CURRICULUM VITAE: Gustavo Deco

Prof. Dr. phil. Dr. rer. nat. habil. Gustavo Deco is a Research Professor at the Institució Catalana de Recerca i Estudis Avançats and Full Professor (Catedrático) the Pompeu Fabra University (Barcelona) where he is head of the Computational Neuroscience Group.

He studied Physics at the National University of Rosario (Argentina) where he received his diploma degree in Theoretical Atomic Physics. In 1987, he received his Ph.D. degree in Physics for his thesis on Relativistic Atomic Collisions. In 1987, he was a post doctoral fellow at the University of Bordeaux in France. In the period from 1988 to 1990, he obtained a post doctoral position of the Alexander von Humboldt Foundation at the University of Giessen in Germany. From 1990 to 2003, he has been with the Neural Computing Section at the Siemens Corporate Research Center in Munich, Germany, where he led the Computational Neuroscience Group. In 1997, he obtained his habilitation (maximum German academic degree) in Computer Science (Dr. rer. nat. habil.) at the Technical University of Munich for his thesis on Neural Learning. In 2001, he received his PhD in Psychology (Dr. phil.) for his thesis on Visual Attention at the Ludwig-Maximilian-University of Munich.

He was a lecturer at the universities of Rosario, Frankfurt and Munich. From 1998 to 2001 he was Associate Professor at the Technical University of Munich. Since 1999 he has been an Honorary Professor at the University of Rosario, since 2001 Invited Lecturer at the Ludwig-Maximilian-University of Munich, since 2016 Associate Researcher at the Max Planck Institute for Human Cognitive and Brain Science, 2017 Adjunct Professor of the Faculty of Medicine of Monash University and 2019-2023 Adjunct Professor, Faculty of Medicine, School of Psychological Sciences and Turner Institute for Brain and Mental Health, Monash University. Since 2001 he is also McDonnell-Pew Visiting Fellow of the Centre for Cognitive Neuroscience at the University of Oxford. In 2001 he was awarded the international prize of Siemens "Inventor of the Year" for his contribution in statistical learning, models of visual perception, and fMRI based diagnosis of neuropsychiatric diseases. His research interests include computational neuroscience, neuropsychology, psycholinguistics, biological networks, statistical formulation of neural networks, and chaos theory. He was awarded the Clarivate Highly Cited Researcher 2023.

He has published 4 books, more than 529 papers in International Journals and 36 book chapters. He has 52 patents in Europe, USA, Canada and Japan. He was awarded an ERC Synergy grant in 2022, an ERC Advanced grant in 2012. He was a member of the Human Brain Project (EU Flagship).

CURRICULUM VITAE: Gustavo Deco

Prof. Dr. Dr. phil. Dr. rer. nat. habil. Gustavo Deco

Private : Birth Date and Place: 07.11.1961 in Rosario (Argentina)
Marital Status: Married and four sons
Nationality: Italian

Graduates Degrees :

03.79 - 03-83 Diploma in Theoretical Physics
National University of Rosario

Postgraduates Degrees :

04.84 - 06.87 Ph.D in Theoretical Physics.
Ph.D thesis: Atomic Collision at Relativistic High Energies.
National University of Rosario. Note: Summa cum Laude

12.96 Habilitation and PhD in Theoretical Computer Science (Dr. rer.nat. habil.)
(Habilitation is the maximal academical degree in Germany and qualifies for a professorship)
Postdoctoral thesis: Unsupervised Learning and Information Theory:
Parametric and Nonparametric Formulation
Technical University of Munich

05.97 - 07.01 Ph.D in Psychology (Neuropsychology, Dr. phil.).
Ph.D thesis: "The Computational Neuroscience of Visual Attention"
Ludwig-Maximilian-University of Munich. Note: Summa cum Laude.

