2025

Author(s)	Type	Stimulus	Decoding	Notes
Dold et al.	article	modulated Gold codes	reconvolution, CCA	Dareplane, experiment platform
Dong, Zheng, Pei, Gao, and Wang	article	NBRS	EEG2Code	240 classes
Fodor, Canturk, Heisenberg, Volosyak, et al.	proceedings	m-sequence	CCA	class augmentation
Fodor et al.	article	m-sequence	CCA	number of electrodes, montage
Guyonnet-Hencke et al.	article	Gold code	CCA	auditory hearing diagnostics
Le, Fodor, Cantürk, and Volosyak	proceedings	m-sequence	CCA	authentication
Martín-Fernández, Martínez-Cagigal, Moreno-Calderón, Santamaría-Vázquez, and Hornero	article	m-sequence	CCA	stimulus opacity
Martínez-Cagigal, Thielen, Hornero, and Desain	article			Editorial c-VEP
Martínez-Cagigal et al.	proceedings	m-sequence	CCA	asynchronous, early stopping
Moreno-Calderón, Martínez-Cagigal, Martín-Fernández, Santamaría-Vázquez, and Hornero	article	m-sequence	CCA	mixed reality versus screen
Santamaría-Vázquez et al.	proceedings			calibration-free, deep learning
Tangermann et al.	article			review learning from small datasets
Thielen, Tangermann, Aarnoutse, Ramsey, and Vansteensel	article	modulated Gold codes	reconvolution, CCA	implanted, invasive, sEEG
Thielen	article	m-sequence, de Bruijn sequence, Golay sequence, Gold sequence, Gold code set, modulated	reconvolution, CCA	BCI inefficiency, performance predictors, binary stimulus sequences
Thielen	dataset	m-sequence, de Bruijn sequence, Golay sequence, Gold sequence, Gold code set, modulated		binary stimulus sequences, EEG, ECG, SART, resting-state

2024

Author(s)	**Type**	**Stimulus**	**Decoding**	**Notes**
Ahmadi, Desain, and Thielen	article	modulated Gold codes	reconvolution, CCA	Bayesian dynamic stopping
Cantürk and Volosyak	proceedings	m-sequence	CCA	language model (ChatGPT)
Cabrera Castillos and Dehais	dataset	burst codes		grating stimuli
Dehais, Castillos, Ladouce, and Clisson	article	burst codes	Riemannian, logistic regression	grating stimuli, dry EEG, comfort, eye-strain
Fodor, Herschel, Cantürk, Heisenberg, and Volosyak	article	m-sequence	CCA	classification certainty feedback
C. Huang et al.	article	white noise	TRCA	visual tracking
E. Lai, Mai, Ji, Li, and Meng	proceedings	DIBS	filterbank task related component analysis (FBTRCA), LSTM	asynchronous
Martínez-Cagigal, Álvaro Fernández-Rodríguez, Santamaría-Vázquez, Martín-Fernández, and Hornero	proceedings	non-binary m-sequence	CCA	learning curve
Y. Miao et al.	article	white noise	TDCA, linear modeling, transfer learning	minimal calibration, subject-to-subject transfer
Z. Miao, Meunier, Žák, and Grosse-Wentrup	proceedings	m-sequence	EEG2Code, EEGNet, ShallowConvNet, DeepConvNet, ShallowNet	deep learning, transfer-learning, fine-tuning
Narayanan, Ahmadi, Desain, and Thielen	proceedings	modulated Gold codes	CCA	gaze-independent, covert attention
Qu et al.	article	m-sequence	CCA	biometrics
Scheppink, Ahmadi, Desain, Tangermann, and Thielen	proceedings	modulated Gold codes	CCA	auditory, c-AEP
Shi et al.	article	white-noise	TDCA	maximum information rate
Sun et al.	article	m-sequence	TDCA	small stimuli (0.5, 1, 2, 3 visual degrees)
Thielen, Sosulski, and Tangermann	proceeding	modulated Gold codes	reconvolution, CCA, UMM	calibration-free
Thielen, Farquhar, and Desain	dataset	modulated Gold codes		
Velut, Chevallier, Corsi, and Dehais	proceedings	burst codes	CNN, SPDNet, transfer learning	subject-to-subject transfer
Zheng, Dong, et al.	article	NBRS	FBCCA	calibration-free, c-VEP versus SSVEP
Zheng, Tian, et al.	dataset	NBRS		c-VEP versus SSVEP

