's Handbook of Psychotherapy and Behavior Change*. (5th ed., p. 258-297). New Jersey: Wiley.
6. Owen, J., & Imel, Z.E. (2010). Utilizing rating scales in psychotherapy practice: Theory & application. In L. Baer & M.A. Blais (Eds.), *Handbook of Clinical Rating Scales and Assessment in Psychiatry and Mental Health*. (pp. 257-270). New York: Humana Press.
5. Imel, Z.E. (2009). Common factors in psychotherapy. In F.T. Leong (Ed.), *Encyclopedia of counseling psychology*. New York: Sage.
4. Imel, Z.E. & Wampold, B. E. (2008). The importance of treatment and the science of common factors in psychotherapy. In S.D. Brown & R.W. Lent (Eds.), *Handbook of counseling psychology* (4th ed). (pp. 249-266). New York: Wiley.
3. Wampold, B.E., Imel, Z.E., Bhati, K.S., & Johnson-Jennings, M.D. (2006). Insight as a common factor. In L.G. Castonguay & C.E. Hill, (Eds.), *Insight in Psychotherapy* (pp. 119-137). Washington DC: APA. doi:10.1037/11532-006.
1. Slaughter, J., & Imel, Z.E. (2005). Conversion disorder: A disorder of somatic self-awareness. In B.D. Beitman & J. Nair, (Eds.), *Self-awareness deficits in Psychiatric Patients: Neurobiology, Assessment, and Treatment*. (pp. 280-297). New York: Norton.

COMMENTS/REJOINDERS/NEWSLETTERS

- Baldwin, S.A., & Imel, Z.E. (in press). Studying Specificity in Psychotherapy with Meta-analysis is Hard. *Psychotherapy Research*.
- Imel, Z.E., Budge, S., & Owen, J. (2017). Introduction to special section on advanced methodology: Counseling the dog to wag its methodological tail. *Journal of Counseling Psychology*.
- Owen, J., & Imel, Z.E. (2016). Introduction to the Special Section, "Bigg'er' data:" Scaling up psychotherapy research in counseling psychology. *Journal of Counseling Psychology*, 63,3,247-8. doi: 10.1037/cou0000149.
- Pace, B.P.*, Xiao, B., Soma, C.S.*, Dembe, A.*, Stevyers, M., Atkins, D.A., Narayanan, S., & Imel, Z.E. (2016). What about the words: Natural language processing in psychotherapy. *Psychotherapy Bulletin*.
- Baldwin, S., Imel, Z.E., Atkins, D.C. (2012). The Influence of therapist variance on the dependability of therapists' alliance scores: *Journal of Consulting and Clinical Psychology*, 80(5), 947-51.
- Wampold, B.E., Imel, Z.E., Miller, S. (2009). Barriers to the dissemination of Empirically Supported Treatments. *The Behavior Therapist*, 32, 144-155.
- McCutcheon, S.R., & Imel, Z.E., (2009). Valuing diversity: How do we implement our best intentions? *The Counseling Psychologist*, 37, 760-771. doi:10.1177/0011000009334094.
- Wampold, B.E., Imel, Z.E., & Minami, T. (2007). The placebo effect: "Relatively large" and "robust" enough to survive another assault. *Journal of Clinical Psychology*, 63, 401-403. doi:10.1002/jclp.20350. PMID: 17279522.

Wampold, B.E., **Imel, Z.E.**, & Minami, T. (2007). The story of placebo effects in medicine: Evidence in context. *Journal of Clinical Psychology*, 63, 379-390. doi:10.1002/jclp.20354. PMID: 17279527.

Wampold, B.E., & **Imel, Z.E.** (2006). Psychotherapy stories: A textbook case of privilege. *PsycCRITIQUES*, 51, no pagination. doi:10.1037/a0002225.

***Student**

****Corresponding Author.**

MANUSCRIPTS UNDER REVIEW

Merced, K.*, **Imel, Z.E.**, Baldwin, S.A., Fischer, H., Yoon, T., Stewart, C., Simon, G., Ahmedani, B., Beck, A., Daida, Y., Hubley, S., Rossom, R., Waitzfelder, B., Zeber, J.E., & Coleman, K.J. (2019) Provider contributions to disparities in mental health care. *Psychiatric Services*. Revise and Resubmit.

Tanana, M.J.*, Soma, C.S.*, Kuo, P.B.*, Dembe, A.*, Pace, B.T.*, Srikumar, V., Atkins, D.C. & **Imel, Z.E.** (2019). How do you feel? Using natural language processing to automatically rate emotion in psychotherapy. Manuscript Under Review.

FUNDING

Active

NIH/NIMHD F31 MD014941

Project Title: Prediction of therapist cultural competency using Natural Language Processing (NLP) models

Role: Sponsor/Mentor (Kuo; PI)

Total Costs: \$90,032; 2/12/20-2/11/2022

PCORI ME-1602-34167

Project Title: Development of Computational Methods for Evaluating Doctor-Patient Communication

Role: PI

Total Costs: \$1,059,486; 8/1/17-7/31/20

NIH/NIMH R56 MH118550

Project Title: Technology supported training and quality assurance for psychosocial interventions

Role: Co-I (T. Creed, D. Atkins, S. Narayanan; MPI)

Total Costs: \$787,097; 2/15/19-1/31/20

NIH/NIDA R01 DA038466-04S1

Project Title: Testing the Leadership and Organizational Change for Implementation (LOCI) Intervention in Substance Abuse Treatment Programs

Role: Co-I (Aarons; PI)

Total Costs: \$95,958; 06/01/2018-05/31/2019

NSF 1822877

Project Title: Technology facilitated Training for Mental Health Counseling

Role: Co-PI (V. Srikumar; PI)

Total Costs: \$749,256; 6/1/18-6/1/21

NIH/NIDA 1 R44 DA046243

Project Title: Technology-supported, measurement-based supervision for MI

Role: Co-I (M. Tanana; PI)

Total Costs: \$1,052,836; 5/1/18-1/1/21

NIH/NIAAA 2 R01 AA018673

Project Title: Implementation of Technology-Based Evaluation of MI

Role: Co-I (D. Atkins & S. Narayanan; MPIs)

Total: Costs: \$3,554,426: 9/1/16 – 8/31/21

Completed

Faculty Research Award, College of Education, University of Utah

Project Title: Behavioral Signal Processing of Cultural Conversations.