Research Activities :

04.84 – 03.88 Fellowship from the National Research Council at University of Rosario.
06.87 - 08.87 Post-Doctoral Fellowship at the University of Bordeaux (France)
05.88 - 12.89 Post-Doctoral Fellowship of the *Alexander von Humboldt-Foundation*
University of Gießen (Germany)
01.90 - 06.92 Siemens AG, Unterschleißheim
Real Time Expert Systems and Neural Networks (Spin Glass)
07.92 – 03.03 Siemens AG, Research Corporate
Senior Principal Research Scientist
Neural Networks and Computational Neuroscience
since 09.99 Honorary Professorship at the National University of Rosario
since 02.01 McDonnell-Pew Visiting Fellow of the Centre for Cognitive Neuroscience of the University of Oxford
since 03.03 Research Professor by Institució Catalana de Recerca i Estudis Avançats (ICREA) at the University Pompeu Fabra.

Publications: (see list)

Papers:

International Reviews:	529+
Chapters in Books:	36

Books:

1) "An Information-Theoretic Approach to Neural Computing"
G. Deco and D. Obradovic
Springer Verlag,, New York 1996.

2) "Information Dynamics: Foundations and Applications"
G. Deco and B. Schürmann
Springer Verlag, New York, 2000.

3) "Computational Neuroscience of Vision"
E. Rolls and G. Deco
Oxford University Press, Oxford, 2001.

4) "The Noisy Brain"
E. Rolls and G. Deco
Oxford University Press, Oxford, 2010.

Patents (see list)**:** 52

Awards: Inventor of the Year 2001 (Siemens world wide competition).
Clarivate Highly Cited Researcher 2023.

Academic Activities:

03.83-03.88	Teaching Assistant at the National University of Rosario. - Theoretical Mechanic (1983-1984) - Theoretical Electrodynamic (1985-1986) - Quantum mechanic (1987-1988)
04.1994	Invited Professor at the National University of Rosario. - Introduction to the Theory of Neural Networks.
1994-1995	Teaching Assistant at the University of Frankfurt - Introduction to the Theory of Neural Networks. - Informationdynamics
since 1994	Privat-Dozent at the Technical University of Munich - Information Theory and Neural Network. - Informationdynamics. - Computational Neuroscience.
05.1997	Invited Professor at the National University of Rosario. - Theoretical Computer Science
10.2002	Invited Professor at the University Pompeu Fabra (Barcelona). - Introduction to Computational Neuroscience
since 10.2001	Invited Lecturer at the Ludwig-Maximilians-University Munich.

- Computational Neuroscience

2003-2008 Professor at the University Pompeu Fabra (Barcelona).
Lectures:
- Artifitial Intelligence II (Undergraduates Courses)
- Computational Neuroscience (PhD ans Master Courses)
- Biomathematics (Master in Bioinformatics, Biology-UPF)

2004-2006 Director of the Doctoral Program in Computer Science and Digital Communication at the University Pompeu Fabra (UPF, Barcelona).

2005 Invited Professor: Computational Neuroscience (PhD Course)
- Karolinska Institute, Stockholm (Sweden)
- Universidad La Laguna, Almería (Spain)

2006 Invited Professor: Computational Neuroscience (PhD Course)
- Universidad La Laguna, Almería (Spain)

2007 Invited Professor: Computational Neuroscience (PhD Course)
- Universidad La Laguna, Almería (Spain)
- Karolinska Institute, Stockholm (Sweden)

since 2008 Full Professor (Catedrático) at the University Pompeu Fabra (Barcelona).
Lectures:
- Artifitial Intelligence II (Undergraduates Courses)
- Computational Neuroscience (PhD ans Master Courses)

since 2017 Associate Researcher at the Max Planck Institute for Human Cognitive and Brain Science

2017-2023 Adjunct Professor, Faculty of Medicine, Monash University, Australia

2019-2023 Adjunct Professor, Faculty of Medicine, School of Psychological Sciences and Turner Institute for Brain and Mental Health, Monash University.

Languages : Spanish, German, English, Catalan.

