

bootstrapping

bootstrapping/agents	<i>Agents and tasks</i>	
\agSp	Agents	
\agSpYU	Agents($\mathcal{Y}; \mathcal{U}$)	All agents with given formats.
\agA	\mathcal{A}	An agent
\agExp	expl	Agent's exploration phase
\agAct	act	Agent's action phase
\agAexp	expl $_{\mathcal{A}}$	Exploration phase for agent \mathcal{A} .
\agAact	act $_{\mathcal{A}}$	Action phase for agent \mathcal{A} .
\agAwtor	WtoR $_{\mathcal{A}}$	Map from the world to the result for the agent
\agAwtob	WtoB $_{\mathcal{A}}$	
\agAintermediate	intermediate $_{\mathcal{A}}$	
\agSucAG	success $_{\mathcal{A}}^{\mathcal{G}}$	Success set for the agent \mathcal{A} and goal \mathcal{G} .
\agRep	\mathbf{m}	Agent representation
\agRepSp	\mathcal{M}	Agent's model space
\agNuis	$G_{\mathcal{A}}$	
\agNuisComp	$G_{\mathcal{A}}^{\perp}$	Complement of $G_{\mathcal{A}}$.
\agNuisObs	$G_{\mathcal{A}}^{\mathcal{Y}}$	
\agNuisCmd	$G_{\mathcal{A}}^{\mathcal{U}}$	
\agbbClass	$C_{\mathcal{A}}$	
\agbbClCore	$C_{\mathcal{A}}^0$	
\agGoal	\mathcal{G}	The agent's goal (a subset of StocProcesses)

articles

articles/bds	<i>BDS report</i>	
\BDSnk	BDS($n; k$)	
\BDSSk	CBDS($\mathcal{S}; k$)	
\bgBDSfamily	BDS	Family of BDS sensors
\bgCBDSfamily	CBDS	Family of BDS sensors
\bds	BDS	Bilinear dynamics system
\BDS	BDS	
\cbds	CBDS	Continuous-space bilinear dynamics system
\CBDS	CBDS	
\omsum{...}		omitted sum
\omsumb{...,...}		omitted sum (two arguments)
\TT	T	Learned tensor
\TTe	T	?
\TP	P	
\TPe	P	
\TU	U	Learned tensor
\TUE	U	Learned tensor
\TM	M	Bilinear tensor in BDS dynamics
\TMe	M	Bilinear tensor in BDS dynamics
\TN	N	Bilinear tensor in BDS dynamics
\TNe	N	Bilinear tensor in BDS dynamics
\Tcov	P	Covariance of \mathbf{y} .
\Tcove	P	Covariance of \mathbf{y} .
\Tucov	Q	Covariance of \mathbf{y} .

<code>\Tucove</code>	\mathbf{Q}	Covariance of \mathbf{y} .
<code>\discInt</code>	T	Discretization interval
<code>\nearavg</code>	$\bar{\mu}$	Average nearness
articles/bgds	<i>BGDS report</i>	
<code>\bgds</code>	BGDS	Bilinear gradient dynamics system
<code>\BGDS</code>	BGDS	
<code>\bgCmd</code>	\mathbf{u}	commands
<code>\bgCmdH</code>	\mathbf{u}^T	commands history
<code>\bgCmdSp</code>	\mathcal{U}	commands space
<code>\bgWorld</code>	\mathcal{W}	World
<code>\bgWorldSp</code>	\mathcal{W}	World space
		$\mathcal{W} \in \mathcal{D}(\mathcal{T}, \mathcal{U}, \mathcal{Y})$
		$\$ \backslash \text{bgWorld} \text{ \in } \backslash \text{bgRSSp}(\backslash \text{bgTime}, \backslash \text{bgCmdSp}, \backslash \text{bgObsSp}) \$$
<code>\bgAgent</code>	agent	Agent
<code>\bgAgentEx</code>	learn	Agent exploration
<code>\bgAgentAc</code>	act	Agent action
<code>\bgAgentRep</code>	\mathbf{r}	Agent representation
<code>\bgAgentRepSp</code>	\mathcal{R}	Agent representation space
<code>\bgAgentSp</code>	Agents	Agent action
<code>\bgCmdTr</code>	\mathbf{g}	Transformation of the commands
<code>\bgCmdTrSp</code>	$G^{\mathcal{U}}$	
<code>\bgObsTr</code>	\mathbf{h}	Transformation of the observations
<code>\bgObsTrSp</code>	$G^{\mathcal{Y}}$	
<code>\bgSamplingGroup</code>	Sampling	Groups of sampling operations
<code>\bgCalibration</code>	Calib	Calibration operation
<code>\bgBDSagent</code>	\mathcal{A}_{BDS}	The BDS agent
<code>\bgBGDSagent</code>	$\mathcal{A}_{\text{BGDS}}$	The BGDS agent
<code>\bgPopCode</code>	pop	Popoulation code
<code>\bgRankCode</code>	rankcode	Rank code
<code>\bgRangeFamily</code>	RF	Family of range-finders models
<code>\bgCmdConstraints</code>	$\Omega_{\mathbf{u}}$	
<code>\bgPopK</code>	ψ	
articles/bgds/old	<i>BGDS report</i>	
<code>\state</code>	\mathbf{x}	Generic underlying state.
<code>\stateSp</code>	\mathcal{X}	Generic underlying state space.
<code>\detecte</code>	d	Detector
<code>\submean{\dots}</code>		Quantity with mean normalized.
<code>\dist</code>	σ	Distance to obstacle
<code>\distn</code>	σ^*	Distance to obstacle, mean normalized.
<code>\rfnl</code>	β	Nonlinear function in range-finder tensors.
<code>\near</code>	μ	Nearness
<code>\lum</code>	y	Luminance
<code>\lumn</code>	y^*	Luminance, mean normalized
<code>\sptran</code>	ℓ	Sensor pose (translation)
<code>\sprot</code>	ℓ_{θ}	Sensor pose (rotation)
<code>\slvel</code>	\mathbf{v}^s	Sensor linear velocity (when off axis)
<code>\savel</code>	ω^s	Sensor angular velocity (when off axis)
<code>\TX</code>	\mathbf{X}	Generic metric