Role: PI

Total Costs: \$4,000: 9/1/2016-4/30/18

NIH/NIDA R34 DA034860

Project Title: Development and Feasibility of Computer Based Fidelity Monitoring for MI

Role: PI (D. Atkins; MPI)

Total Costs: \$742,624; 7/1/13 – 6/30/17

Extramural Loan Repayment Program for Clinical Research – Renewal (NIAA; LRP-CR)

9/1/2015-8/31/2016

NIH/NIAAA 1 R01 AA018673

Project Title: Automating Behavioral Coding via Text-mining and Speech Signal Processing

Role: Co-I (D. Atkins & M. Steyvers; MPIs)

Total Costs: \$2,849,613; 9/1/10 – 8/31/16

Non-tenured Faculty Research Grant, College of Education, University of Utah

Project Title: Alone in the Crowd: The Evaluation of Counselor Expertise.

Role: PI

Total Costs: \$3,375; 9/1/14-8/31/15

Extramural Loan Repayment Program for Clinical Research (NIDA; LRP-CR)

9/1/2012-8/31/2014

Institute of Translational Health Sciences (UL1RR025014); NIH National Center for Research Resource, Small Pilot Grant.

Project Title: The feasibility of utilizing administrative outcomes monitoring data to evaluate Cognitive Processing Therapy and Prolonged Exposure

Role: PI (Tracy Simpson, Co-I).

Total Costs: \$9,898; 2/2011-1/2013

University of Utah Seed Grant, VP for Research

Project Title: A model of therapist empathy based on acoustic and semantic synchrony.

Role: PI (John Kircher, Co-I)

Total Costs: \$29,500; 7/1/2012-6/31/2013

Proposal Development Grant, College of Education, University of Utah

Project Title: The source of provider racial/ethnic disparities in mental health outcomes.

Role: PI

Total Direct Costs: \$4,000; 1/15/13-5/1/13

Deans Special Initiative Grant Program, College of Education, University of Utah

Project Title: "The Structure of Psychotherapy: Unsupervised discovery of psychotherapy 'topics' with text-mining procedures"

Role: PI

Total Direct Costs; \$3,425; 9/1/2012-12/31/12

Mental Illness Research, Education, and Clinical Center (MIRECC); Pilot Funds

Project Title: The effect of trauma focus on drop-out in the treatment of post-traumatic and acute stress disorder.

Role: PI

Total Costs: \$2,445; 2010-2011.

Regional Office for Children, Youth and Family Affairs, Tønsberg, Norway

Project Title: Using Client Feedback to Improve Couple Therapy Outcomes: A Randomized Clinical Trial in a Naturalistic Setting.

Role: Statistical Consultant, 2007-2008 (PI: M. G. Anker)

SIAC/Department of Defense (DoD), Center for the Study of Therapeutic Change

Project Title: Effectiveness of Adolescent Substance Abuse Counseling Services for Adolescent Family Members of Active Duty Military Personnel.

Role: Statistical Consultant; 2006-2007 (PI: S. Miller)

Pending

NSF 1928287

Project Title: Computer-Mediated Collaborative Learning in Mental Health Clinical Training

Amount Requested: \$1,443,058

Role: Co-PI (E. Poitras; PI)

NIH/NIMHD R01 MD429656

Project Title: Disparities in Depression Care and Outcomes.

Amount Requested: \$3,880,424

Role: PI

INTERNATIONAL PRESENTATIONS

Caperton, D. D., Davies, D. R., Minami, T. M., & **Imel, Z.E.** (2018, October). How master therapist qualities affect client outcomes in a university counseling center. Poster presented at the second meeting of the Canadian Counseling Psychology Conference, Calgary, AB.

Imel, Z.E. (June, 2015). Computational approaches to mining the raw data of psychotherapy. In O. Gelo (Chair), *Text analysis in psychotherapy research: Between quantitative and qualitative approaches. Participant in structured Discussion at the 46th annual meeting of the International Society for Psychotherapy Research, Philadelphia, Pennsylvania.*

Imel, Z.E., Sheng, E., Baldwin, S.A., & Atkins, D.C. (June, 2015). Removing very low-performing therapists: A simulation of performance-based retention in

psychotherapy. *Paper presented at the 46th annual meeting of the International Society for Psychotherapy Research, Philadelphia, Pennsylvania.*

Dembe, A., & Imel, Z.E. (June, 2015). Co-variation of therapist and client emotional valence in Motivational Interviewing. *Poster presented at the 46th annual meeting of the International Society for Psychotherapy Research, Philadelphia, Pennsylvania.*

Pace, B., & Imel, Z.E. (June, 2015). Using the wisdom of the client crowd to predict therapist performance. *Poster presented at the 46th annual meeting of the International Society for Psychotherapy Research, Philadelphia, Pennsylvania.*

Bryan, C.J., Griffith, J., Pace, B.T., Hinkson, K., Bryan, A.O., Clemans, T.A., & **Imel, Z.E.** (June 2015). Combat exposure and risk for suicidal thoughts and behaviors among military personnel and veterans: a systematic review and meta-analysis. In C.J. Bryan (Chair), *Advances in understanding suicide in the U.S. military*. Paper presented at the biennial meeting of the International Association for Suicide Prevention, Montreal, Canada.

