

# CONTENT

<b>CHAPTER 1</b>	<b>7</b>
General introduction	
<b>CHAPTER 2</b>	<b>25</b>
Automatic individual non-invasive photo-identification of fish (Sumatra barb <i>Puntigrus tetrazona</i> ) using visible patterns on a body	
<b>CHAPTER 3</b>	<b>41</b>
Computer vision based individual fish identification using skin dot pattern	
<b>CHAPTER 4</b>	<b>55</b>
Image-based automatic individual identification of fish without obvious patterns on the body (scale pattern)	
<b>CHAPTER 5</b>	<b>73</b>
Towards fish individuality-based aquaculture	
<b>CHAPTER 6</b>	<b>87</b>
General discussion	89
English summary	99
Czech summary	100
Acknowledgements	101
List of publications	102
Training and supervision plan during study	104
<i>Curriculum vitae</i>	106