<code>\TXe</code>	X	Generic metric
<code>\OS</code>	S	$S = s \times \nabla$
<code>\convf</code>	f_*	Indicates the convolution with a kernel f .
<code>\my</code>	m	Metric on the tangent space of $y(s)$.
<code>\ip{\dots}</code>		
<code>\bgBGDSfamily</code>	BGDS	Family of BGDS sensors
<code>\BGDSsk</code>	$\text{BGDS}(\mathcal{S}; k)$	
<code>\focal</code>	F	Pinhole camera focal length.
<code>\traindist</code>	p_T	Training distribution.
<code>\trainsym</code>	$\text{Sym}(p_T)$	Symmetry group of p_T .
<hr/>		
articles/bgds/logical	<i>Gradient dynamics</i>	
<code>\obsfsp</code>	\mathcal{Z}	Observation logical space
<code>\obsf</code>	\mathbf{z}	Observations in logical space
<code>\obsle</code>	z	Observation logical space element
<code>\xtos</code>	φ	Mapping between \mathcal{S} and \mathcal{Z} .
<code>\jac</code>	\mathbf{J}	Jacobian of φ
<code>\jace</code>	J	An element of the Jacobian of φ .
<code>\mz</code>	μ	Metric on the tangent space of $z(x)$.
<code>\mmu</code>	M	Metric for the commands u .
<hr/>		
articles/bgds/logical/grads	<i>Gradient dynamics</i>	
<code>\Tzgd</code>	\mathbf{L}	\mathbf{z} gradient dynamics
<code>\Tzgde</code>	L	\mathbf{z} gradient dynamics (element)
<code>\Tzgl</code>	\mathbf{M}	\mathbf{z} gradient learned tensor
<code>\Tzgle</code>	M	\mathbf{z} gradient learned tensor (element)
<code>\Tzgcov</code>	\mathbf{S}	\mathbf{z} gradient covariance
<code>\Tzgcove</code>	S	\mathbf{z} gradient covariance (element)
<code>\Tzad</code>	\mathbf{E}	Affine part of dynamics.
<code>\Tzade</code>	E	Affine part of dynamics (element)
<code>\Tzal</code>	\mathbf{F}	Learned affine part of dynamics.
<code>\Tzale</code>	F	Learned affine part of dynamics (element)
<hr/>		
articles/bgds/tensors	<i>BGDS report</i>	
<code>\Tygd</code>	\mathbf{G}	\mathbf{y} gradient dynamics
<code>\Tygde</code>	G	\mathbf{y} gradient dynamics (element)
<code>\Tygl</code>	\mathbf{H}	\mathbf{y} gradient learned tensor
<code>\Tygle</code>	H	\mathbf{y} gradient learned tensor (element)
<code>\Tygcov</code>	\mathbf{R}	\mathbf{y} gradient covariance
<code>\Tygcove</code>	R	\mathbf{y} gradient covariance (element)
<code>\Tyad</code>	\mathbf{B}	Affine part of dynamics.
<code>\Tyade</code>	B	Affine part of dynamics (element)
<code>\Tyal</code>	\mathbf{C}	Learned affine part of dynamics.
<code>\Tyale</code>	C	Learned affine part of dynamics (element)
<hr/>		
articles/bgds/models/deprecated	<i>Definition of random models</i>	
<code>\bgTime</code>	\mathbb{T}	Time axis
<code>\bgRS</code>	\mathcal{D}	Random model
<code>\bgRSSp</code>	\mathcal{D}	All models
<code>\bgRSinput</code>	\mathbf{a}	Input signal
<code>\bgRSinputSp</code>	\mathcal{A}	

<code>\bgRInputH</code>	\mathbf{a}^T	History of input signal
<code>\bgROutput</code>	\mathbf{b}	
<code>\bgROutputH</code>	\mathbf{b}^T	History of output signal
<code>\bgROutputSp</code>	\mathcal{B}	
<code>\bgRInputTr</code>	\mathbf{g}	
<code>\bgRInputTrSp</code>	G^A	
<code>\bgROutputTr</code>	\mathbf{h}	
<code>\bgROutputTrSp</code>	G^B	
<code>\bgObs</code>	\mathbf{y}	observations
<code>\bgObsH</code>	\mathbf{y}^T	observations history
<code>\bgObsSp</code>	\mathcal{Y}	observation space
<hr/>		
<code>articles/camera</code>	<i>Camera paper</i>	
<code>\rank</code>	order	
<code>\place</code>	place	
<code>\ff</code>	f	Distance to similarity function
<code>\Sany</code>	\mathcal{M}	Generic hypersphere
<code>\targetSp</code>	\mathcal{M}	Target manifold
<code>\Ssubset</code>	M	A subset of \mathcal{M} XXX
<code>\infr</code>	infr	Informative radius
<code>\ffr</code>	$\text{infr}(f)$	Informative radius of f
<code>\distradius</code>	rad	Radius of a distribution
<code>\distdiam</code>	diam	Diameter of a distribution
<code>\hausdorff</code>	hausdorff	Hausdorff distance
<code>\kimberley</code>	kim	Kimberley value
<code>\errproc</code>	e_{pr}	Procrustes score
<code>\isoError</code>	e_{iso}	
<code>\symError</code>	e_{sym}	
<code>\relError</code>	e_r	
<code>\scaledRelError</code>	e_{sr}	
<code>\angcorr</code>	ρ_θ	
<code>\spearperf</code>	ρ_{sp}	Spearman performance measure
<code>\spearperfn</code>	ρ_{sp}^*	Normalized Spearman performance measure
<code>\dirset</code>	\mathcal{S}	Set of directions
<code>\dirmat</code>	\mathbf{S}	Directions stacked in a matrix
<code>\matX</code>	\mathbf{X}	
<code>\matI</code>	\mathbf{I}	
<code>\arot</code>	\mathbf{X}	
<code>\cosmat</code>	\mathbf{C}	
<code>\cosmatij</code>	C_{ij}	
<code>\distmat</code>	\mathbf{D}	
<code>\distmatij</code>	D_{ij}	
<code>\simmat</code>	\mathbf{Y}	Similarity matrix
<code>\simmatij</code>	Y_{ij}	
<code>\simmatii</code>	Y_{ii}	
<code>\simmatkl</code>	Y_{kl}	
<code>\algorparam</code>	γ	
<code>\shannon</code>	H	
<code>\fov</code>	FOV	field of view
<code>\SKalgo</code>	SK	Shepard-Kruscall algorithm
<code>\SBSEw</code>	$SKv + w$	An extension to the SK algorithm

\SBSE	SKv	An extension to the SK algorithm (without
articles/dds	<i>DDS report</i>	
\ddsres	ρ	Resolution of the sensor in a DDS.
\ddsarea	$ \mathcal{S} $	Area of the manifold \mathcal{S} .
\ddsbound	d_{\max}	Bound on the maximum diffeomorphism in
\DDS	DDS	
\dds	DDS	
\ddsl	DDSL	
\DDSu	$\text{DDS}(\mathcal{S}; \mathcal{U})$	
\DDSLsvu	$\text{DDSL}(\mathcal{S}, \mathcal{V}; \mathcal{U})$	
\bgDDSfamily	DDS	
\bgDDSLfamily	DDSL	
\diffeoURL	???	Model
\cmdAlphabet	\mathcal{U}	
\ncmdwords	$ \mathcal{U} $	Number of commands words.
\obsspD	$d^{\mathcal{S}}$	Metric on \mathcal{S} .
\diffId	$\text{Id}_{\mathcal{S}}$	Identity diffeomorphisms.
\diffU	Γ	Uncertainty of estimated diffeomorphism.
\diffDist	d^{Diff}	Distance between two diffeomorphism.
\cmdDist	\mathcal{D}_{cmd}	Distance between two commands.
\cmdADist	\mathcal{A}_{cmd}	Anti-distance between two commands.
\images	$\mathbb{F}(\mathcal{S})$	
\obspsV	\mathcal{V}	viewport
\ddsfov	\mathcal{V}	viewport
\obspsVunpred	$\mathcal{V}^{\overline{\text{pr}}}$	undpredictable part
\obspsVpred	\mathcal{V}^{pr}	predictable part
\obspsVunpredt	$\mathcal{V}_t^{\overline{\text{pr}}}$	undpredictable part at time t
\obspsVpredt	$\mathcal{V}_t^{\text{pr}}$	predictable part at time t
\ddsctod	C_TO_DIFF	
\ddsste	x	State of a DDS (element)
\ddsst	\mathbf{x}	State of a DDS
articles/dptr1	<i>Technical report for diffeoplanning</i>	
articles/dptr1/spaces	<i>spaces</i>	
\SetImages	Im	
\SetUIImages	UIm	
\genericdist{...,...}		
\genericudist{...,...}		
\obsstart	$\mathbf{y}_{\text{start}}$	
\obsgoal	\mathbf{y}_{\circ}	
\SetPlans	Plans	
\planSp	Plans	
\redplans	RedPlans	reduced plans
\plan	p	a generic plan
\plang	p_{\circ}	true plan
\planf	p^{\star}	The solution found
\zeroplan	\emptyset	
\obsu	\mathbf{z}	Scalar uncertainty
\obsue	z	Scalar uncertainty