Atkins, D.C., & **Imel, Z.E.** (June, 2014). Computational psychotherapy research: Can we use technology to scale up patient/provider evaluation? *The Language of Interaction: Quantitative Tools from Engineering, Computer Science, and Clinical Psychology*. Volkswagenstiftung, Heidelberg, Germany.

Imel, Z.E. (June, 2014). Empathy: What is it, and how do we measure it? *The Language of Interaction: Quantitative Tools from Engineering, Computer Science, and Clinical Psychology*. Volkswagenstiftung, Heidelberg, Germany.

Steyvers, M., **Imel, Z.E.**, Atkins, D., & Smyth, P. (October, 2014). Computational Psychotherapy. *Asia-Pacific Conference on Computational Behavioral Sciences*. Seoul, Korea.

Imel, Z.E., Baer, J. Martino, S.M., Ball, S., Carroll, K. (2010, June). Client related effects on therapist adherence and competence in motivational enhancement therapy (MET). *Paper presented at the 41st annual meeting of the International Society for Psychotherapy Research, Asilomar, CA.*

Imel, Z.E., Wampold, B.E., Baldwin, S., & Baardseth, T. (2008, June). An empirically derived estimate of cultural competence in the cannabis youth treatment study. *Paper presented at the 39th annual meeting of the International Society for Psychotherapy Research, Barcelona, Spain.*

Wampold, B.E., **Imel, Z.E.**, & Baardseth, T. (2008, June). Methods for empirically estimating cultural competence. *Paper presented at the 39th annual meeting of the International Society for Psychotherapy Research, Barcelona, Spain.*

Owen, J., **Imel, Z.E.**, Tao, K.W., Smith, A., & Rodolfa, E. (2008, June). Cultural ruptures: A preliminary multilevel examination of racial microaggressions in psychotherapy. *Paper presented at the 39th annual meeting of the International Society for Psychotherapy Research, Barcelona, Spain.*

Imel, Z.E., Baldwin, S.A., & MacCoon, D., Bonus, K. (2007, June). Group effects in a mindfulness based stress reduction program. *Paper presented at the 38th annual meeting of the International Society for Psychotherapy Research, Madison, WI.*

Imel, Z.E., Guequierre, L., Montero, R., Scull, N., Wampold, B.E. (2007, June). A meta-analysis of bona-fide treatments for alcohol use disorders. *Poster presented at the 38th annual meeting of the International Society for Psychotherapy Research, Madison, WI.*

Imel, Z.E., & Wampold, B.E. (2006, June). Content or context: The implications of psychotherapy research for applied neuroscience. *Paper presented at the annual meeting of the 37th International Society for Psychotherapy Research, Edinburgh, UK.*

Imel, Z.E., Malterer, M., McKay, K.M., & Wampold, B.E. (2006, June). Null again!? A meta-analysis of medication vs. psychotherapy comparison trials for depression. *Poster presented at the 37th annual meeting of the International Society for Psychotherapy Research, Edinburgh, UK.*

NATIONAL PRESENTATIONS

Imel, Z.E., Atkins, D.C. (Chairs, September, 2018). The Digital Exploration of Psychotherapy (DEPTH) Project. Symposium presented at the Annual Meeting of North American Society for Psychotherapy Research. Snowbird, Utah. Discussant: Michael Constantino

Imel, Z.E., Van Epps, J., Huebner, L., Narayanan, S., & Atkins, D.C. (September, 2018). Psychotherapy + Machine Learning: An Overview of the Digital Exploration of Psychotherapy Project. Paper presented at the Annual Meeting of North American Society for Psychotherapy Research. Snowbird, Utah.

Pace, B.T., Soma, T., & Hirsch, T., Atkins, D.C., & **Imel, Z.E.** (September, 2018). Enhancing Supervision with Novel Technologies: Key Design Challenges. Paper presented at the Annual Meeting of North American Society for Psychotherapy Research. Snowbird, Utah.

Goldberg, S.B., **Imel, Z.E.**, Narayanan, S., & Atkins, D.C. (September, 2018). Evaluating the Quality of Therapeutic Alliance from Session Content. Paper presented at the Annual Meeting of North American Society for Psychotherapy Research. Snowbird, Utah.

Tanana, M., **Imel, Z.E.**, Narayanan, S., & Atkins, D.C. Automatic Prediction of Symptom Change in Psychotherapy from Session Recordings. Paper presented at the Annual Meeting of North American Society for Psychotherapy Research. Snowbird, Utah.

Solomonov, N. (Chair, September, 2018). Panelists: Robert Ashford, **Zac Imel**, Joshua Swift. Many Data points, Many Changes: Novel and Cutting-Edge Approaches to Change in Psychotherapy Research. Presented at the Annual Meeting of North American Society for Psychotherapy Research. Snowbird, Utah.

Caperton, D.C., Whitely, A., Kuo, P., Hashtpari, H., Allred, H., **Imel, Z.E.**, Dorn, U.P. (September, 2018). When Learning to Be a Therapist Isn't Just Intellectual: Describing the Physiological Arousal of Therapists-in-Training During Multicultural Process Groups. Poster presented at the Annual Meeting of North American Society for Psychotherapy Research. Snowbird, Utah.

Caperton, D. D., Davies, D. R., Minami, T. M., & Imel, Z. E. (2018, August). Prediction of client outcomes from therapist attachment orientation. Poster presented at the annual meeting of the American Psychological Association, San Francisco, CA.

