

# Contents

<b>1</b>	<b>Hardy and Littlewood Type Inequalities</b> .....	1
1.1	Preliminaries and Basic Inequalities on Time Scales.....	1
1.2	Hardy-Type Inequalities .....	14
1.3	Hardy-Littlewood Type Inequalities .....	22
1.4	An Extension of Hardy's Type Inequality .....	36
1.5	Generalizations of Hardy's Inequality via Convexity .....	40
<b>2</b>	<b>Copson-Type Inequalities</b> .....	49
2.1	Copson-Type Inequalities I .....	49
2.2	Copson-Type Inequalities II .....	54
2.3	Converses of Copson-Type Inequalities.....	62
2.4	Extensions of Copson-Type Inequalities .....	68
<b>3</b>	<b>Leindler-Type Inequalities</b> .....	81
3.1	Leindler-Type Inequalities I .....	81
3.2	Leindler-Type Inequalities II .....	86
3.3	Converses of Leindler-Type Inequalities I .....	94
3.4	Converses of Leindler-Type Inequalities II .....	99
<b>4</b>	<b>Littlewood-Bennett Type Inequalities</b> .....	105
4.1	Littlewood-Type Inequalities .....	105
4.2	Littlewood-Bennett Type Inequalities I .....	108
4.3	Littlewood-Bennett Type Inequalities II .....	118
4.4	Sneak-Out Principle on Time Scales .....	126
<b>5</b>	<b>Weighted Hardy Type Inequalities</b> .....	135
5.1	Weighted Hardy-Type Inequalities I .....	135
5.2	Weighted Hardy-Type Inequalities II .....	150
<b>6</b>	<b>Levinson-Type Inequalities</b> .....	167
6.1	Levinson-Type Inequalities I .....	167
6.2	Levinson-Type Inequalities II .....	194
6.3	Pachpatte-Type Inequalities I.....	203

6.4	Yang and Hwang-Type Inequalities .....	211
6.5	Chan-Type Inequalities .....	220
6.6	Pachpatte-Type Inequalities II .....	226
<b>7</b>	<b>Hardy-Knopp Type Inequalities .....</b>	<b>235</b>
7.1	Hardy-Knopp Type Inequalities .....	235
7.2	Hardy-Knopp Type Inequalities with Two Functions .....	247
7.3	Hardy-Knopp Type Inequalities with Kernels .....	252
7.4	Hardy-Knopp Type Inequalities via Superquadracity .....	279
7.5	Refinements of Hardy-Knopp Type Inequalities .....	288
7.6	Diamond- $\alpha$ Type Inequalities .....	301
<b>References .....</b>		<b>309</b>
<b>Index .....</b>		<b>317</b>

Hardy Type Inequalities on Time Scales

Agarwal, R.P.; O' Regan, D.; Saker, S.

2016, X, 305 p., Hardcover

ISBN: 978-3-319-44298-3