\sarea	A	area around pixel s
\dd	φ	Generic diffeomorphisms
\dde	φ	Generic diffeomorphisms
\ddu	γ	its uncertain
\ddue	γ	its uncertain
\udiffSp	UDiff	
articles/dptr1/structure	<i>Diffeo structure</i>	
\dscommute	commute	
\dsinverse	inverse	
\dssame	same	
\dsvoid	void	
\S0two	SO(2)	
articles/dptr1/simplification	<i>plan reduce</i>	
\plantodiff	p_to_d	
\ptod	p_to_d	
\pd	p_to_d	
\planreduce	PlanReduce	
\noutoforder	noutoforder	TODO
articles/dptr1/distances	<i>Distances</i>	
\dDiffLone	$d_{L_1}^{\text{Diff}(S)}$	
\dUDiffLone	$\bar{d}_{L_1}^{\text{UDiff}(S)}$	
\dobsps	$d_{L_1}^S$	
\dImL{...}		
\dImLone	$d_{L_1}^{\text{lm}}$	
\dImLtwo	$d_{L_2}^{\text{lm}}$	
\dImN{...}		
\dImD{...}		
\cmdOrd	\prec	
\algoname{...}		
\gnbc	GNB	
\bnbc	BNB	
\bngc	BNG	
\bntc	BNT	
\gebc	GEB	
\bebc	BEB	
\begc	BEG	
\betc	BET	
\betcb	BETc	
\plansarea	P_{near}	
\algocover	cover	
\algoplanreduce	planreduce	
\algotwobidirectional	bidirectional-search	
\dubinsys	<i>Dubin' scar</i>	
\orbitalsys	<i>Orbitcamera</i>	
\markit{...}		
\markA	\dagger	
\markB	\ddagger	
\markC	\S	

<code>\distthres</code>	c	
<code>\btrue</code>	true	
<code>\bfalse</code>	false	
<code>\botherwise</code>	otherwise	
<code>\cmdleft</code>	\mathbf{u}_{left}	
<code>\cmdright</code>	\mathbf{u}_{right}	
<code>\cmdup</code>	\mathbf{u}_{top}	
<code>\cmddown</code>	\mathbf{u}_{down}	
<code>\imvis</code>	vis	Visibility
<code>\minvis</code>	v_0	
<code>\maxdis</code>	d_g	goal threshold
<code>\impred</code>	pred	Image prediction
<code>\plA</code>	$RLrl$	
articles/estgroups	<i>Estimation with symmetries</i>	
articles/estgroups/state	<i>State</i>	
<code>\esSt</code>	\mathbf{x}	State
<code>\esStDim</code>	n	Dimension of state space
<code>\esStSp</code>	\mathcal{X}	State space
<code>\esStDist</code>	$\mu_{\mathbf{x}}^{\mathcal{X}}$	Prior for state
articles/estgroups/observations	<i>Observations</i>	
<code>\esObs</code>	\mathbf{y}	Observations
<code>\esObsDim</code>	m	Observations dimensions
<code>\esObsSp</code>	\mathcal{Y}	Observations space
<code>\esObsMap</code>	h	Observation map
		$\mathbf{y} = n\mathbf{h}(\mathbf{x})$
		<code>\esObs = \esNuis \esObsMap(\esSt)</code>
articles/estgroups/nuisances	<i>Nuisances</i>	
<code>\esNuis</code>	\mathbf{n}	Nuisance
<code>\esNuisSp</code>	\mathbf{N}	Nuisance group
<code>\esNuisDist</code>	$\mu_{\mathbf{n}}^{\mathbf{N}}$	Nuisance distribution
articles/estgroups/estimators	<i>Estimators, risks and performances</i>	
<code>\esEst</code>	m	Estimator
<code>\esEstSp</code>	\mathcal{M}	Estimator set
<code>\esEstSpOpt</code>	\mathcal{M}^*	Optimal subset of estimators
<code>\esRisk</code>	e	Risk function
<code>\esRiskSp</code>	\mathcal{E}	Risk space
<code>\esRiskDist{\dots}</code>		Risk distribution for given estimator
<code>\esRiskDistP0</code>	\preceq	Partial order defining preference on distributions
<code>\esProb</code>	\mathcal{P}	Estimation problem
articles/estgroups/symmetries	<i>Symmetries in the problem</i>	
<code>\esStAb</code>	α	Abstract state
<code>\esStAbSp</code>	\mathcal{A}	Abstract space
<code>\esRep</code>	φ	Representation
		$\varphi : \mathbf{x} \mapsto \alpha.$
		<code>\esRep: \esSt \mapsto \esStAb\$.</code>