- Merced, K., **Imel, Z.E.**, Coleman, K.J., Coleman, K.J., Simon, G. (September, 2018). The Impact of Client-Therapist Language Concordance on Adhering to Psychotherapy. Poster presented at the Annual Meeting of North American Society for Psychotherapy Research. Snowbird, Utah.
- Caperton, D.D., Baldwin, S.A., Kuo, P., Atkins, D.C., **Imel, Z.E.** (September, 2018). Who's Your Therapist?: Naturalistic Psychotherapy Data is Not Nested. Poster presented at the Annual Meeting of North American Society for Psychotherapy Research. Snowbird, Utah.
- Kuo, P.B., Tao, K.W., **Imel, Z.E.** (September, 2018). Wait, What?: Identification and Emotional Impact of Micro-Aggressions in Psychotherapy Vignettes. Poster presented at the Annual Meeting of North American Society for Psychotherapy Research. Snowbird, Utah.
- Soma, C.S., Kuo, P.B., **Imel, Z.E.**, Atkins, D.C. (September, 2018). The Silent Treatment: The Relationship of Silence in Psychotherapy to Treatment Outcomes. Poster presented at the Annual Meeting of North American Society for Psychotherapy Research. Snowbird, Utah.
- Pace, B. T.*, Tanana, M.*, Smyth, P., Atkins, D. C., & **Imel, Z. E.** (2018, September). "It looks like it's going to snow." Detecting small-talk in psychotherapy. Panel presented at the Society for Psychotherapy Research North American Conference, Snowbird, Utah.
- Pace, B. T.*, Huebner, L., Davies, D. R., & **Imel, Z. E.** (2018, August). Determining therapist contribution to the relationship between multicultural competence and outcome. Poster presented at the meeting of the American Psychological Association, San Francisco, CA.
- Imel, Z.E.** (August, 2018). It Takes Two: Modeling the Process of Mutual influence Psychotherapy. In Symposium; Client factors in psychotherapy. Chairs, Jairo Fuertes and Libby Nut Williams. Presented at the annual Convention of the American Psychological Association, San Francisco, CA.
- Imel, Z.E.** (August, 2018). Machine Learning to Support Psychotherapy Research and Training: Scalable PerformanceBased Feedback. In Symposium; Personalizing Mental Health Care through Disruptive, EvidenceInformed Innovations to Psychotherapy. Chair, Michael J Constantino. Presented at the annual Convention of the American Psychological Association, San Francisco, CA.
- Soma, C.*, Xiao, B., Butner, J., Hilpert, P., Baucom, B.R., Narayanan, S., Atkins, D.A., & **Imel, Z.E.** (2016, July). Social Regulation of Emotion: Using Dynamic Systems to Explore potential mechanisms in psychotherapy. *Paper Presented to The Society for Chaos Theory in Psychology & Life Sciences, 25th Annual Conference, Salt Lake City, UT.*
- Soma, C. S.*, Xiao, B., Butner, J. B., Hilbert, P., Baucom, B.R., Narayanan, S., Atkins, D.C., & **Imel, Z.E.*** (2016, August). Using Dynamic Systems to Model the Therapeutic Relationship. *Poster presented at the American Psychological Association, 124th Annual Convention, Denver, CO.*
- Tanana, M.J.*, Soma, C.S.*, Narayanan, S., Atkins, D.C., & Imel, Z.E. (2016, August). Therapy Bot: A self-taught computerized therapist. *Poster Presented at the American Psychological Association, 124th Annual Convention, Denver, CO.*
- Merced, K.*, Caperton, D.D.*, **Imel, Z.E.**, Atkins, D. A., & Creed, T. (2016, October). *Variability in therapist adherence to CBT in community behavioral health.* Poster presented at the annual meeting of the Association for Behavioral and Cognitive Therapies. New York, NY.

- Caperton, D.D.*, Merced, K.*, Atkins, D. C., & **Imel, Z.E.** (2016, October). Rating Motivational Interviewing therapist fidelity from thin slices: How thin can we go? Poster presented at the annual meeting of the Association for Behavioral and Cognitive Therapies. New York, NY.
- Merced, K.*, **Imel, Z.E.**, Coleman, K., & Simon, G.E. (March 2016). *The Mental Health Provider as a Source of Racial and Ethnic Disparities in Antidepressant Adherence*. Poster presented at: Annual Meeting of the University of Utah's College of Education Student Research Fair. Salt Lake City, UT.
- Pace, B.T.*, Dembe, A.*, Soma, C. S.*, Tanana, M., Caperton, D.D.*, Merced, K.*, Bellefontaine, W.*, Gibson, J., Hirsch, T., Narayanan, S., Atkins, D.C., & **Imel, Z.E.** (2016, March). *Developing automated therapist feedback for Motivational Interviewing: The Counselor Observer Ratings Expert for MI (CORE-MI)*. Poster presented at the annual meeting of the University of Utah's College of Education Student Research Fair, Salt Lake City, UT.
- Pace, B. T.*, Dembe, A. *, Soma, C. S.*, Tanana, M.*, Caperton, D.D.*, Merced, K. *, Gibson, J., Gray, G., Hirsch, T., Narayanan, S., Atkins, D.C., **Imel, Z.E.** (2016, October). *Developing automated therapist feedback for Motivational Interviewing: The Counselor Observer Ratings Expert for MI (CORE-MI)*. Poster presented at the Association for Behavioral and Cognitive Therapies Conference, New York, NY.
- Pace, B. T.*, Goldberg, S.B., Huebner, L., Davies, R., & **Imel, Z.E.** (2016, August). Therapist and client variability via alliance, satisfaction, and cultural competence ratings. In J. Lichtenberg (Co-Chair), R. K. Goodyear (Co-Chair), Z.E. Imel (Co-Chair), *The Determination and Promotion of Expertise in Psychotherapy*. Paper presented at the 124th annual convention of the American Psychological Association, Denver, CO.
- Hallgren, K.A., Pace, B.*, Dembe, A. *, Dunn, C.W., Atkins D.C., & **Imel, Z.E.** (August, 2016). Variability in adherence to Motivational Interviewing across therapists, settings, and time. In J. Lichtenberg (Co-Chair), R. K. Goodyear (Co-Chair), Z.E. Imel (Co-Chair), *The Determination and Promotion of Expertise in Psychotherapy*. Paper presented at the 124th annual convention of the American Psychological Association, Denver, CO.
- Owen, J., **Imel, Z.E.**, Driane, J., & Kopta, M. (August, 2016). Therapist expertise: The collective perspective. In J. Lichtenberg (Co-Chair), R. K. Goodyear (Co-Chair), Z.E. Imel (Co-Chair), *The Determination and Promotion of Expertise in Psychotherapy*. Paper presented at the 124th annual convention of the American Psychological Association, Denver, CO.
- Lichtenberg, J., Goodyear, R., & **Imel, Z.E.** (Chairs, August, 2016) "The Development of Expertise in Psychotherapy. *Symposium presented at the 124th Annual Convention of the American Psychological Association, Denver, CO.*
- Soma, C. *, Xiao, B., Butner, J., Hilpert, P., Baucom, B.R., Narayanan, S., Atkins, D.A., & **Imel, Z.E.** (October, 2016). Social Regulation of Emotion: A mechanism in patient-therapist interactions in psychotherapy. In **Imel, Z.E.**, & Baucom, B. (Chairs) "A systems approach to modeling intra and inter-personal processes in psychotherapy and psychopathology. *Symposium presented at the Association for Behavioral and Cognitive Therapies Conference, New York, NY.*

