

# Notations and symbols

In this work we shall often make use of the following symbols:

$\  \cdot \ $	Uniform norm	p. 1
$\  \cdot \ _w$	Weighted uniform norm	p. 56
<b>1</b>	Constant function of value 1	p. 21
$A(K)$	Space of all affine functions on the compact set $K$	p. 15
$A_\infty(K)$	Space of all finite products in $A(K)$	p. 16
$C(K)$	Space of all real continuous functions on $K$	p. 15
$C^{2,\alpha}(K)$	Class of twice differentiable functions with $\alpha$ -Hölder continuous second-order derivative	p. 21
$C(\overline{\mathbb{R}})$	Set of all continuous real functions on $\mathbb{R}$ which admit finite limits at the points $\pm\infty$	p. 40
$C^2(\overline{\mathbb{R}})$	Set of all functions in $C(\overline{\mathbb{R}})$ with second-order derivatives in $C(\overline{\mathbb{R}})$	p. 40
$C_w(\overline{\mathbb{R}})$	Weighted space of $C(\overline{\mathbb{R}})$	P. 56
$C_w^2(\overline{\mathbb{R}})$	Set of all functions in $C_w(\overline{\mathbb{R}})$ with second-order derivatives in $C_w(\overline{\mathbb{R}})$	p. 59
$C_w([0, 1])$	Weighted space in the interval $[0, 1]$	p. 74
$C_w^2([0, 1])$	Weighted space of twice differentiable functions in the interval $[0, 1]$	p. 74
$C^{(b)}(\mathbb{R}^2)$	Space of all continuous bounded real functions on $\mathbb{R}^2$	p. 80
$C_0(\mathbb{R}^2)$	Subspace of all continuous functions vanishing at the point at infinity of $\mathbb{R}^2$	p. 80
$C_w^{(b)}(\mathbb{R}^2)$	Bounded weighted space of $C^{(b)}(\mathbb{R}^2)$	p. 80
$C_{0,w}(\mathbb{R}^2)$	Bounded weighted space of $C_0(\mathbb{R}^2)$	p. 86
$C_w^{2,(b)}(\mathbb{R}^2)$	Space of all functions in $C_w^{(b)}(\mathbb{R}^2)$ with bounded second-order partial derivatives.	p. 82
$\Delta_h(f, x)$	Divided difference operator	p. 31
$\Delta_h^r(f, x)$	$r$ -th order divided difference	p. 31
$\delta_{ij}$	Kronecker symbol	p. 25

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$\varepsilon_x$	Dirac measure	p. 16
id	Identity function	p. 26
$L^1_{\text{loc}}(\mathbb{R})$	Spaces of all locally integrable functions	p. 39
$L^1_{\text{loc}}(\mathbb{R}^2)$	Spaces of all locally integrable functions on $\mathbb{R}^2$	p. 79
$\mathcal{M}^+(K)$	Positive Radon Measure	p. 15
$\text{pr}_i$	Canonical $i$ -th projection of $\mathbb{R}^n$ onto $\mathbb{R}$	p. 17
$\omega(f, \delta)$	Modulus of continuity	p. 31
$\omega_r(f, \delta)$	Modulus of continuity	p. 31