<code>\esStSym</code>	A	Group of symmetries of the state
<code>\esObsSym</code>	B	Group of symmetries of the observation
<code>\esRiskSym</code>	C	Group of symmetries of the risk function
<code>\esPOSym</code>	D	Group of symmetries acting on the partial
<code>\esProbSym</code>	S	Tuple of symmetries
<hr/> articles/groupspectral	<i>Group spectral properties</i>	
<code>\gsHom</code>	HomMaps	Induced homomorphisms.
<code>\gsImage</code>	Image	
<code>\gsEqs</code>	EqSet	Fixed points of a function.
<code>\gsGA</code>	GrAct	If the function is the action of a group.
<code>\gsGAsym</code>	\parallel	Used to specify that a function can be expr
<code>\gsSym</code>	Sym	Set of symmetries
<code>\gsStrongCan</code>	SCan	Strong canonization operator
<code>\gsWeakCan</code>	WCan	Weak canonization operator
<code>\gsEquiCan</code>	BCan	Bold canonization operator
<code>\gsEndoCan</code>	MCan	Mild canonization operator
<code>\gsUnCan</code>	UCan	Unstructured canonization operator
<code>\gsNuis</code>	Sample	
<code>\regular</code>	regular	
<code>\unstr</code>	\sim	Unstructured symbol.
<code>\jokFunc</code>	\star	Joker function
<code>\zerFunc</code>	0	Zero function
<hr/> articles/groupspectral/defs	<i>Group spectral properties</i>	
<code>\gsdContravariant</code>	$\xrightarrow{-1}$	Contravariance
<code>\gsdInvariant</code>	$\xrightarrow{0}$	Invariance
<code>\gsdEquivariant</code>	$\xrightarrow{\text{Id}}$	Equivariance
<code>\gsdIntroduces</code>	$\xrightarrow{\star}$	Nuisance introduced
<code>\gsdUnstructured</code>	$\xrightarrow{\sim}$	Unstructured result
<hr/> articles/invariances	<i>Invariances</i>	
<code>\rndual{\dots}</code>		Dual of a representation nuisance
<hr/> articles/jbds	<i>Symbols introduced in JBDS</i>	
<code>\veh</code>	B	A vehicle body
<code>\vehBody</code>	B	A vehicle body
<code>\vehKin</code>	K	Vehicle kinematics
<code>\vehSensPos</code>	\mathbf{r}	Sensor relative pose
<code>\vehSensFun</code>	ψ	Function that defines an exteroceptive sens
<code>\env</code>	e	Environment
<code>\envSp</code>	\mathcal{E}	Environment space
<code>\envo</code>	\mathcal{O}	Obstacles in the environment
<code>\envt</code>	\mathcal{T}	Texture (function on $\partial\mathcal{O}$)
<code>\envf</code>	\mathcal{F}	Field sensed by field sampler
<code>\envob</code>	$\partial\mathcal{O}$	Obstacles boundaries
<code>\obspsDiff</code>	\mathcal{S}^{dif}	
<code>\obspsNotDiff</code>	$\mathcal{S}^{\overline{\text{dif}}}$	
<code>\sic</code>	VS	ideal camera
<code>\sir</code>	RF	ideal range finder

<code>\sif</code>	FS	ideal field sampler
<code>\sicV</code>	$VS(\mathcal{V})$	ideal camera with viewport
<code>\sirV</code>	$RF(\mathcal{V})$	ideal range finder with viewport
<code>\sifV</code>	$FS(\mathcal{V})$	ideal field sampler with viewport
<code>\zoh{\dots}</code>		Zero order hold
<hr/>		
articles/jbds/misc	<i>Used in proofs for JBDS</i>	
<code>\ygneig</code>	N	A neighborhood of \mathbf{y}_o .
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articles/jbds/robots		
<code>\allrobots</code>	Robots	The set of all robots
<code>\vehRob</code>	Vehicles	Vehicle robots
<code>\vehRobNuis</code>	$\tilde{\text{Vehicles}}$	Vehicle robots with nuisances
<code>\robVeh</code>	Vehicles	
<hr/>		
articles/soattotheory	<i>Symbols used by Soatto</i>	
<code>\scene</code>	ξ	scene
<code>\representation</code>	$\hat{\xi}$	representation
<code>\minrep</code>	$\hat{\xi}^\vee$	minimal representation
<code>\feature</code>	ϕ	feature
<code>\maxinv</code>	ϕ^\wedge	maximal invariant feature
<code>\suffstat</code>	ϕ^\vee	maximal invariant feature
<code>\image</code>	\mathcal{I}	image
<code>\addnoise</code>	n	additive noise
<code>\imageform</code>	h	image formation function
<code>\groupnuis</code>	g	nuisance which have the structure of a group
<code>\othernuis</code>	ν	other non-invertible nuisance
<code>\lightfield</code>	\mathcal{L}	all possible images generated by a scene
<code>\complex</code>	H	Complexity measure
<code>\actinfo</code>	\mathcal{H}	Actionable information
<code>\covdet</code>	ψ	Covariant detector
<hr/>		
articles/soattotheory/mseerep	<i>msee report</i>	
<code>\nuddisc{\dots}</code>		Domain sampling operator (subset)
<code>\nusample{\dots}</code>		Domain sampling operator (subset)
<code>\nuvdisc{\dots}</code>		Value Discretization operator (subset)
<code>\nusmooth{\dots}</code>		Smoothing operator (kernel)
<code>\nucens{\dots}</code>		Censoring operator (field of view)
<code>\nuoccl{\dots}</code>		Occlusions
<code>\imform</code>	I	
<code>\contrast</code>	f	
<hr/>		
articles/thesis	<i>Special symbols for thesis</i>	
<code>\labelrefinement</code>	ref	Indicates a refinement
<code>\pchomeoR</code>	$\text{PieceHomeo}(\mathbb{R})$	
<code>\dianode{\dots}</code>		used in properties1.dot
<code>\dianodem{\dots}</code>		
<code>\bitZ</code>	\square	
<code>\bit0</code>	\boxplus	
<code>\infbinstrings</code>	$\{\square, \boxplus\}^{\mathbb{N}}$	Set of infinite binary strings
<code>\chineseClose</code>	(nosummary)	The Chinese character corresponding to “cl

<code>\twosignals</code>	y^i, y^j	
<code>\twosignalsa</code>	y^i	
<code>\twosignalsb</code>	y^j	
<code>\twosignalscolon</code>	$y^i; y^j$	
<code>\semrelorder</code>	m	Order of a generic semantic relations
<code>\infininit</code>	d	Infinitesimal
<code>\genericsemrel</code>	\mathcal{R}	A generic semantic relation.
<code>\gensemrelsym</code>	$\text{Sym}(\mathcal{R})$	Symmetries of the semantic relation
<code>\genericssimilarity</code>	R	A generic similarity measure.
<code>\obsecdf</code>	c	CDF of one sensel
<code>\cmdreverse</code>	ρ	The map from a command to its reverse.
<code>\cmdopt</code>	\mathbf{u}^*	The optimal command
<code>\cmdnop</code>	\mathbf{u}^{nop}	Command corresponding to “resting”.
<code>\rew</code>	R	Reward function
<code>\placeneig</code>	Neighbors	
<code>\genericrel</code>	\sim	Generic relation
<code>\notgenericrel</code>	$\not\sim$	
<hr/>		
articles/thesis/longexample	<i>Long example</i>	
<code>\CalibA</code>	CalibA	
<code>\CalibB</code>	CalibB	
<code>\Smoothkernel</code>	k	
<code>\Smooth</code>	Smooth_k	
<code>\BGDSAg</code>	BGDSagent	
<code>\BGDSAgS</code>	BGDSagentS	
<code>\DImagesU</code>	$\mathcal{D}(\text{Im}(\mathcal{S}); \mathcal{U})$	
<code>\DImagesR</code>	$\mathcal{D}(\text{Im}(\mathcal{S}); \mathbb{R}^{n_u})$	
<code>\ABehavior</code>	<i>behavior</i>	
<code>\DImagesSphU</code>	$\mathcal{D}(\text{Im}(\mathbb{S}^2); \mathcal{U})$	
<code>\hobs</code>	\mathbf{x}	
<code>\hobse</code>	x	
<code>\bound</code>	M	
<hr/>		
common	<i>Common symbols to all papers</i>	
<hr/>		
common/abbreviations	<i>Other abbreviations</i>	
<code>\setA</code>	\mathcal{A}	
<code>\setB</code>	\mathcal{B}	
<code>\setC</code>	\mathcal{C}	
<code>\setU</code>	\mathcal{U}	
<code>\setM</code>	\mathcal{M}	
<code>\setY</code>	\mathcal{Y}	
<code>\setX</code>	\mathcal{X}	
<code>\setZ</code>	\mathcal{Z}	
<code>\setS</code>	\mathcal{S}	
<code>\grG</code>	\mathcal{G}	
<code>\grH</code>	\mathcal{H}	
<code>\grK</code>	\mathcal{K}	
<code>\grN</code>	\mathcal{N}	
<hr/>		
common/abbreviations/invariances/abbreviations		