Research Projects:

- European Project " GALATEA" ESPRIT Project 5293 (1992-1994)
- European Project " Computational Tools and Industrial Applications of Complexity" ESPRIT Project 21042 (1997-1999)
- European Project " ALAVLSI" IST-2001-38099 (2002-2005)
- Siemens AG-Project " Computational Neuroscience" (2003-2006)
- Deutsche ForschungsGemeinschaft (DFG)
  Germany Ministry, " Attention and Dynamics" (2003-2005)
- Royal Society Project, British Council, Ref. Nr. 15619 (2003-2005)
- Plan Nacional de Investigación Científica (Ministerio de Educación y Ciencia, Spain) " Mechanisms of Multisensory and Temporal Integration in Cognition and Intelligent Systems" (TIN2004-04363-C03-01)

(2004-2006)

- European Project “ EmCap“ “ Emergent Cognition Through Active Perception“ FP6-2002-IST, 013123-2 (2005-2008)
- European Project “ Neural Decision in Motion“, FP6-IST-4 (2006-2009)
- Volkswagen-Foundation “ Audiovisual Processing of Speech and Non-Speech Oral Gestures“ (2006-2009)
- BMBF (German Ministery for Science) “ Brain Plasticity and Perceptual Learning: Experimental Analysis and Computational Modeling“ (Ref.: 01GW0761) (2008-2010)
- Plan Nacional de Investigación Científica (Ministerio de Educación y Ciencia, Spain) “ From Detection to Decision: Neurodynamical Model of Higher Order Cortical Processing“ (BFU2007-61710/BFI) (2007-2009)
- Bilingualism and Cognitive Neuroscience. Consolider Ingenio 2010 (Elite-Project of the Ministerio de Educación y Ciencia, Spain) (2008-2012)
- European Project (HEALTH FP7) “ BrainSync“ “ Large Scale Interaction in Brain Networks and their Breakdown in DiseasesBrain“ (2008-2010)
- European Marie Curie Training Network, CODDE “ Coordination of Optimal Decisions in Dynamical Enviroments“ (2008-2011)
- Fundació La Marató TV3. “ Estudi de la dinàmica remissió-recaiguda de la depressió major a través de l'anàlisi de xarxa als mapes de connectivitat de Fmri: implicacions per a la teràpia“ (2010-2012)
- Plan Nacional de Investigación Científica (Ministerio de Educación y Ciencia, Spain) “ Communication and Information Processing Between Cortical Circuits: Oscillations and Plasticity“ (2011-2013)
- European Project (FP7), CORONET “ Choreographing neural networks: coupling activity dynamics across biomimetic brain interfaces with neuromorphic VLSI” (2011-2014)
- European Project (FP7) BRAINSCALES “ Brain-inspired multiscale computation in neuromorphic hybrid systems“ (2011-2014)
- James McDonnell Foundation US. Collaborative Awards - Human Cognition “ Brain Network Recovery Group Phase II“ (2011-2016)
- Advanced ERC Grant European Research Council “DYSTRUCTURE“: The Dynamical and Structural Basis of Human Mind Complexity: Segregation and Integration of Information and Processing in the Brain“ (2012-2017)
- PCIN-2013-026 Plan Estatal de Fomento de la Investigación Científica y Técnica de Excelencia SEMAINE “ Simultaneous MEG or fMRI And INtracranial EEG”.ERA-NET-NEURON “SEMAINE“ (2013-2016).
- EU H2020 Marie Curie Fellowship, NEUCOD. Adrià Tauste “ Information-theoretic approach to infer encoding patterns in a decision making process“ (2013-2015)
- EU H2020 Marie Curie Fellowship, INTERACTIONS. Gorka Zamora “ Investigation of the interaction between external stimulation and ongoing brain activity in cortical networks: analysis, modeling and empirical corroboration“ (2013-2015)
- EU H2020 Marie Curie Training Network, INDIREA “ Individualised Diagnostics and Rehabilitation of Attention“ (2013-2017)