- Imel, Z.E.**, & Baucom, B. (Chairs, October, 2016) "A systems approach to modeling intra and inter-personal processes in psychotherapy and psychopathology. *Symposium presented at the Association for Behavioral and Cognitive Therapies Conference, New York, NY.*
- Merced, K., **Imel, Z.E.**, Fischer, H., Yoon, T., Waitzfelder, B., Stewart, C., Coleman, K. J., Simon, G. (November, 2016). The Mental Health Provider as a Source of Racial and Ethnic Disparities in Adherence to Antidepressant and Psychotherapy. In J. Owen (Moderator), *Multicultural Processes in Psychotherapy Research. Symposium presented at the North American Society for Psychotherapy Research Annual Convention, Berkeley, CA.*
- Imel, Z.E.**, Xiao, B., Georgiou, P., Narayanan, S., & Atkins, D. (May, 2015). Scaling up the evaluation of Motivational Interviewing: Modeling MI adherence with statistical text mining and speech signal processing. In S. Martino (Chair), *Training Motivational Interviewing: New Directions in Research. Symposium presented at the 27th Association of Psychological Science Annual Convention, New York, NY.*
- Imel, Z.E.**, Xiao, B., Georgiou, P., Narayanan, S., & Atkins, D. (May, 2015). Scaling up the evaluation of Motivational Interviewing: Modeling MI adherence with statistical text mining and speech signal processing. In S. Martino (Chair), *Training Motivational Interviewing: New Directions in Research. Symposium presented at the 27th Association of Psychological Science Annual Convention, New York, NY.*
- Atkins, D.A., **Imel, Z.E.**, Steyvers, M. (November, 2014). How text-mining methods can enhance psychotherapy mechanism research. In (N. Jacobson, Chair). *Novel Analytic Methods to Clinical Psychology. Symposium presented at Association for Behavioral and Cognitive Therapies, 48th Annual Convention, Philadelphia, PA.*
- Lord, S.P., Sheng, E., **Imel, Z.E.**, Baer, J.S., & Atkins, D.A. (November, 2014). More Than Reflections: Empathic Listening in Motivational Interviewing Includes Language Style Matching Between Counselor and Client. *Poster presented at Association for Behavioral and Cognitive Therapies, 48th Annual Convention, Philadelphia, PA.*
- Pace, B., **Imel, Z.E.**, Atkins, D.A., Baldwin, S.A., Lord, S.P., Dembe, A.*, Soma, T.* (November, 2014). Why Does Motivational interviewing Work? A Network Meta-Analysis of Adherence and Outcomes. *Poster presented at Association for Behavioral and Cognitive Therapies, 48th Annual Convention, Philadelphia, PA.*
- Atkins, D.A., & **Imel, Z.E.** (Chairs, November, 2014) "Siri, Rate My Therapist": Interdisciplinary Research on Scaling Up the Evaluation of Psychotherapy. *Symposium presented at Association for Behavioral and Cognitive Therapies, 48th Annual Convention, Philadelphia, PA.*
- Imel, Z.E.**, Lord, S.P., Sheng, E., & Baer, J.S., (November, 2014). Translational psychotherapy research: using computational methods to study the basic psychological processes of psychotherapy. In (Dave Atkins & **Zac Imel**, Chairs) "Siri, Rate My Therapist": Interdisciplinary Research on Scaling Up the Evaluation of Psychotherapy. *Symposium presented at Association for Behavioral and Cognitive Therapies, 48th Annual Convention, Philadelphia, PA.*
- Baucom, B.R., Crenshaw, A.O., Atkins, D.C., **Imel, Z.E.**, Bryan, C.J. (November, 2014). Collaborative emotional processes during crisis intervention for suicidality. In (Craig Bryan, Chair) Brief Cognitive Behavioral Interventions to Reduce Suicide Attempts in Military

Personnel. *Symposium presented at Association for Behavioral and Cognitive Therapies, 48th Annual Convention, Philadelphia, PA.*