<code>\sqa</code>	a	
<code>\sqae</code>	a	
<code>\sqb</code>	b	
<code>\sqbe</code>	b	
<code>\sqc</code>	c	
<code>\sqce</code>	c	
common/acronyms	<i>Acronyms</i>	
common/algebra	<i>Algebra</i>	
<code>\ones</code>	1	
<code>\idMat</code>	I	Identity matrix
<code>\matTrace</code>	Tr	Trace of a matrix.
<code>\angleFun</code>	\angle	Angle function
<code>\flatten</code>	vec	Matrix-to-vector rearrangement.
common/basic	<i>Basic stuff</i>	
<code>\setfun</code>	\Rightarrow	Symbol for set functions (one-to-many)
<code>\algfield</code>	field	Field. <code>field($\mathcal{X}, +, \times$)</code> is an algebraic field. <code>$\\$ \backslash \text{algfield}(\backslash \text{aset}\{X\}, +, \backslash \text{times}) \\$</code> is an algebraic field.
<code>\wellorder</code>	wellorder	A well ordered set. <code>wellorder(\mathcal{X}, \leq)</code> is a well-ordered set. <code>$\\$ \backslash \text{wellorder}(\backslash \text{aset}\{X\}, \backslash \text{leq}) \\$</code> is a well-ordered set.
<code>\orderedfield</code>	orderedfield	A well ordered field. <code>orderedfield($\mathcal{X}, +, \times, \leq$)</code> is a well-ordered field. <code>$\\$ \backslash \text{orderedfield}(\backslash \text{aset}\{X\}, +, \backslash \text{times}, \backslash \text{leq}) \\$</code> is a well-ordered field.
<code>\powerset</code>	powerset	Power set of a space
<code>\supp</code>	supp	Support of a set
<code>\idFunc</code>	Id	The identity function
<code>\invFunc</code>	\cdot^{-1}	Inverse function
<code>\funcComp</code>	\circ	Function composition
<code>\emptysequence</code>	\emptyset	Empty sequence
<code>\allFuncs</code>	Functions	All maps from a space to the other
<code>\D</code>	d	Used for integrals
<code>\sign</code>	sgn	Sign function
common/sequences	<i>Sequences</i>	
<code>\sequences</code>	Sequences	Set of sequences
<code>\contsequences</code>	ContSequences	Set of continuous sequences
<code>\Aut</code>	Aut	Automorphism group
<code>\contFuncs</code>	Continuous	Continuous functions on some metric space <code>Continuous(\mathcal{A})</code> are all continuous functions <code>$\\$ \backslash \text{contFuncs}(\backslash \text{set}A) \\$</code> are all continuous functions on $\backslash \text{set}A$.
<code>\differFuncs</code>	Differentiable	Differentiable functions
<code>\partitions</code>	partitions	
<code>\mExp</code>	mexp	Matrix exponential

<code>\bigO</code>	\mathcal{O}	Big-O notation
<code>\smallo</code>	o	
<code>\metricon{...}</code>		
<code>\definedas</code>	\triangleq	
<code>\crossprod</code>	\times	cross-product
<code>\gsDom</code>	Domain	
<code>\gsCod</code>	Codomain	
<code>\interCC{...,...}</code>		
<code>\interCO{...,...}</code>		
<code>\interOC{...,...}</code>		
<code>\interOO{...,...}</code>		
<code>\unitInterval</code>	$[0, 1]$	
<code>common/basic/logic</code>	<i>Logic</i>	
<code>\logicAnd</code>	\wedge	Logic "and"
<code>\logicOr</code>	\vee	Logic "or"
<code>\logicNot</code>	\neg	Logic "not"
<code>common/simplesets</code>	<i>Simple sets</i>	
<code>\reals</code>	\mathbb{R}	Real numbers
<code>\natnumbers</code>	\mathbb{N}	Natural numbers
<code>\ratnumbers</code>	\mathbb{Q}	Rational numbers
<code>\hreals</code>	$^*\mathbb{R}$	Hyper-real numbers
<code>\nonNegReals</code>	\mathbb{R}^+_{\bullet}	Non negative reals
<code>\posReals</code>	\mathbb{R}^+_{\circ}	Strictly positive reals
<code>\nzReals</code>	\mathbb{R}_{\circ}	Nonzero reals
<code>common/blackboxes</code>	<i>Black boxes</i>	
<code>\abb{...}</code>		A black box
<code>\bbD</code>	\mathbf{D}	
<code>\bbinv{...}</code>		Inverse of a black box
<code>\bbli{...}</code>		left inverse of a black box
<code>\bbri{...}</code>		right inverse of a black box
<code>\alloutcomes</code>	AllOutcomes	
<code>\alloutputs</code>	AllOutputs	All outputs of a given system
<code>\bbDelay</code>	Δ	The one-step delay system.
<code>\vertblock</code>	\mathbf{I}	
<code>\bbAccum</code>	\mathbf{III}	Accumulator system
<code>\inLoop</code>	Loop	Closes the loop around a system
<code>\idSys</code>	IdSys	The identity system
<code>\bbSp</code>	\mathcal{D}	Set of black boxes
		$\mathcal{D}(\mathcal{X}; \mathcal{Y})$ are all the black boxes from \mathcal{X} to \mathcal{Y}
		$\mathcal{D}(\mathcal{X}; \mathcal{Y})$ are all the black boxes from \mathcal{X} to \mathcal{Y} .
<code>\bbFM</code>	\mathcal{D}_{fm}	Systems with finite memory
<code>\bbSpInv</code>	\mathcal{D}^*	Set of invertible systems
<code>\bbFMinv</code>	$\mathcal{D}^*_{\text{fm}}$	Systems with finite memory and invertible
<code>\bbSpIns</code>	$\mathcal{D}_{\text{inst}}$	Set of instantaneous systems
<code>\bbSpDet</code>	\mathcal{D}_{det}	Deterministic systems
<code>\bbSpInvIns</code>	$\mathcal{D}^*_{\text{inst}}$	Set of invertible and instantaneous systems

