

Errata List

This errata sheet lists errors and their correction for the doctoral thesis of Saulius Sakavičius, titled “Improvement of Learning-Based Methods for Localization of Multiple Sound Sources” (*Mokymu grįstų metodų keliems garso šaltiniams lokalizuoti tobulinimas*), Vilnius Gediminas Technical University, 2021, scientific book No. 2021-050-M. Pdf link: <http://dspace.vgtu.lt/handle/1/4309>.


Location	Error	Correction
Page vii, par. 1, line 10	MAE – Mean Average Error	MAE – Mean <u>Absolute</u> Error
Page 12, par. 3, line 18	Two element acoustic arrays are referred to as binaural arrays (Löllmann et al. 2018).	<u>In the scope of this thesis</u> , two element acoustic arrays are referred to as binaural arrays.
Page 12, par. 3, line 19	<...> (ILD), interaural time difference (ITD) and interaural phase difference (IPD).	<...> (ILD), interaural time difference (ITD) and interaural phase difference (IPD). <u>ILD, IPD and ITD are used not only in context of biological auditory systems, but also in microphone-based auditory systems (Birchfield, Gangishetty 2005).</u> S. T. Birchfield and R. Gangishetty. 2005. Acoustic localization by interaural level difference, in <i>Proceedings. (ICASSP '05). IEEE International Conference on Acoustics, Speech, and Signal Processing.</i> , pp. iv/1109-iv/1112 Vol. 4, doi: 10.1109/ICASSP.2005.1416207.
Page 16, par. 3, line 13	Existing source <...> time-difference of arrival (TDoA) information (DiBiase et al. 2001).	“Existing source <...> time-difference of arrival (TDoA) information” (DiBiase et al. 2001 p. 158).
Page 17, par. 1, lines 6-17	Overall, the computational requirements <...> environments.	“Overall, the computational <...> environments.” (DiBiase et al. 2001 p. 159)

Page 17, par. 2, lines 19-29	These algorithms tend to be <...> of decreased resolution.	“These algorithms tend to be <...> of decreased resolution.” (DiBiase <i>et al.</i> 2001 p. 161)
Page 17, par. 3, lines 30-33	Primarily because <...> are TDoA-based.	“Primarily because <...> TDoA-based.” (DiBiase <i>et al.</i> 2001 p. 161)
Page 17, par. 4, lines 34-39	The two major sources <...> of the Generalized Cross-Correlation (GCC) function.	“The two major sources of signal degradation which <...> of the Generalized Cross-Correlation (GCC) function.” (DiBiase <i>et al.</i> 2001 p. 161)
Page 17, par. 5, line 40	In the presence of <...> in realistic enclosures.	“In the presence of <...> in realistic enclosures.” (Brandstein, Silverman 1997 p. 375)
Page 18, par. 2, line 7	In the past, some studies <...> in the frequency domain (i.e., convolutional smearing).	“In the past, some <...> in the frequency domain (i.e., convolutional smearing).” (Champagne <i>et al.</i> 1996)
Page 18, par. 4, line 10	The most common approach adopted in the sound source localization <...> may lead to wrong TDoA estimates (Champagne <i>et al.</i> 1996).	According to (Champagne <i>et al.</i> 1996) “The most common approach adopted in the sound source localization <...> may lead to wrong TDoA estimates.”
Page 18, par. 4, line 21	<...> a coherence measure is the use of GCC-PHAT Knapp, Carter (1976).	<...> a coherence measure is the use of GCC-PHAT (Knapp, Carter 1976).
Page 18, par. 6, line 32	Our environment is <...> the source location estimate is $\vec{x}_s = \arg \min_{\vec{x}} E_{\text{RMS}}(\vec{x}).$	According to (Do 2009, p. 8) “Our environment is <...> the source location estimate is $\vec{x}_s = \arg \min_{\vec{x}} E_{\text{RMS}}(\vec{x}).$ ”
Page 22, par. 3, line 17	The signal $x_m(t)$ at microphone <...> called a functional evaluation (fe).	According to (Do 2009 p. 22) “The signal $x_m(t)$ at microphone <...> called a functional evaluation (fe).”

Page 25, par. 5, line 28	Given a windowing function $W(t)$, $\langle \dots \rangle$ which is called disjoint orthogonality (Jourjine et al. 2000).	<u>According to (Jourjine et al. 2000 p. 2):</u> “Given a windowing function $W(t)$, $\langle \dots \rangle$ which is called disjoint orthogonality”.
Page 45, par. 4, line 15	One of the earliest approaches to manifold learning is the ISOMAP $\langle \dots \rangle$ points Pedregosa et al. (2011).	One of the earliest approaches to manifold learning is the ISOMAP $\langle \dots \rangle$ points (Tenenbaum et al. 2000). Tenenbaum, J. B., De Silva, V., & Langford, J. C. (2000). <i>A global geometric framework for nonlinear dimensionality reduction</i> . science, 290(5500), 2319-2323.
Page 97, par. 5, line 41	$\langle \dots \rangle$ signals might not accurately reflect the real-world situation.	$\langle \dots \rangle$ signals might not accurately reflect the real-world situation. <u>The dataset presented in this section is provided online at https://github.com/Sakavicius/link-menu-dataset.</u>
Page 134, par. 1, line 1	$\langle \dots \rangle$ didžiausias poveikis metodo rezultatams pastebimas uždaroje erdvėje (\Rightarrow).	$\langle \dots \rangle$ didžiausias poveikis metodo rezultatams pastebimas uždaroje erdvėje.
Page 143, par. 3, line 14	$\langle \dots \rangle$, naudojant matavimo juostą, kurios tikslumas $\pm 0,005$ m.	$\langle \dots \rangle$, naudojant matavimo juostą, kurios paklaida $\pm 0,005$ m.

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