- Atkins, D.A., & Imel, Z.E. (May, 2014). Computational psychotherapy research: Can we use technology to scale up patient/provider evaluation? Prevention Science Methodology Group, Center for Prevention Implementation Methodology, Northwestern University, Feinberg School of Medicine, Chicago, IL
- Imel, Z.E. (Chair, November, 2013). Developing Linguistic Models of Motivational Interviewing: An Interdisciplinary Collaboration. *Symposium presented at Association for Behavioral and Cognitive Therapies, 47th Annual Convention, Nashville, TN.*
- Imel, Z., Barco, J.*, Brown, H.*, Baucom, B., Xiao, B., Baer, J., & Atkins, D. (November, 2013). Vocal tone synchrony as an indicator of empathy during motivational interviewing. In (Zac Imel, Chair) Developing Linguistic Models of Motivational Interviewing: An Interdisciplinary Collaboration. *Symposium presented at Association for Behavioral and Cognitive Therapies, 47th Annual Convention, Nashville, TN.*
- Imel, Z.E. (Chair; August, 2013). Interpersonal Influence in Psychotherapy. *Symposium sponsored by Section for the Promotion of Psychotherapy Science (Division 17; Counseling Psychology) at the 121st Annual Convention of the American Psychological Association, Honolulu, HI.*
- Imel, Z.E., Hunt, T.*, Barco, J.*, Brown, H.*, Kelly, A.*, & Atkins, D. (August, 2013). Coordination of Emotion Word Use in Therapist--Client Psychotherapy Dyads. In (Zac Imel, Chair) Interpersonal Influence in Psychotherapy. *Symposium sponsored by Section for the Promotion of Psychotherapy Science (Division 17; Counseling Psychology) at the 121st Annual Convention of the American Psychological Association, Honolulu, HI.*
- Imel, Z.E. (August, 2013). Our time's up: Towards real-time evaluation of psychotherapy. In (Mark Hilsenroth, Chair) Interpersonal Influence in Psychotherapy. Celebrating the 50th Anniversary of *Psychotherapy*---Looking Ahead to the Next Decade of Research (Division 29; Psychotherapy) at the 121st Annual Convention of the American Psychological Association, Honolulu, HI.
- Atkins, D., Imel, Z.E., Can, D., Xiao, B., Georgiou, P., Narayanan, S. (May, 2013). Scaling up assessment of therapist fidelity in Motivational Interviewing: Preliminary development of the 'AutoMITI'. *Presentation to the Seattle Implementation Research Conference, Seattle, WA.*
- Imel, Z.E. (August, 2012). Emotional attunement: Toward a linguistic model of therapist empathy. In (Jeff Reese, Chair) New Ideas and Innovations in Psychotherapy. *Symposium sponsored by Section for the Promotion of Psychotherapy Science (Division 17; Counseling Psychology) at the 120th Annual Convention of the American Psychological Association, Orlando, FL.*
- Barco, J.*, & Imel, Z.E. (March, 2012). The effects of self-defense training on self-efficacy and self-esteem: A meta-analysis. *Poster presented at the Association for Women in Psychology Conference. Palm Springs, CA.*
- Owen, J., Imel, Z., & Wampold, B. (2011). New directions for multicultural competencies research. *Symposium at the annual meeting of the American Psychological Association, Washington, D.C.*

- Owen, J. **Imel, Z.**, Tao, K., & Obasi, E. (August, 2009). Racial/Ethnic microaggressions: Empirical evidence for understanding cultural ruptures in psychotherapy. *Symposium presented at the 117th Annual Convention of the American Psychological Association, Toronto, Ontario, Canada.*
- McKay, K.M., **Imel, Z.E.**, Woods, T.E., & Hoyt, W.T. (April, 2009). Drop-out in psychosocial oncology Treatment: A comparison of group- and treatment-effects in a mixed cancer sample. *Poster presented at the annual conference of the Society of Behavioral Medicine, Montreal, Canada.*
- Imel, Z.E.**, Guequierre, L., Montero, R., Scull, N., & Wampold, B.E. (2007, August). A meta-analysis of bona-fide treatments for alcohol use disorders: The effects of allegiance. *Poster presented at the annual meeting of the American Psychological Association, San Francisco, CA.*
- Benish, S.M., **Imel, Z.E.** (2007, August). A meta-analysis of bona fide psychotherapies for post-traumatic stress disorder. *Poster presented at the annual meeting of the American Psychological Association, San Francisco, CA.*
- Baldwin, S.A., Wampold, B.E., **Imel, Z.E.** (2007, August). Patient and therapist contributions to the alliance. *Poster presented at the annual meeting of the American Psychological Association, San Francisco, CA.*
- Imel, Z.E.**, & Wampold, B.E. (2006, October). Therapist effects: Conceptually simple, methodologically complex, strategically important. *Paper presented at the annual meeting of the North American Chapter, Society for Psychotherapy Research, Burr Oak, OH.*
- McKay, K.M., & **Imel, Z.E.** (2006, October). Psychiatrist effects in the psychopharmacological treatment of depression. *Paper presented at the annual meeting of the North American Chapter, Society for Psychotherapy Research, Burr Oak, OH.*
- Wampold, B.E., **Imel, Z.E.**, Bhati, K.S., & Johnson-Jennings, M.D. (August, 2006). Insight as a common factor. In (Louis G. Castonguay & Clara E. Hill, Chairs) Insight in psychotherapy: Theoretical perspectives and clinical issues. *Symposium at the 114th Annual Convention of the American Psychological Association, New Orleans, LA.*
- Imel, Z.E.** (2006, April). Discussant (F.B.M. de Waal, Author). Emotions in our primate kin: Sociality cooperation, and empathy. *Symposium presented at the annual Wisconsin Symposium on Emotion, Madison, WI.*
- Imel, Z.E.** (2005, April). Discussant (H.K. Manji, Author). Impairments of cellular plasticity and resilience in severe mood disorders: Therapeutic Implications. *Symposium presented at the annual Wisconsin Symposium on Emotion, Madison, WI.*

REGIONAL/LOCAL PRESENTATIONS

- Imel, Z.E., (October, 2018). "Empathy and the Machine: Technology and the future of Psychotherapy" Invited Keynote, Convention for the Oklahoma Psychological Association. Tulsa, Oklahoma.
- Caperton, D.D.*, Kuo, P.*, Tanana, M.*, Pace, B.T.*, Huebner, L., Narayanan, S. S., Imel, Z. E., & Atkins, D. C. (2017). Digital Exploration of Psychotherapy (DEPTH): Developing an

instant clinician feedback system at the University of Utah Counseling Center. Poster presented at the annual meeting of the Utah University Counseling Centers Conference, Salt Lake City, UT.