<code>\bbSpCore</code>	\mathcal{D}°	$\mathcal{D}^*(\mathcal{A})$ is a subset of $\mathcal{D}(\mathcal{A}; \mathcal{A})$ $\mathcal{S}\mathbb{S}\mathcal{P}\mathcal{I}\mathcal{N}\mathcal{V}(\mathcal{S}\mathcal{E}\mathcal{T}\mathcal{A})$ is a subset of $\mathcal{S}\{\mathbb{S}\mathcal{P}(\mathcal{S}\mathcal{E}\mathcal{T}\mathcal{A}; \mathcal{S}\mathcal{E}\mathcal{T}\mathcal{A})\}$ Systems up to representation
<hr/>		
common/blackboxes/abbreviations		
<code>\bbDinv</code>	D^{-1}	
<code>\bbDri</code>	D^R	
<code>\bbDli</code>	D^L	
<code>\bbE</code>	E	
<code>\bbF</code>	F	
<code>\bbG</code>	G	
<code>\bbSpBA</code>	$\mathcal{D}(\mathcal{B}; \mathcal{A})$	to write
<code>\bbSpAB</code>	$\mathcal{D}(\mathcal{A}; \mathcal{B})$	to write
<hr/>		
common/blackboxes/deprecated	<i>Deprecated</i>	
<code>\bbOp</code>	\oplus	Composition operation
<code>\inSeries</code>	Series	Series of two systems
<hr/>		
common/boot	<i>Bootstrapping symbols</i>	
<hr/>		
common/boot/obscmd	<i>Observations and commands</i>	
<code>\world</code>	\mathbf{m}	The "world", an element of $\mathcal{D}(\mathcal{Y}; \mathcal{U})$.
<code>\obs</code>	\mathbf{y}	Observations vector.
<code>\obse</code>	y	Observations element.
<code>\cmd</code>	\mathbf{u}	Commands vector.
<code>\cmde</code>	u	Commands element.
<code>\nobs</code>	$n_{\mathbf{y}}$	Number of sensels
<code>\ncmd</code>	$n_{\mathbf{u}}$	Number of actuators
<code>\obsSp</code>	\mathcal{Y}	Observation space
<code>\cmdSp</code>	\mathcal{U}	Commands space
<code>\cmdSph</code>	$\overline{\mathcal{U}}$	Domain of a single actuator $\mathcal{U} = \overline{\mathcal{U}}^{n_u}$.
<code>\obsSph</code>	$\overline{\mathcal{Y}}$	Domain of a single sensel $\mathcal{Y} = \overline{\mathcal{Y}}^{n_y}$.
<code>\obsSphd</code>	$d^{\overline{\mathcal{Y}}}$	Metric on $d^{\overline{\mathcal{Y}}}$
<code>\obsSpd</code>	$d^{\mathcal{Y}}$	Metric on $d^{\mathcal{Y}}$
<hr/>		
common/boot/spatialsensors	<i>Spatial sensors</i>	
<code>\obssp</code>	\mathcal{S}	Observation physical space.
<code>\obsps</code>	\mathcal{S}	Observation physical space.
<code>\genimages</code>	\mathbf{Im}	Images on physical space \mathcal{S} .
<code>\imps</code>	$\mathbf{Im}(\mathcal{S})$	Images on physical space \mathcal{S} .
<hr/>		
common/boot/servo	<i>Servoing</i>	
<code>\obsghmark</code>	\circ	
<code>\obsgh</code>	\mathbf{y}_\circ	Goal observations.
<code>\obsge</code>	y_\circ	Goal observations (element).
<code>\obsghl</code>	\mathbf{z}_\circ	Goal observations (element).
<code>\obsghle</code>	z_\circ	Goal observations (element).
<hr/>		
common/boot/abbreviations	<i>Abbreviations</i>	
<code>\bbSpYU</code>	$\mathcal{D}(\mathcal{Y}; \mathcal{U})$	to write

<code>\bbSpYXU</code>	$\mathcal{D}(\mathcal{Y}; \mathcal{X}; \mathcal{U})$	to write
<code>\bbSpUY</code>	$\mathcal{D}(\mathcal{U}; \mathcal{Y})$	to write
<code>\bbSpInvY</code>	$\mathcal{D}^*(\mathcal{Y})$	Representation nuisances on commands
<code>\bbSpInvU</code>	$\mathcal{D}^*(\mathcal{U})$	Representation nuisances on observations
<code>\bbSpInvYU</code>	$\mathcal{D}^*(\mathcal{Y}; \mathcal{U})$	Representation nuisances
<code>\bbSpInvUY</code>	$\mathcal{D}^*(\mathcal{U}; \mathcal{Y})$	
<code>\bbSpCoreYU</code>	$\mathcal{D}^\circ(\mathcal{Y}; \mathcal{U})$	Systems up to representation
<code>common/vehicles</code>	<i>The Vehicles universe</i>	
<code>\veEnvironments</code>	Environments	All Vehicles environments
<code>\veSensors</code>	Sensors	all Vehicles sensors
<code>\veDynamics</code>	Dynamics	all Vehicles dynamics
<code>\veVehicles</code>	Vehicles	
<code>common/vehicles/mah</code>	<i>todo</i>	
<code>\veSce</code>	S	
<code>\veVeh</code>	V	
<code>\veMov</code>	M	
<code>\veAdd</code>	A	
<code>\veJoi</code>	J	
<code>\vePar</code>	P	Parallel composition of sensors
<code>\veNcmd</code>	U	
<code>\veNobs</code>	Y	
<code>common/expressions</code>	<i>Miscellaneous expressions</i>	
<code>\etal</code>	<i>et al.</i>	
<code>\eg</code>	<i>e.g.,</i>	
<code>\etc</code>	<i>etc.</i>	
<code>\ie</code>	<i>i.e.,</i>	
<code>\viceversa</code>	<i>viceversa</i>	
<code>\vs</code>	<i>vs</i>	Versus
<code>\adhoc</code>	<i>ad hoc</i>	
<code>\apriori</code>	<i>a priori</i>	
<code>common/goodformulas</code>	<i>Better formulas annotations</i>	
<code>\expl{...}</code>		Explanation in formulas
<code>\highA{...}</code>		Highlight something in formulas (observation)
<code>\highB{...}</code>		Highlight something in formulas (command)
<code>\highC{...}</code>		both observations and commands
<code>common/yesorno</code>	<i>Miscellaneous functions for document formatting</i>	
<code>\ns</code>		
<code>\tickYes</code>	✓	
<code>\tickNo</code>	7	
<code>\NA</code>	<i>n/a</i>	
<code>\coltickNo</code>	7	
<code>\yes</code>	✓	
<code>\no</code>	7	
<code>\onehalf</code>	$\frac{1}{2}$	small one half
<code>\smPO</code>	+1	Small plus one
<code>\smMO</code>	−1	Small minus one (e.g. in <code>smallmatrix</code>)