- EU H2020 Marie Curie Fellowship, eu-msca-629613 CEMNet. Alexandre Hyafyl “A unified framework for Perceptual Inference in Sensory cortices“ (2014-2016)
- National Institutes of Heath (US-NIH), “Stroke, Brain Networks and Behavior“ (2015-2020)
- European Project (FP7, Flagship), HBP “ Human Brain Project“ (Ramp-up phase 2013-2016), “Human Brain Project SGA1“ (H2020) 2016-2018, “Human Brain Project SGA2“ (H2020) 2018-2020, and “Human Brain Project SGA3“ (H2020) 2020-2023
- Plan Estatal de I+D+I. Ministerio de Economía y Competitividad “ Integrating Connectomics with Brain Activity Mapping“ (2014-2016)
- AGAUR, Agencia Gestio Ajuts Universitaris i Recerca Research Group in Cognitive and Computational Neurocience (2014-2016)
- PCIN-2015-079 NSF PIRE “PIRE-Program in Cognitive, Computational and Systems Neuroscience” Plan Estatal de I+D+I. Ministerio de Economía y Competitividad. Acciones de Programación Conjunta Internacional (2015-2017).
- PCIN-2015-127 CHAMPMouse “Charting Multi-areal Visual Perception in the Mouse” Plan Estatal de I+D+I. Ministerio de Economía y Competitividad. Acciones de Programación Conjunta Internacional (2015-2018)
- European Commission H2020 Marie Curie Fellowship, EU-MSCA-656547. NeuArc2Fun Mathew Gilson.“Biological neural networks: from structure to function”. European Commission, Horizon 2020 Marie Sklodowska-Curie Individual Fellowship: (2016-2018)
- European Marie Curie Fellowship, EU-MSCA-656262. QTMODEM Ignasi Cos “ Quantitative Motor Control for Decision Makin“, European CommissionHorizon 2020 Marie Sklodowska-Curie Individual Fellowship: I. Cos, (2016-2017)
- European Marie Curie Fellowship, EU-MSCA-661583- CONSCBRAIN “How consciousness is shaped by neuronal network dynamics”, European Commission, Horizon 2020 Marie Sklodowska-Curie Individual Fellowship: G. Hahn, (2015-2017)
- Swiss National Science Foundation (SNSF), SYNERGIA "Exploring brain communication pathways by combining diffusion based quantitative structural connectivity and EEG source imaging: application to physiological and epileptic networks" (2016-2020)
- Plan Estatal de I+D+I. Ministerio de Economia y Competitividad “COBRAS Searching for the underlying Complexity of Brain States“ (2016-2019)
- Fundació La Marató TV3. “Brain-Connect: Brain Connectivity During Stroke Recovery and Rehabilitation“ (2018-2020)
- Flag-ERA “Comparative Investigation of the Cortical Circuits in Mouse, NHP and Human“ (2018-2020).
- DFG German Research Foundation “Dynamic Connectome Uderlying Language in the Brain“. (2018-2020).
- AGAUR, Catalan Agencia Gestio Ajuts Universitaris i Recerca “Research Group in Cognitive and Computational Neurocience“ (2017-2020)