Imel, Z.E. (2017, January). Data Science + Mental Health (Psychotherapy Edition). Data Science Day, University of Utah. Invited Talk.

Imel, Z.E. (2017, February). The Psychotherapy Debate: Where are we and What's next. Grand Rounds presented to George E. Whalen VA. Salt Lake City, Utah.

Soma, C.S.*, & Imel, Z. E. (2015, April). Social Regulation of Emotion: A mechanism in patient-therapist interactions in psychotherapy. *Poster presented at the Graduate Student Research Fair, College of Education, University of Utah, Salt Lake City, UT.*

Melling, A. *, & Imel, Z.E. (November, 2014). The 80/20 Problem at the UCC: "Brief Treatment" and the Utilization of Services in the University Counseling Center. *Presentation to University Counseling Center Staff Development Seminar.* University of Utah, Salt Lake City, Utah.

Imel, Z.E. (October, 2014). Empathy and the Machine. *Data Group Meeting, School of Computing, University of Utah. Salt Lake City, Utah.*

Imel, Z.E. (April, 2014). Towards machine generated therapist feedback. *Didactics for Psychology Interns, VA Salt Lake City Healthcare System.* Salt Lake City, Utah.

Imel, Z.E. (April, 2014). Computational psychotherapy research: Implications of scaling up the evaluation of client-therapist interactions. *Presentation to University Counseling Center Staff Development Seminar.* University of Utah, Salt Lake City, Utah.

Imel, Z.E. (December, 2012). Visualizing the state of psychotherapy research. *Invited address to clinical research conference Clinical Psychology Program, Brigham Young University, Provo, Utah.*

Barco, J. *, & Imel, Z.E. (April, 2012). The effects of self-defense training on self-efficacy and self-esteem: A meta-analysis. *Poster presented at Graduate Student Research Fair, College of Education, University of Utah, Salt Lake City, UT.*

Imel, Z.E. (2012, May). An introduction to 'R' for social scientists. *Invited training given to Learning Sciences Faculty at University of Utah. Salt Lake City, UT.*

Imel, Z.E. (2011, March). The role of the therapist in the process and outcome of psychotherapy *Invited lecture given to VA Puget Sound Pre-doctoral clinical psychology interns. Seattle, WA.*

Imel, Z.E. (2011, January). Determining the most effective PTSD treatments. *Invited lecture given to VISN 20 Mental Illness Research, Education, and Clinical Center, Veterans Administration VA Puget Sound Seattle, WA.*

Imel, Z.E. (2009, March). The effect of trauma focus on the effectiveness of PTSD treatments. *Invited lecture given to PTSD Outpatient Clinic, VA Puget Sound. Seattle, WA.*

Imel, Z.E. (2007, December). Therapist effects: An empirical perspective on multicultural competence. *Invited lecture given to evidence based practice seminar for pre-doctoral*

interns at University of Wisconsin-Madison, Counseling and Consultation Services, Madison, WI.

- Imel, Z.E.** (2007, July). Myth and the healing context. *Invited lecture to research methods course for masters in counseling psychology program at University of Wisconsin-Madison, Madison, WI.*
- Imel, Z.E.** (2006, October). Common factors research in psychotherapy. *Invited lecture to theories of counseling and psychotherapy course for masters in counseling psychology program at University of Wisconsin-Madison, Madison, WI.*
- Imel, Z.E., & MacCoon, D.** (2005, December). A proposed psychology of healing: Implications for integrative medicine. *Invited lecture to the staff of Integrative Medicine at the University of Wisconsin, Madison, WI.*
- McKay, K.M., **Imel, Z.E., & Wampold, B.E.** (2005, November). Psychiatrist effects in the NIMH TDCRP study. *Paper presented at the Madison chapter of the Society for Psychotherapy Research, Madison, WI.*
- Imel, Z.E.** (2005, June). Common factors research in psychotherapy: Implications for training. *Invited lecture given to Theories of Psychotherapy Course for the Masters in Family Therapy program students at Edgewood College, Madison, WI.*
- McKay, K.M., **Imel, Z.E., & Wampold, B.E.** (2005, March). Psychiatrist effects in the NIMH TDCRP study. *Poster presented at the annual Wisconsin Psychological Association Conference. Middleton, WI.*
- Imel, Z.E.** (2004, December). Explanation and 'truth' in psychotherapy. *Invited lecture to the Behavioral Research Seminar at the Wisconsin Psychiatric Institute and Clinics, Madison, WI.*
- Nichols, G., Huffman, K., Moore, L., Sommerfeld, A.K., Fillingame, L., Benish, S., & **Imel, Z.E.** (March, 2004). Model of professional multicultural development. *Paper presented at University of Wisconsin-Madison Social Justice Conference, Madison, WI.*
- Christenson, T.K., & **Imel, Z.E.** (2002, November). Narrative/Storytelling in career counseling. *Paper presented at the University of Missouri Career Center Conference, Columbia, MO.*
- Imel, Z.E., Lomax, S.K., & Butner, L.** (1999, November). Effects of long-term marijuana use on gestalt impaired stroop effect. *Paper presented at the Mid-American Undergraduate Psychology Research Conference, Charleston, IL.*

COURSES TAUGHT

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| 2013-2015 | Department of Psychiatry, PGY 3-4. Psychotherapy Research Seminar. |
| 2013-2017 | EDPS 7860: Emotion and Cognition, University of Utah |
| 2011-2014 | EDPS 6200; Counseling Theories, University of Utah |
| 2012-2019 | EDPS 6210; Counseling Skills, University of Utah |
| 2012-2017 | EDPS 7600; Adult Diagnostic Psychopathology, University of Utah |

