Abbreviations

ACC	**A**ccuracy
ADMM	**A**lternating **D**irection **M**ethod of **M**ultipliers
ADR	**A**ccelerated **D**ouglas **R**achford
AEOSA	**A**ccelerated **E**xtragradient-based **O**perator **S**plitting **A**lgorithm
AGA/AGD	**A**ccelerated **G**radient **A**lgorithms/**D**escent
CCA	**C**anonical **C**orrelation **A**nalysis
DR	**D**ouglas **R**achford
EOSA	**E**xtragradient-based **O**perator **S**plitting **A**lgorithm
FBA	**F**orward **B**ackward **A**lgorithm
FISTA	**F**ast **I**terative **S**hrinkage-**T**hresholding **A**lgorithm
FOM	**F**irst **o**rder **M**ethod
IPM	**I**nterior **P**oint **M**ethod
LASSO/Lasso/lasso	**L**east **A**bsolute **S**hrinkage and **S**election **O**perator
MAP	**M**ean **A**verage **P**recision
MFBA	**M**ann-based **F**orward **B**ackward **A**lgorithm
MPGA	**M**ann **P**roximal **G**radient **A**lgorithms
MTL	**M**ulti-**T**ask **L**earning
MURL	**M**ulti-modal **U**nified **R**epresentation **L**earning
NAGA	**N**ew **A**ccelerated **G**radient **A**lgorithm
NAGEL	**N**ew **A**ccelerated **G**radient Algorithm for **E**xtended **L**asso
NIFBA	**N**ormal S-iteration-based **I**nertial **F**orward **B**ackward **A**lgorithm
NSFBA	**N**ormal **S**-iteration-based **F**orward **B**ackward **A**lgorithm

NSPGA/NPGA	**N**ormal **S**-iteration **P**roximal **G**radient **A**lgorithms
PCA	**P**rincipal **C**omponents **A**nalysis
PGA/PGD	**P**roximal **G**radient **A**lgorithms/**D**escent
PLS	**P**artial **L**east **S**quares
PR	**P**eaceman **R**achford
PRE	**P**recision
rMSE/RMSE	**R**oot **M**ean **S**quare **E**rror
REC	**R**ecall
SFBA	**S**-iteration-based **F**orward **B**ackward **A**lgorithm
SPGA	**S**-iteration **P**roximal **G**radient **A**lgorithms
SVD	**S**ingular **V**alue **D**ecomposition
VAGA	**V**iscosity-based **A**ccelerated **G**radient **A**lgorithm
VFBA	**V**iscosity-based **F**orward **B**ackward **A**lgorithm
VIFBA	**V**iscosity-based **I**nertial **F**orward **B**ackward **A**lgorithm
VPGA	**V**iscosity-based **P**roximal **G**radient **A**lgorithm

Symbols

$\mathbb{R}$	set of real numbers
$\mathbb{N}$	set of natural numbers
$\mathbb{R}^d$	the set of real column-vectors of length d
$\mathbb{R}^{n\times d}$	the set of real matrices with n rows and d columns
x^T	Transpose of vector x
$\bar{\mathbb{R}} := \mathbb{R} \cup \{\infty\}$	the extended real line
$\mathscr{H}$	real Hilbert space
$\lvert\cdot\rvert$	Absolute value
$\lVert x\rVert_p$	p-norm of a vector x, defined as $(\sum_{i=1}^n \lvert x_i\rvert^p)^{1/p}$.
$\langle\cdot,\cdot\rangle$	inner product
Id or I	the identity operator
$\langle x,y\rangle_2 = x^T y$	Euclidean inner-product
$2^{\mathscr{X}}$	power set of a set $\mathscr{X}$
$A : \mathscr{X} \to 2^{\mathscr{Y}}$	A set-valued operator
$gphA = \{(x,y) \in \mathscr{X} \times \mathscr{Y} \lvert y \in Ax\}$	graph of A.
$T : \mathscr{H} \to \mathscr{H}$	An operator
$fix_T = \{x \in \mathscr{H} \lvert Tx = x\}$	set of fixed-points to the operator T
$\Gamma_0(\mathscr{H})$	the class of closed, proper and convex functions.
∇f	Gradient of function f.
∂f	set of subgradients of function f.

$\{x_n\}$ *or* $\{x_n\}_{n=0}^{\infty}$	a sequence
$prox_g$	Proximity operator with respect to function $g(\cdot)$
(a,b)	$\{x \in \mathbb{R} \vert a < x < b\}$
$[a,b)$	$\{x \in \mathbb{R} \vert a \leq x < b\}$
$(a,b]$	$\{x \in \mathbb{R} \vert a < x \leq b\}$
$[a,b]$	$\{x \in \mathbb{R} \vert a \leq x \leq b\}$
L $(or\ L_f)$	Lipschitz Constant (with respect to function f)
ϕ	empty set
J_r^A	Resolvent operator with respect to maximal monotone operator A
$J_r^{A,B}$	Forward-backward operator $J_r^A(Id - rB)$
R_r^A	Reflected Resolvent operator with respect to maximal monotone operator A
sgn	sign function
$(\cdot)_+$	positive part
$tr(\cdot)$	trace function
P	Projection operator
κ $(or\ \kappa_f)$	Contraction (contraction w. r. t. operator f)
$\rightharpoonup$	weakly convergence.
$\sup_{n\in\mathbb{N}}\{\cdot\}$	least upper bound.
$\alpha,\ \beta$	integer values.
$\{\alpha_n\},\ \{\beta_n\}$	sequence of integer numbers for $n = 1, 2, \cdots, \mathbb{N}$.
$\{\lambda_n\},\ \{c_n\}$	regularization sequences for $n = 1, 2, \cdots, \mathbb{N}$.
$f,\ g,\ h$	functions/operators.
$x^*,\ y^*,\ z^*$	optimal vectors.
$\gamma_{\mathscr{H},B}$	integer parameter w.r.t. $\mathscr{H}$ and an operator B.
$\{P_n\},\ \{W_n\},\ \{Q_n\}$	sequences of matrices.
ρ	sparsity controlling parameter.
θ	a tuning parameter.