2023

Author(s)	Type	Stimulus	Decoding	Notes
Ahmadi and Desain	preprint	modulated Gold codes	CCA	Bayesian dynamic stopping
Cabrera Castillos, Ladouce, Darmet, and Dehais	article	m-sequence, burst codes	CNN	
Cabrera Castillos	dataset	m-sequence, burst codes		
Darmet, Ladouce, and Dehais	proceedings	m-sequence	TRCA, EEG2Code, CNN	
Fernández-Rodríguez, Martínez-Cagigal, Santamaría-Vázquez, Ron-Angevin, and Hornero	article	m-sequence	CCA	Eyestrain spatial frequency
Henke et al.	proceedings	m-sequence	CCA	Background music
Z. Huang, Liao, Ou, Chen, and Zhang	article	m-sequence	Combined EEGNet	Biometrics
E. Lai, Mai, and Meng	proceedings	DIBS	FBTRCA, LSTM	fatigue
Martínez-Cagigal et al.	article	m-sequence, non-binary m-sequences	CCA	Eyestrain, fatigue
Martínez-Cagigal, Santamaría-Vázquez, and Hornero	proceedings	non-binary m-sequence	CCA	Dynamic stopping
Moreno-Calderón et al.	article	m-sequence	CCA	Games
Santamaría-Vázquez, Martínez-Cagigal, and Hornero	proceedings	non-binary m-sequence,	EEG-inception	
Thielen	proceedings	m-sequence, APA sequence, Gold codes, Golay sequence, de Bruijn sequence	reconvolution, CCA	Simulated EEG
Thielen, Cornielje, van der Werff, and Desain	proceedings	m-sequence, Gold codes, Golay sequence, de Bruijn sequence, modulated codes	reconvolution, CCA	Empirical EEG
Thielen, Marsman, Farquhar, and Desain	dataset	modulated Gold codes		
Volosyak et al.	proceedings	m-sequence	CCA	Gender
Wolf and Götzelmann	article			VEPdgets, Dry EEG
Xu et al.	article	m-sequence	TRCA	c-VEP versus SSVEP

2022

Author(s)	Type	Stimulus	Decoding	Notes
Dehais et al.	article			Dry EEG, flight simulator, active and passive BCI
Stawicki and Volosyak	article	m-sequence	transfer learning	Session-to-session transfer
Sun, Zheng, Pei, Gao, and Wang	article	shifted Gold code	FBTRCA	120 targets
Ying, Wei, and Zhou	article	m-sequence	Riemannian, transfer learning	Subject-to-subject transfer
Zarei and Asl	article	m-sequence	spatiotemporal beamformer	
Zarei and Asl	article	m-sequence	spatiotemporal beamformer	Improved covariance estimator
Zheng, Pei, Gao, Zhang, and Wang	article	Gold codes	TRCA	Brain-switch

2021

Author(s)	Type	Stimulus	Decoding	Notes
Kaya, Bohorquez, and Özdamar	article	quasi steady-state	CLAD	
Martínez-Cagigal et al.	article			Review c-VEP
Thielen, Marsman, Farquhar, and Desain	article	modulated Gold codes	reconvolution, CCA	Zero-training
Torres and Daly	article	APA sequence, de Bruijn sequence, Golay sequence, m-sequence, Gold code, Kasami sequence	CCA, ICA, PCA, MLP	Synthetic EEG
Verbaarschot et al.	article	modulated Gold codes	CCA	ALS versus healthy participants

2020

Author(s)	Type	Stimulus	Decoding	Notes
Behboodi, Mahnam, Marateb, and Rabbani	article	m-sequence, TFO, 6FO	CCA	
Gembler, Rezeika, Benda, and Volosyak	article	m-sequence, quintary m-sequence	FBCCA	Presentation rate (60, 120, 240), comfort
Gembler, Benda, Rezeika, Stawicki, and Volosyak	article	m-sequence	CCA	Asynchronous, language model
Gembler	dissertation			c-VEP
Gembler, Stawicki, Rezeika, Benda, and Volosyak	proceedings	m-sequence	FBCCA	Asynchronous, multi-session
Z. Huang, Zheng, Wu, and Wang	article	m-sequence	transfer-learning	Subject-to-subject transfer
Volosyak, Rezeika, Benda, Gembler, and Stawicki	article	m-sequence	CCA	SSVEP, SSMVEP, c-VEP, BCI illiteracy
Shirzhiyan et al.	article	periodic, quasi-periodic, chaotic codes	CCA	Fatigue
Turi, Gayraud, and Clerc	article	m-sequence	CCA	Auto-calibration, language model, zero training
Yasinzai and Ider	article	m-sequence, random sequence, SOP sequences	CCA	