- EU ERDF Operational Program of Catalonia 2014-2020 “CECH The Emerging Brain Cluster“ (2019-2021)
- H2020 MSCA-ITN-2019 Innovative Training Networks “euSNN European School of Network Neuroscience“ (2019-2021)
- MCIU AEI Proyectos I+D+i 2019 “Awakening: Using Whole Brain Models Perturbational Approaches for Predicting External Stimulation to Force Transitions Between Different States“ (2019-2023)
- Australian Research Council “A Comprehensive Framework for Modelling the Human Connectome“ (2020-2022)
- The HBP Calls for Expression of Interest for SGA3 Validation and Inference “Netscovery Model-free and model-based inference and validation workflows for causal brain network discovery“ (2020-2023)
- The HBP Calls for Epression of Interest for SGA3 Data and models for understanding of consciousness “BRICON Brain Inspired Consciousness“ (2020-2023)
- Australian Research Council “Decoding neuronal populations for visually-guided decision and action“ (2021-2023)
- H2020-FET Proactive “Neurotwin Digital twins for model-driven non invasive electrical brain stimulation“ (2021-2024)
- FLAG-ERA JTC 2021 “Combining model free and model based biomarkers for the consciousness diagnosis“ (2021-2024)
- Australian NHMRC “Neuropharmacology of decision-making: causal brain network modelling across species“ (2022-2026)
- Horizon Europe EBRAIN-HEALTH „Actionanable Multilevel Health Data (2022-2026)
- Horizon Europe Hyperstim “High-Dimensional Electrical Stimulation for Visual Prosthesis“ (2022-2026)
- AGAUR, Catalan Agencia Gestio Ajuts Universitaris i Recerca “Research Group in Cognitive and Computational Neurocience“ (2022-2024)
- CHDI Foundation “Whole-Brain Dynamic fMRI Biomarkers for Monitoring the Evolution of Huntington's Disease” (2023-2025)
- Ministry of Science and Innovation, the State Research Agency and the European Regional Development Fund.PID2022-136216NB-I00 MCIN /AEI /10.13039/501100011033 / FEDER, UE. NOn-equilibrium DYNamical analysis of brain functions in health and disease (2023-2026)
- ERC Synergy Grant Nemesis Neurological Mechanisms of Injury, and Sleep-like cellular dynamics (2023-2029)
- MCIU, AEI, EU. PID2024-155136NI-I00 P. BRAINSAGE- Biomarkers and Reversibility in Aging Networks for Sex-Specific Evaluation (2024-2027).

Supervised Ph.D Thesis :

- L. Parra, Ph.D in Physics
at the Ludwig-Maximilian University of Munich
- C. Schittenkopf, Ph D in Computer Science
at the Technical University of Munich
- S. Kriebel, Ph D in Computer Science

at the Technical University of Munich
- M. Szabo, Ph.D in Computer Science
at the Technical University of Munich
- N. Galm, PhD in Computer Science
at the Technical University of Munich
- A. Stemme, PhD in Psychology
at the Ludwig-Maximilian University of Munich
- D. Marti, PhD in Computer Science
at the Universitat Pompeu Fabra
- M. Loh, PhD in Computer Science
at the Universitat Pompeu Fabra
- A. Buehlmann, PhD in Computer Science
at the Universitat Pompeu Fabra
- L. Albantakis, PhD in Computer Science
at the Universitat Pompeu Fabra
- J. Cabral, PhD in Computer Science
at the Universitat Pompeu Fabra
- J.P Larsson, PhD in Computer Science
at the Universitat Pompeu Fabra
- A. Insabato in Computer Science
at the Universitat Pompeu Fabra
- P. Theodoni, PhD in Computer Science
at the Universitat Pompeu Fabra
- M. Martinez, PhD in Computer Science
Universitat Pompeu Fabra
- T. Nakagawa, PhD in Computer Science
Universitat Pompeu Fabra
- C. Tornador, PhD in Biology
Universitat Pompeu Fabra
- M. Demirtas, PhD in Computer Science
Universitat Pompeu Fabra.
- R.Ton, PhD in Computer Science
Universitat Pompeu Fabra and University of Amsterdam
- R. Bettinardi, PhD in Computer Science
Universitat Pompeu Fabra
- K. Glomb, PhD in Computer Science
Universitat Pompeu Fabra
-V. Saenger, PhD in Computer Science
Universitat Pompeu Fabra
-B. Jobst, PhD in Computer Science
Universitat Pompeu Fabra
-V. Pallares, PhD in Computer Science
Universitat Pompeu Fabra
-Josephine Cruzat, PhD in Biomedicine
Universitat Pompeu Fabra
- Jessica de Santiago, PhD in Computer Science
Universitat Pompeu Fabra
-Camilo Miguel Signorelli, PhD in Biomedicine
Universitat Pompeu Fabra
-Manel Vila Vidal, PhD in Biomedicine