- 2012-2019 EDPS 7430; Research in Counseling Psychology, University of Utah
- Spring 2012 EDPS 7710; Practicum in Counseling Psychology, University of Utah
- 2011-2019 ED PS 6860; Research Seminar, University of Utah
- Summer 2012 PSY 4800; Research Experience, University of Utah
- 2009 - 2011 Facilitator, PTSD Clinical Trials Journal Club, VA Puget Sound Healthcare System – Seattle Division.
- Summer 2008 Teaching Assistant, Research Methods II: Multiple Regression and Correlation, Department of Counseling Psychology, University of Wisconsin-Madison.
- Fall 2006 Teaching Assistant, Theories of Counseling and Psychotherapy, Department of Counseling Psychology, University of Wisconsin-Madison.
- 2003-2005 Teaching Assistant, Theory and Practice of Interviewing, Department of Counseling Psychology, University of Wisconsin-Madison.
- Fall 2003 Teaching Assistant, Career Explorations, Department of Counseling Psychology, University of Missouri-Columbia.

MENTORING

Dissertations Chaired

- 2014 Elizabeth (Proemmel) Duszak, Associate Director for Student Affairs, Assessment, Evaluation, & Research, University of Utah
- 2014 Amy Melling, Independent Practice, Austin, Texas
- 2015 Sara Owen, Psychologist, George E. Wahlen Department of Veterans Affairs Medical Center, Salt Lake City, Utah
- 2018 Michael Tanana, Research Assistant Professor, College of Social Work, University of Utah
- 2019 Brian Pace, Post-doctoral Fellow, *Lyssn.io*

SERVICE

- 2019-2021 *Member*, Retention, Promotion, Tenure Committee, College of Education, University of Utah, Salt Lake City
- 2019-Present *Director of Clinical Training*, Counseling Psychology Program, Department of Educational Psychology, College of Education, University of Utah, Salt Lake City
- 2016-2018 *Chair*, Art Committee, Department of Educational Psychology, College of Education, University of Utah, Salt Lake City
- 2016-2018 *Director of Graduate Studies*, Department of Educational Psychology, College of Education, University of Utah, Salt Lake City

- 2015-2018 *Member*, University Research Committee, University of Utah, Salt Lake City, Utah.
- 2012-2017 *Member*, Diversity Committee, Department of Educational Psychology, University of Utah, Salt Lake City, Utah.
- 2012-2017 *Member*, Faculty Grant Review Committee, College of Education, University of Utah, Salt Lake City, Utah.
- 2012-Present *Member*, Center for the Advancement of Technology in Education (CATE), College of Education, University of Utah, Salt Lake City, Utah.
- 2012-2014 *Chair*, Section for the Promotion of Psychotherapy Science (Division 17; Counseling Psychology), American Psychological Association.
- 2012-2019 *Board Member*, Section for the Promotion of Psychotherapy Science (Division 17; Counseling Psychology), American Psychological Association.
- 2011-Present *Staff Associate*, University Counseling Center, University of Utah

REVIEWING/EDITORIAL

Editorial

- 2018-2019 *Guest Editor*, Journal of Counseling Psychology
- 2013-Present *Associate Editor*, Psychotherapy
- 2019-Present *Consulting Editor*, Psychotherapy Research
- 2017 *Co-Editor, Special Section, Applications of Advanced Methodology*, Journal of Counseling Psychology
- 2016 *Co-Editor, Special Section, "Bigg'er" Data: Scaling up Psychotherapy Research in Counseling Psychology*, Journal of Counseling Psychology
- 2014-2019 *Consulting Editor*, Journal of Counseling Psychology
- 2010-2013 *Consulting Editor*, Psychotherapy

Ad hoc

- 2019 *Ad hoc Reviewer*, The Counseling Psychologist
- 2017 *Ad hoc Reviewer*, Sage Open
- 2016 *Ad hoc Reviewer*, Perspectives on Psychological Science
- 2009-2019 *Ad hoc Reviewer*, Psychotherapy Research
- 2010,2015-19 *Ad hoc Reviewer*, Journal of Consulting and Clinical Psychology
- 2015 *Ad hoc Reviewer*, Group Dynamics: Theory, Research, & Practice
- 2015 *Ad hoc Reviewer*, Interaction Studies
- 2015 *Ad hoc Reviewer*, Frontiers in Psychology
- 2015 *Ad hoc Reviewer*, Psychology of Addictive Behaviors
- 2015 *Ad hoc Reviewer*, IEEE Transactions on Affective Computing
- 2015 *Ad hoc Reviewer*, Clinical Psychology Review
- 2014 *Ad hoc Reviewer*, Military Psychology
- 2014 *Ad hoc Reviewer*, Annals of Internal Medicine
- 2014 *Ad hoc Reviewer*, Journal of Substance Abuse Treatment
- 2010-2013 *Ad hoc Reviewer*, Journal of Counseling Psychology
- 2013 *Ad hoc Reviewer*, Clinical Psychology: Research and Practice
- 2012 *Ad hoc Reviewer*, Psychological Assessment

2011 *Ad hoc Reviewer*, Counseling and Psychotherapy
2009 *Ad hoc Reviewer*, Addiction
2009 *Ad hoc Reviewer*, Psychology and Psychotherapy: Theory, Research and Practice
2009 *Ad hoc Reviewer*, Training & Education in Professional Psychology
2008 *Ad hoc Reviewer*, American Journal of Orthopsychiatry

Conference

2018 Co-Chair, Local Organizing Committee, North American Society for Psychotherapy Research, Annual Conference, Snowbird, Utah.
2016 *Program Committee*, North American Chapter of the Association for Computational Linguistics: Human Language Technologies – Computational Linguistics and Clinical Psychology Workshop.