common/incomplete	<i>Incomplete symbols</i>	
<code>\AC{...}</code>		Marker for sections to write
<code>\ac{...}</code>		
<code>\towrite</code>	to write	Marker for sections to write
<code>\placeholder{...,...}</code>		A placeholder
<code>\tocite{...}</code>		
<code>\citeboh</code>	<i>[xxx]</i>	
<code>\citexxx</code>	<i>[xxx]</i>	
<code>\xxx</code>	???	
<code>\notsure</code>	(Not sure...)	
<code>\dontlike</code>	(Don't like this)	
<code>\notformal</code>	(not formal)	
<code>\betterword{...}</code>		
<code>\boh</code>	???	incomplete
<code>\bn</code>		bad notation, this should change later
<code>\checkbadformat</code>		incomplete
<code>\prooftowritesomeday</code>		
<code>\myrule{...,...}</code>		
<code>\unitInterval</code>	$[0, 1]$	
common/geometry	<i>Differential geometry</i>	
<code>\diff</code>	Diff	Diffeomorphism Diff(\mathcal{M}) are the diffeomeorphisms from \mathcal{M} to \mathcal{M} . $\text{\textbackslash diff}(\text{\textbackslash aset}\{M\})$ are the diffeomeorphisms from $\text{\textbackslash aset}\{M\}$ to itself.
<code>\diffPos</code>	Diff ₊	Orientation-preserving diffeomorphism.
<code>\homeoPos</code>	Homeo ₊	Orientation-preserving homeomorphisms (or diffeomorphisms).
<code>\diffBounded{...}</code>		Diffeomorphisms with bounded curvature
<code>\diffVol</code>	Diff _{vol}	
<code>\homeo</code>	Homeo	Set of all homeomorphisms
<code>\isometries</code>	Isom	Isometries group Isom(\mathcal{M}) are all the isometries of \mathcal{M} . $\text{\textbackslash isometries}(\text{\textbackslash aset}\{M\})$ are all the isometries of $\text{\textbackslash aset}\{M\}$.
<code>\diffFix{...}</code>		Diffeomorphisms that fix a point
<code>\conformalFuncs</code>	Conformal	Conformal transformations
common/geometry/manifolds	<i>Manifolds</i>	
<code>\Sone</code>	\mathbb{S}^1	Unit circle.
<code>\Stwo</code>	\mathbb{S}^2	Unit sphere.
<code>\stwo</code>	\mathbb{S}^2	Unit sphere
<code>\hypsp</code>	\mathbb{H}	
<code>\hypspn</code>	\mathbb{H}^n	
common/groups	<i>Group theory</i>	
<code>\gIdentity</code>	e	Identity of a group
<code>\tgroup</code>	group	Group set with operations group(G, \cdot) means G is a group under \cdot . $\text{\textbackslash tgroup}(\text{\textbackslash agroup}\{G\}, \text{\textbackslash cdot})$ means $\text{\textbackslash agroup}\{G\}$ is a group under $\text{\textbackslash cdot}$.

<code>\haar</code>	<code>haar</code>	Haar measure
		The Haar measure on \mathcal{X} is haar^X .
		The Haar measure on \mathcal{X} is haar^X .
<code>common/groups/famous</code>	<i>Famous groups</i>	
<code>\idGroup</code>	<code>Id</code>	The trivial group with identity only.
<code>\permutations</code>	<code>Perm</code>	Set of permutation
<code>\stab{...}</code>		Stabilizer of a set
<code>\functionsym{...}</code>		Symmetries of a function
<code>\allsubgroups</code>	<code>AllSubgroups</code>	
<code>\comgroup{...}</code>		Commutator sub group
<code>\groupJoin</code>	<code>∨</code>	Group join
<code>\groupconj{...}</code>		Conjugation
<code>\groupquotient</code>	<code>/</code>	Group quotient
<code>\groupsemdir</code>	<code>⋈</code>	Semidirect product.
<code>\groupisom</code>	<code>≅</code>	Isomorphism
<code>\issubgroup</code>	<code>≤</code>	Subgroup relation.
<code>\normalsub</code>	<code>⊲</code>	Normal subgroup relation
<code>\actionsymbol</code>	<code>·</code>	Group action.
<code>\companionFuncs{...}</code>		Companions functions
<code>\transversalFuncs{...}</code>		Transversal functions
<code>common/groups/matrix</code>	<i>Matrix groups</i>	
<code>\orthogroup</code>	<code>O</code>	Orthogonal group.
<code>\trangroup</code>	<code>T</code>	Translation group
<code>\segroup</code>	<code>SE</code>	Special Euclidean group.
<code>\Egroup</code>	<code>E</code>	Euclidean group.
<code>\SLgroup</code>	<code>SL</code>	Special linear group
<code>\Diaggroup</code>	<code>D</code>	Diagonal matrices with non-zero elements.
<code>\PMgroup</code>	<code>D_±</code>	Diagonal matrices with ± 1 on the diagonal
<code>\Scalegroup</code>	<code>Sc</code>	Multiples of the identity
<code>\sogroup</code>	<code>SO</code>	Special orthogonal group.
<code>\soneggroup</code>	<code>SO⁻</code>	
<code>\affgroup</code>	<code>Aff</code>	Affine group
<code>\affgrouppos</code>	<code>Aff₊</code>	Affine group
<code>\GL</code>	<code>GL</code>	General linear group
<code>\GLpos</code>	<code>GL₊</code>	
<code>\se</code>	<code>se</code>	Special Euclidean algebra
<code>\soalgebra</code>	<code>so</code>	
<code>\sealgebra</code>	<code>se</code>	Special Euclidean algebra
<code>\SOthree</code>	<code>SO(3)</code>	Special orthogonal group (rotation matrices)
<code>\SEthree</code>	<code>SE(3)</code>	Special Euclidean group
<code>\SEtwo</code>	<code>SE(2)</code>	Special Euclidean group
<code>\SEthreeAlg</code>	<code>se(3)</code>	
<code>\SEtwoAlg</code>	<code>se(2)</code>	
<code>\SOthreeAlg</code>	<code>se(3)</code>	
<code>\SOtwoAlg</code>	<code>se(2)</code>	
<code>\setwo</code>	<code>SE(2)</code>	
<code>\sethree</code>	<code>SE(3)</code>	
<code>\sotwo</code>	<code>SO(2)</code>	
<code>\sothree</code>	<code>SO(3)</code>	