Universitat Pompeu Fabra
-Ane Lopez, PhD in Biomedicine
Universitat Pompeu Fabra
-Laura Ulysse, PhD in Computer Science
Universitat Pompeu Fabra
-Eleonora DeFilippi PhD in Computer Sciene
Universitat Pompeu Fabra
-Anira Escrichs, PhD in Computer Science
Universitat Pompeu Fabra
-Katerina Capouskova in Biomedicine
Universitat Pompeu Fabra
-David Blair in Computer Science
Universitat Pompeu Fabra
-Ludovica Mana Biomedicine
Universitat Pompeu Fabra
-Sebastian Idesis Biomedicine
Universitat Pompeu Fabra
-Rafael Bergoin in Computer Sciene
Univweristat Pomeu Fabra
-Marc Schwartz Biomedicine
Universitat Pompeu Fabra

Afiliations:

Member of the Editorial Board of Journal of Physiology Paris
Member of the Editorial Board of Cognitive Neurodynamics
Member of the Editorial Board of eNeuro
Action Editor of Neural Networks
Referee of: Science, Nature Neuroscience, Neuron, PNAS, Physical Review, Physical Review Letters, Neural Computation, PLoS CB, etc.
Member of the European Neural Network Society
Member of the German Society of Neuroscience
Member of the Society for Neuroscience (USA)
Member of the Society for Cognitive Neuroscience (USA)
Member of the International Scientific Advisory Board of the Max-Planck Institute for Biological Cybernetics (Tuebingen)
Member of the International Scientific Advisory Board of the Bernstein Center Berlin
Member of the International Scientific Advisory Board of the Bernstein Center Heidelberg
Member Hamburg Academy of Science
Member Academia Europaea

Patents:

1) 1995P02051 DE "Lernverfahren und Anordnung zur Nachbildung eines dynamischen Prozesses", G. Deco and J. Storck
conceded in: Germany, USA

2) 1996P01205 DE "Verfahren zur Klassifikation einer Zeitreihe, die eine vorgebbare Anzahl von Abtastwerten aufweist, insbesondere eines elektrischen Signals, durch einen Rechner", G. Deco und B. Schürmann
conceded in: Germany, France and England

3) 1996P01207 DE "Verfahren zur Klassifikation einer Zeitreihe, die eine vorgebbare Anzahl von Abtastwerten aufweist, insbesondere eines elektrischen Signals, durch einen Rechner", G. Deco and B. Schürmann
conceded in: Germany, USA

4) 1996P01246 DE "Verfahren zur Klassifikation einer Zeitreihe, die eine vorgebbare Anzahl von Abtastwerten aufweist, beispielsweise eines elektrischen Signals, durch einen Rechner und Verwendung des Verfahrens ", G. Deco and B. Schürmann
conceded in: Germany, USA

5) 1996P01608 DE "Verfahren zur Klassifikation einer Zeitreihe, die eine vorgebbare Anzahl von Abtastwerten aufweist, beispielsweise eines elektrischen Signals, durch einen Rechner", G. Deco and C. Schittenkopf
conceded in: Germany, USA

6) 1996P01855 DE "Rechnergestütztes Verfahren zur Auswahl von Trainingsdaten für ein neuronales Netz", G. Deco, D. Obradovic and B. Schürmann
conceded in: Germany, France, England

7) 1996P02453 DE "Verfahren zur Klassifikation der statistischen Abhängigkeit einer ersten Zeitreihe, die eine vorgebbare Anzahl von Abtastwerten, insbesondere eines elektrischen Signals, aufweist, durch einen Rechner", G. Deco and C. Schittenkopf
conceded in: Germany, Netherlands, England
pending in: Japan, USA.