2019

Author(s)	Type	Stimulus	Decoding	Notes
Ahmadi	dataset	modulated Gold codes		
Ahmadi	dataset	modulated Gold codes		
Ahmadi, Borhanazad, Tump, Farquhar, and Desain	proceedings	modulated Gold codes	CCA	Number of electrodes, montage
Ahmadi, Borhanazad, Tump, Farquhar, and Desain	article	modulated Gold codes	CCA	Number of electrodes, montage
Başaklar, Tuncel, and İder	article	m-sequence	CCA	Presentation rate (60, 120, 240 Hz)
Borhanazad, Thielen, Farquhar, and Desain	proceedings	modulated Gold codes	CCA	Presentation rate (40, 60, 90, 120 Hz)
Desain, Thielen, van den Broek, and Farquhar	patent	modulated Gold codes	CCA	
Gembler and Volosyak	article	m-sequence	CCA	Language model
Gembler, Stawicki, Rezeika, and Volosyak	proceedings	m-sequence	FBCCA	Presentation rate (30, 60, 120 Hz), age (young, elderly)
Gembler, Stawicki, Saboor, and Volosyak	article	m-sequence	FBCCA	Language model, dynamic stopping
Gembler, Benda, Saboor, and Volosyak	proceedings	m-sequence	FBCCA	Language model, dynamic stopping
Grigoryan, Filatov, and Kaplan	article	m-sequence	CCA	Presentation rate (30, 60, 120 Hz)
Kadıoğlu, Yıldız, Closas, Fried-Oken, and Erdoğmuş	article	m-sequence	Maximum likelihood	Color (green-red), fusion of c-VEP and eye tracker
Kaya, Bohorquez, and Ozdamar	proceedings	quasi steady-state	CLAD	QSSVEP
Kaya, Bohórquez, and Özdamar	article	quasi steady-state	CLAD	QSSVEP
Kaya	dissertation			QSSVEP
Luo and Huang	proceedings	m-sequence	LDA, transfer learning	Subject-to-subject transfer
Matsuno, Itakura, Mizuno, and Mito	proceedings			frequency-hopping VEP
Nagel and Spüler	article	optimized random sequences	EEG2Code	Asynchronous, non-control state
Nagel and Spüler	article	random sequences	EEG2Code	
Nagel	dissertation			c-VEP
Peng and Huang	proceedings	m-sequence	sLDA	For psychological experiments (button presses without behavior)
Shirzhiyan et al.	article	m-sequence, chaotic codes	CCA, spatiotemporal beam-forming	Fatigue
Turi and Clerc	article	m-sequence		Static stopping number of cycles
Zhao, Wang, Liu, Pei, and Chen	article	m-sequence	FBCCA. FBTRCA	Biometrics
Zheng, Wang, Pei, and Chen	proceedings	Gold codes	TRCA	Brain switch

2018

Author(s)	Type	Stimulus	Decoding	Notes
Başaklar, İder, and Tuncel	proceedings	m-sequence		Presentation rate (60, 120, 240 Hz)
Dimitriadis and Marimpis	article	m-sequence	SVM	PAC, healthy and patients
Gembler, Stawicki, Saboor, et al.	proceedings	m-sequence	CCA	Presentation rate (60, 120, 200 Hz)
Gembler, Stawicki, Rezeika, et al.	proceedings	m-sequence	CCA	Language model
Liu, Wei, and Lu	article	Golay sequence, APA sequence	CCA	
Nagel, Dreher, Rosenstiel, and Spüler	article	m-sequence		Monitor raster latency, P300, SSVEP, c-VEP
Nagel, Rosenstiel, and Spüler	proceedings	optimized random sequences	CCA, regression	
Nagel and Spüler	article	random and optimized sequences	Ridge regression, EEG2Code	
Nezamfar, Mohseni Salehi, Higger, and Erdogmus	article	m-sequence	RDA	Color (green-red), c-VEP versus eye tracker
Spüler and Kurek	article	m-sequence	CCA, SVM	ASSR versus c-AEP
Turi, Gayraud, and Clerc	preprint	m-sequence		Zero-training, language model
Wei et al.	article	grouping modulation, Golay complementary sequences, APA sequence	CCA	