common/groups/simple	<i>Very simple groups</i>	
\mgroup	(\mathbb{R}_0, \times)	Multiplication group
\mposgroup	(\mathbb{R}_0^+, \times)	Positive multiplication group
\mpmgroup	$(\pm 1, \times)$	+1/-1 multiplication group
\addgroup	$(\mathbb{R}, +)$	Addition group
common/groups/simple/abbreviations	<i>Abbreviations</i>	
\addgroupn	$(\mathbb{R}^n, +)$	Addition group on \mathbb{R}^n
\affone	$\text{Aff}(\mathbb{R})$	Affine group 1D
\affonepos	$\text{Aff}_+(\mathbb{R})$	Affine group 1D
\affn	$\text{Aff}(\mathbb{R}^n)$	Affine group in n dimensions.
\affnpos	$\text{Aff}_+(\mathbb{R}^n)$	Affine transformations preserving orientation
common/probability	<i>Probability</i>	
\uniformdist	Uniform	Uniform distribution
\measuresupport	Support	Support of a probability measure
\processes	StocProcesses	Set of stochastic processes
\conditional	Conditional	Conditional distribution
		Conditional($\mathcal{B}; \mathcal{A}$) is the set of conditional distributions
		$\$\text{\conditional(\setB;\setA)}\$$ is the set of conditional distributions
\finaldist	Final	Stationary distribution of a stochastic process
\measureSp	meas	Measure space.
		meas(\mathcal{X}, Σ, μ) is a measure space.
		$\$\text{\measureSp(\aset\{X\}, \Sigma, \mu)}\$$ is a measure space.
\probSp	prob	Probability space.
		prob(\mathcal{X}, Σ, μ) is a probability space.
		$\$\text{\probSp(\aset\{X\}, \Sigma, \mu)}\$$ is a probability space.
\measures	Measures	Set of probability measures on a set.
		Try $\mu^{\mathcal{X}} \in \text{Measures}(\mathcal{X})$
		Try $\mu \in \{\text{\aset\{X\}}\} \in \text{\measures(\aset\{X\})}$
\dirac	δ	
common/robotics	<i>Robotics</i>	
\obsip	m	Inner product bilinear form.
\obsosp	\mathcal{O}	Observation output space.
\dummySensel	s	
\pose	\mathbf{q}	Robot pose $\mathbf{q} = (\mathbf{t}, \mathbf{R}) \in \mathcal{Q} \subset \text{SE}(3)$.
\posesp	\mathcal{Q}	Pose space, subgroup of $\text{SE}(3)$.
\posespAlg	\mathbf{q}	Pose space algebra.
\confspace	\mathcal{Q}	Robot configuration space
\pos	\mathbf{t}	Position in the world frame.
\posEl	t	Position in the world frame (element)
\rotm	\mathbf{R}	Rotation matrix representing orientation in
\rotme	R	Element of rotation matrix
\lvel	\mathbf{v}	Linear velocity
\lvele	v	Linear velocity (element)

<code>\avel</code>	ω	Angular velocity (as vector)
<code>\avele</code>	ω	Angular velocity (element)
<code>\avels</code>	ω	Angular velocity in 2D (scalar)
<code>\avelse</code>	$\hat{\omega}$	Angular velocity (as skew-symmetric matrix)
<code>\njoints</code>	n_j	Number of joints in a robot
<code>\attitude</code>	\mathbf{R}	
<code>\position</code>	\mathbf{t}	
<code>common/robotics/fieldsmapler</code>	<i>Field samplers</i>	
<code>\field</code>	\mathcal{F}	Field sampled by the field sensor.
<code>\fieldpos</code>	\mathbf{z}	Generic position in the world.
<code>\fieldpose</code>	z	Generic position in the world.
<code>\worldSp</code>	Maps	
<code>common/robotics/old</code>	<i>Deprecated</i>	
<code>\wshape</code>	\mathbf{s}	
<code>\wpose</code>	\mathbf{p}	
<code>\worldsp</code>	Maps	
<code>\wshapesp</code>	Shapes	
<code>common/robotics/maps</code>	<i>New stuff</i>	
<code>\mshape</code>	\mathbf{s}	Map shape.
<code>\mpose</code>	\mathbf{p}	Map pose.
<code>\mshapesp</code>	Shapes	Shape space.
<code>\mapsp</code>	Maps	Maps set $\text{Maps} = \text{Shapes} \times \text{SE}(3)$.
<code>common/statistics</code>	<i>Misc statistics</i>	
<code>\stddev</code>	<code>std</code>	Standard deviation
<code>\var</code>	<code>var</code>	Variance
<code>\ex</code>	\mathbb{E}	Expected value
<code>\corr</code>	<code>corr</code>	
<code>\cov</code>	<code>cov</code>	covariance
<code>\spearcorr</code>	<code>spear</code>	Spearman correlation between two variables
<code>\mutualinf</code>	\mathcal{I}	Mutual information
<code>\entr</code>	\mathcal{H}	Entropy
<code>\varinf</code>	\mathcal{V}	Variation of information
<code>\varinfn</code>	\mathcal{V}_1	Normalized variation of information
<code>\pushedforward{...}</code>		Pushed forward notation
<code>\distributedAs</code>	\sim	Distributed as
<code>common/statistics/sorting</code>	<i>Sorting vectors</i>	
<code>\order</code>	<code>order</code>	Order (or rank) of the elements of a vector.
<code>\sorted</code>	<code>sorted</code>	Sorted version of a vector
<code>\differ</code>	<code>differ</code>	
<code>\sortedSeq</code>	<code>sortedSeq</code>	
<code>\weaksortedSeq</code>	<code>weaksortedSeq</code>	
<code>common/systems</code>	<i>Dynamical systems</i>	
<code>\CTI</code>	CTI	Continuous-time time-invariant systems.
<code>\DTI</code>	DTI	Discrete-time time-invariant systems.
<code>\DDTI</code>	DDTI	Deterministic discrete-time time-invariant systems.

<code>\DCTI</code>	CDTI	Deterministic continuous-time time-invariant
<code>\DFSTI</code>	DFSTI	Discrete-time finite-state-space time-invariant
<code>\CFSTI</code>	CFSTI	Continuous-time finite-state-space time-invariant
<code>\DFSTIGO</code>	DFSTIGO	Discrete-time finite-state-space time-invariant
<code>\CLTI</code>	CLTI	Continuous-time linear time-invariant systems
<code>\CLTIG</code>	CLTIG	Continuous-time linear time-invariant systems
<code>\DLTI</code>	DLTI	Discrete-time linear time-invariant systems
<code>\DSMPLTI</code>	DSMPLTI	Discrete-time stable minimum-phase linear
<code>\DLTIG</code>	DLTIG	Discrete-time linear time-invariant systems
<code>\laptrans</code>	\mathcal{L}	Laplace transform
<code>\impulseresp</code>	ImpulseResp	Impulse response of a system
<code>\transferfunc</code>	TF	Transfer function
<i>typography</i>	<i>Basic typography</i>	
<code>\myacronym{...}</code>		All acronyms; good for text as well as math
<i>typography/tensors</i>	<i>Tensors and tensor elements</i>	
<code>\T{...}</code>		Tensor
<code>\Tel{...}</code>		Tensor element
<code>\Te{...}</code>		
<i>typography/matrices</i>	<i>Matrices and matrix elements</i>	
<code>\M{...}</code>		A matrix
<code>\Mel{...}</code>		The elements of a matrix
<i>typography/sets</i>	<i>Sets</i>	
<code>\aset{...}</code>		A set
<code>\agroup{...}</code>		Fonts for a set which is a group.
		A set \mathcal{X} , a group X, G, \dots
		A set \mathcal{X} , a group X, G, \dots
		A set \mathcal{X} , a group X, G, \dots
<code>\aseq{...}</code>		Formatting for sequences
<code>\aseqe{...}</code>		Formatting for one element in a sequence
<code>\dummyIndices</code>		
<i>typography/misc</i>	<i>Everything else</i>	
<code>\aword{...}</code>		How words should look like in formulas.
		Consider the operator scale, ...
		Consider the operator \mathcal{X} , a group X, G, \dots
<code>\vmath{...}</code>		How words should appear in math mode.