8) 1997P01352 DE "Verfahren zur rechnergestützten Extraktion statistisch unabhängiger digitaler Signale aus digitalen Eingangssignalen", G. Deco and D. Obradovic
conceded in: Germany, Netherlands, England, Finnland, Japan, USA

9) 1997P08002 DE "Verfahren zur Detektion von Synchronizität zwischen mehreren digitalen Messreihen mit Hilfe eines Rechners", G. Deco and L. Martignon
conceded in: Germany, Netherlands, England, Austria, Israel, Japan, USA

10) 1997P08003 DE "Zur Detektion von Synchronizität zwischen mehreren digitalen Messreihen mit Hilfe eines Rechners", G. Deco and L. Martignon
conceded in: Germany, Netherlands, England, Austria, Israel, Japan, USA.

11) 1997P08119 DE "Verfahren und Vorrichtung zur Klassifikation einer ersten Zeitreihe und einer zweiten Zeitreihe", G. Deco and C. Schittenkopf and R. Silipo
conceded in: Germany

12) 1997P08121 DE "Anordnung zur Vorhersage einer Abnormalität eines Systems und zur Durchführung einer der Abnormalität entgegenwirkenden Aktion", G. Deco and L. Dubé
conceded in: Germany, France, England, Italy,USA.

13) 1998P02394 DE "Verfahren zum Trainieren eines neuronalen Netzes, Verfahren zur Klassifikation einer Folge von Eingangsgrössen unter Verwendung eines neuronalen Netzes, neuronales Netz und Anordnung zum Trainieren eines neuronalen Netzes", G. Deco and B. Schürmann
conceded in: Germany, France, England, Austria, Belgien, USA

14) 1999P01906 DE "Mustersuche", G. Deco and B. Schürmann
conceded in: Germany, France, England, Austria, Italy, Netherlands, Japan, USA.

15) 1999P01907 DE "Mustersuche", G. Deco and B. Schürmann
conceded in: Germany, France, England, Austria, Italy, Netherlands, Japan, USA.

16) 1999P01908 DE "Mustererkennung", G. Deco and B. Schürmann
conceded in: Germany, France, England, Austria, Italy, Netherlands, Japan, USA.

17) 2001P09039 DE "Diskrimnierung kontinuierlicher und multivariater Signale mit einem Netzwerk von pulsgekoppelten Oszillatoren", G. Deco and J. Storck
Patent pending.

18) GR 99E2492 DE "Rekurrente Netze zur Klassifizierung dynamischer Signale", G. Deco and B.Schürmann
Patent pending.

19) 2001P14962 DE "Gabor-rekurrente Netze zur effizienten Bildkodierung", G. Deco and B. Schürmann
Patent pending.

20) 2000P19382 DE "Neurodynamisches System aus gepulsten Oszillatoren zur Aufmerksamkeitsgetriebenes Suche von Objekten", G. Deco and S. Corchs
pending in: Germany.

21) GR 99E6770 DE "Multimodulares neurodynamisches System zur intelligenten, aufmerksamkeitsgesteuerten visuellen Suche", G. Deco and B. Schürmann

pending in: Germany, France, England, Austria, Italy, Netherlands, Japan, USA.

22) 2001P09068 DE "Netzwerke aus gepulsten Neuronen mit dynamischen Synapsen zur Klassifizierung der Verkehrsdynamik in Rechnernetzen", G. Deco, J. Storck and B. Schürmann
Patent pending.

23) 2000P01870 DE "Neurokognitives System zur visuellen Objekterkennung", G. Deco and B. Schürmann
Patent pending.

24) 2000E14212 DE "Thought-Mouse", C. Hoffmann, J. Storck, G. Deco and B. Schürmann
Patent pending.

25) 2000E16468 DE "Sprachsignalfilterung durch eine rekurrente aufmerksamkeitsbasierte Independent Component Analysis Prozedur", G. Deco and B. Schürmann
pending in: Germany, France, England, Austria, Italy, Netherlands, Japan, USA.

26) 2001P14963 DE "IDENTIFY: Image-Based Diagnostics by Extraction, Neurocognitive Testing and Identification of Feature Yield", B. Schürmann, M. Stetter, G. Deco, and J. Storck.
Patent pending.