2017

Author(s)	Type	Stimulus	Decoding	Notes
Aminaka and Rutkowski	chapter	m-sequence	CCA, SVM	Color (green-blue), 40 Hz
Isaksen, Mohebbi, and Puthusserypady	article	m-sequence, Gold code, Barker code	correlation	
Nagel, Rosenstiel, and Spüler	proceedings	m-sequence, random codes	CCA	
Spüler	article	m-sequence	CCA	Dry EEG, static and dynamic stopping
Thielen, Marsman, Farquhar, and Desain	chapter	modulated Gold codes	reconvolution, CCA	Zero-training
Wei, Gong, and Lu	article	grouping modulation, Golay sequence, APA sequence	CCA	
Wittevrongel, Van Wolputte, and Van Hulle	article	m-sequence	beamformer	

2016

Author(s)	Type	Stimulus	Decoding	Notes
Desain, Thielen, van den Broek, and Farquhar	patent	modulated Gold codes	CCA	
Isaksen, Mohebbi, and Puthusserypady	proceedings	m-sequence	Barker code, Gold code	
Nezamfar, Salehi, Moghadamfalahi, and Erdogmus	article	m-sequence		FlashType, color (red-green), 110 Hz, language model
Riechmann, Finke, and Ritter	article	m-sequence	SVM (linear)	Color (green-red, black-white), shape, background, 120 Hz, virtual agent
Sato and Washizawa	proceedings	m-sequence	CCA, MLP, Lasso regression, Linear regression	
Thielen, Farquhar, and Desain	proceedings	modulated Gold codes	reconvolution, CCA	
Wei, Feng, and Lu	article	m-sequence	CCA	Stimulus characteristics: size (0.67, 1.7, 2.8, 3.8, 5.4, 7.1, 8.9 dva), color (white, red, green, blue, yellow), proximity (3.8, 4.8, 5.8, 6.8 dva), length (15, 31, 63, 127 bits), lag (2, 4, 6, 8, 10 bits)
Wei, Huang, Li, and Lu	article	m-sequence, Golay sequence	CCA	

2015

Author(s)	Type	Stimulus	Decoding	Notes
Aminaka, Makino, and Rutkowski	proceedings	m-sequence	CCA	Color (green-blue, white-black), presentation rate (30, 40 Hz)
Aminaka, Makino, and Rutkowski	proceedings	m-sequence	CCA, SVM	Color (green-blue, white-black), presentation rate (30, 40 Hz), CCA versus SVM
Aminaka, Makino, and Rutkowski	proceedings	m-sequence	SVM	Color (green-blue, white-black), presentation rate (30, 40 Hz), pass-band optimization (6-21 Hz)
Aminaka, Makino, and Rutkowski	proceedings	m-sequence	SVM	Color (green-blue, white-black), presentation rate (30, 40 Hz), SVM (linear, polynomial, rbf, sigmoid)
Mohebbi et al.	proceedings	Gold code	correlation	Wheelchair
Nezamfar, Salehi, and Erdogmus	proceedings	m-sequence	maximum likelihood	Color (red-green, blue-yellow, black-white), presentation rate (30, 60, 110 Hz)
Sato and Washizawa	proceedings	m-sequence	correlation	Automatic repeat request
Spüler	proceedings	m-sequence	CCA, SVM	Windows applications
Thielen, van den Broek, Farquhar, and Desain	article	modulated Gold codes	reconvolution, CCA	
Waytowich and Krusienski	article	m-sequence	CCA	Foveal versus peripheral stimulation

2014

Author(s)	Type	Stimulus	Decoding	Notes
Kapeller et al.	article	m-sequence	CCA, LDA	Invasive, video application
Tu et al.	article		CSP, SVM, Naive Bayes, LDA	Color (red-green), CTVEP

2013

Author(s)	Type	Stimulus	Decoding	Notes
Bohórquez, Lozano, Kao, Toft-Nielsen, and Özdamar	proceedings	temporally jittered SSVEP	CLAD	
Kapeller et al.	proceedings	m-sequence	CCA, LDA	Robot, SSVEP versus c-VEP
Riechmann, Finke, and Ritter	proceedings	hierarchical codebook	SVM	Color (red-green, black-white)
Spüler, Rosenstiel, and Bogdan	proceedings	m-sequence	OCSVM,	Unsupervised online calibration
Spüler, Rosenstiel, and Bogdan	proceedings	m-sequence	OCSVM	Unsupervised online calibration
Spüler, Walter, Rosenstiel, and Bogdan	article	m-sequence	CCA, OCSVM	c-VEP, ERN, P300, TMSEP, CCEP