27) 2000E18262 DE "SmartBot: Saccade-Based User Intention Detection", G. Deco, J. Storck, B. Schürmann, and M. Stetter.
Patent pending.

28) 2001P14964 DE "ImageBot: Web Image Mining", G. Deco, J. Storck, B. Schürmann, and M. Stetter.
Patent pending.

29) 2000E18297 DE "NeuroWarp: Vollautomatische inhaltsbasierte Bildüberlagerung (Warping) durch ein neurokognitives Modul", M. Stetter, G. Deco, J. Storck, and B. Schürmann.
Patent pending.

30) 2001P16787 DE "CALIBRATOR: Calculation of Instantaneous BOLD-to-Spike Ratio by Acummulation of Total Oxygen", M. Stetter, S. Corchs, G. Deco, B. Schürmann, and J. Storck.
Patent pending.

31) 2001P08864 DE "DIAMOND: Diagnostic Aid by Modelling of Neurocognitive Dynamics", S. Corchs, G. Deco, B. Schürmann, M. Stetter, and J. Storck.
Patent pending.

32) 2001P08873 DE "Neurodynamische Architektur zur Aufmerksamkeitsbasierten Objekterkennung and visuelle Suche", G. Deco.
Patent pending.

33) 2000E22858 DE "Speech Processing with Networks of Spiking Neurons and Dynamic Synapses", J. Stork, F. Jäkel, G. Deco, M. Stetter, and B. Schürmann.
Patent pending.

34) 2001E04431 DE "Autonome Fahrzeugsteuerung basierend auf visuelle Suche", M. Stetter, G. Deco, and B. Schürmann.
Patent pending.

35) 2002P12914 DE "fMRI-basierte Modellierung zur computergestützten Diagnostic: Extrahierung der funktionellen Konnektivität", G. Deco, and N. Galm.
Patent pending.

36) 2002P12938 DE "fMRI-basierte Modellierung zur computergestützten Diagnostic: Verwendung nichtlinearer Konnektivitätsgleichungen", G. Deco, and N. Galm.
Patent pending.

37) 2002P12929 DE "fMRI-basierte Modellierung zur computergestützten Diagnostic: Verwendungen von Statistiken höherer Ordnungen im Rahmen der "Structural Equatin Modeling"", G. Deco, and N. Galm.
Patent pending.

38) 2002P12915 DE "fMRI-basierte Modellierung zur computergestützten Diagnostik", G. Deco, and N. Galm.
Patent pending.

39) 2002E03585 DE "Hierarchical Neurodynamical Cortical Architecture for Invariant Object recognition", G. Deco.
Patent pending.

40) 2002P12816 DE "Computer-Aided Drug Evaluation with fMRI for Cerebral Disorders", G. Deco, M. Stetter and N. Galm
Patent pending .

41) 2002E18963 DE "Method for Quantitative Evaluation of fMRI Event-Related Signals by a Neurodynamical Model", G. Deco, S. Corchs
Patent pending .

42) 2002E18964 DE "An Implementation of Working Memory for Intelligent Systems by a Network of Spiking Neurons", G. Deco
Patent pending.

43) 2002E18964 DE "Neurodynamical Model of Event-related fMRI Measurements for Clinical Diagnosis", G. Deco
Patent pending.

44) 2004P11578 DE "Dynamic Shaping of Feature Selectivity in IT by Visual Categorization", M. Stetter, R. Almeida, M. Szabo and G. Deco
Patent pending.

45) 2004P03492 DE "Efficient Information Storage in Task-Relevant Working Memory by Propagation of Competition", R. Almeida , G. Deco and M. Stetter
Patent pending.

46) 2003E13999 DE "Extended Biased Competition-Cooperation Neurocognitive Model for Attentional Filtering of Irrelevant Inputs", R. Almeida , G. Deco, M. Szabo and M. Stetter
Patent pending.

47) 2004P11500 DE "Bioanalogue Mechanisms of Reward-Processing for Cognitive Flexibility", G. Deco and M. Stetter
Patent pending.

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