2012

Author(s)	Type	Stimulus	Decoding	Notes
Nakanishi and Mitsukura	proceedings	m-sequence, periodic codes	periodicity detection	
Spüler, Rosenstiel, and Bogdan	proceedings	m-sequence	CCA, OCSVM	
Spüler, Rosenstiel, and Bogdan	article	m-sequence	CCA, OCSVM	Online unsupervised adaptation with ERN

2011

Author(s)	Type	Stimulus	Decoding	Notes
Bin et al.	article	m-sequence	CCA	
S. M. Lai, Zhang, Hung, Niu, and Chang	article			Color (red-green), CTVEP
Nezamfar, Orhan, Purwar, et al.	article	m-sequence	template matching, Bayesian fusion	
Nezamfar, Orhan, Erdogmus, et al.	proceedings	m-sequence	correlation, naive Bayes	Presentation rate (15, 30 Hz)

2009

Author(s)	Type	Stimulus	Decoding	Notes
Bin, Gao, Wang, Hong, and Gao	article	m-sequence	correlation	ERP versus SSVEP versus c-VEP

2008

Author(s)	Type	Stimulus	Decoding	Notes
Desain, Farquhar, Blankespoor, and Gielen	proceedings	Gold codes	reconvolution	Auditory
Farquhar, Blankespoor, Vlek, and Desain	proceedings	Gold codes		Auditory
Momose	proceedings	m-sequence		Hybrid P300 and c-VEP

2007

Author(s)	Type	Stimulus	Decoding	Notes
Momose	proceedings	m-sequence		

2006

Author(s)	Type	Stimulus	Decoding	Notes
Bohórquez and Özdamar	article	m-sequence	CLAD	Auditory

2002

Author(s)	Type	Stimulus	Decoding	Notes
Hanagata and Momose	proceedings			

1992

Author(s)	Type	Stimulus	Decoding	Notes
Sutter	article	m-sequence	correlation	Invasive, ALS patient

1984

Author(s)	Type	Stimulus	Decoding	Notes
Sutter	proceedings			

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Glossary

6FO 6 factor optimum. 5

ALS amyotrophic lateral sclerosis. 4, 11

APA almost perfect auto-correlation. 3, 4, 7

ASSR auditory steady-state response. 7

BCI brain computer interfacing. 5

c-AEP code-modulated auditory evoked potential. 2, 7

c-VEP code-modulated visual evoked potential. 1–7, 10, 11

CCA canonical correlation analysis. 1–10

CCEP contrico-cortical evoked potential. 10

CLAD continuous loop averaging deconvolution. 4, 6, 10, 11

CNN convolutional neural network. 2, 3

CSP common spatial patterns. 9

CTVEP chromatic transient visual evoked potential. 9, 10

DIBS discrete interval binary sequence. 2, 3

ECG electrocardiography. 1

EEG electroencephalography. 1–4, 7

ERN error related negativity. 10

ERP event related potential. 10

FBCCA filterbank canonical correlation analysis. 2, 5, 6

FBTRCA filterbank task related component analysis. 2–4, 6

ICA independent component analysis. 4

LDA linear discriminant analysis. 6, 9, 10

LSTM long short term memory. 2, 3

MLP multilayer perceptron. 4, 8

NBRS narrow-band random sequences. 1, 2

OCSVM one class support vector machine. 10

PAC phase to amplitude coupling. 7

PCA principal component analysis. 4

QSSVEP quasi steady-state visual evoked potential. 6

RDA regularized discriminant analysis. 7

SART sustained attention to response task. 1

sEEG stereoelectroencephalography. 1

sLDA shrinkage linear discriminant analysis. 6

SOP superposition optimized pulse. 5

SSMVEP steady state motion visual evoked potential. 5

SSVEP steady state visual evoked potential. 2, 3, 5, 7, 10

SVM support vector machine. 7–10

TDCA task discriminative component analysis. 2

TFO time-factor optimum. 5

TMSEP transcranial magnetic stimulation evoked potential. 10

TRCA task related component analysis. 2–4, 6

UMM unsupervised mean difference maximization. 2

VEP visual evoked potential. 6