

Prof. Philip Chidi Njemanze

powered by
COS Expertise®

Chidicon, Inc. USA
Non-invasive Neurocybernetic Flow Laboratory
Human Factors
CEO Appointed: 1990
Chidicon, Inc. USA
Non-invasive Neurocybernetic Flow Laboratory
Human Factors
Head of Research Appointed: 1990
International Institutes of Advanced Research and
Training
Chidicon Medical Center
Non-Invasive Neurocybernetic Flow Laboratory
Neurocybernetics
Appointed: 1987



Mailing Address

Noninvasive Neurocybernetic Flow Laboratory
Institute of Space Medicine and Terrestrial
Sciences
Chidicon Medical Center
International Institutes of Advanced Research and
Training, No 1 Uratta/MCC Road
Owerri
Nigeria

Contact Information

Phone: +234 (8033) 026124
Fax: (713) 794-1370
Mobile: +2348033026124
philip.njemanze@chidicon.com
<http://www.chidicon.com>

Qualifications

University of Munich, Neurosurgery, 1989.
M.D., Rostov State Medical Institute, Internal Medicine, 1986.

Expertise and Research Interests

Prince Dr. Philip Chidi Njemanze, M.D. (summa cum Laude)
Special Interest in Brain Control Systems - Neurocybernetics:
Hemispheric Lateralization and Brain-Cardiac Control Systems in Norm and Pathology
Position: CEO Chidicon USA Inc., Chairman, Chidicon Medical Center
International Institutes of Advanced Research and Training, No. 1 Uratta Road, P.O. Box 302, Owerri,
Imo State, Nigeria

Expertise in Neuroimaging: MRI flow imaging of CSF, Transcranial Doppler, Carotid Color Flow
Ultrasound
Man-machine-interface System Technologies
Ultrasound development technology
Nanotechnology
Artificial Intelligence: neural networks and fuzzy logic

Other Expertise

Risk Analysis Systems
Probabilistic Layer Analysis
Geographic Information System Technologies
Remote Sensing

Future Research

Life Systems Manager (LSM) in advanced avionic systems. LSM to provide an intelligent, adaptive, integrated space system coupling astronauts to the space craft, and is achievable based on innovative integration of present technology. The electronics implementation of a LSM consists primarily of input/output (I/O) processing based on neural network architecture. Cabin pressure, flight parameters, and mission crew 'state-of-being' are monitored and processed. The expert system processing unit would providesystem coordination, provide cautions and warnings, initiate recovery sequences, and control the escape system. The hardware architecture of the LSM consists of a processor, analog and digital I/O to read and control, and access to space data via upgraded avionic architecture. Fault tolerance would be incorporated to insure safe and reliable operations of life support systems. This system couples nicely with present space vehicle management system (VMS) technologies being developed for control of hydro-electromechanical systems such as fuel systems and flight controls. An extension of Pilot's Associate (PA) approach, it focuses on mission crew 'state-of-being'. Processing resources to handle the LSM function are available in the VMS developed for the Space Shuttle and Space Station. Development and integration of present near-term technologies promise enhanced survival and increased performance of tomorrow's space craft and aircraft by combining crew and machine. Reduction or elimination of spacecraft/aircraft and spacecrew/aircrew loss can be fully realized.

Industrial Relevance

Human-factors in Advanced Avionics and Space Shuttle
Air-traffic Control
Human Cognition Based Safety Systems

Keywords

COS Keywords:

Artificial Intelligence Or Cybernetics, Computer Interface, Electronic Neural Network, Fuzzy Logic, Human Factors Engineering, Nanotechnology, Neuroimaging, Neurosurgery, Risk Factor Analysis, Ultrasonography.

Additional Terms:

Cognition in Space, Gravitational Loss of Consciousness, Human Factors-Man-Machine Interface, Risk Analysis System.

Languages

(Reading, Writing, Speaking)

English: (fluent, fluent, fluent)

German: (basic, basic, basic)

Igbo: (basic, basic, basic)

Russian: (basic, basic, basic)

Memberships

American Association for the Advancement of Science

American Epilepsy Society

American Heart Association

American Society for Testing and Materials

American Society for Tropical Medicine and Hygiene

American Society of Neuroimaging

Association of General and Private Medical Practitioners of Nigeria

British Institute of Radiology

Global Council on Health

Infectious Disease Society of America

Institute of Patentees and Inventors United Kingdom

International Society of Gravitational Physiology

International Society of Neuroscience

National Geographic Society

Neuroscience Society of Nigeria

New York Academy of Sciences

Nigerian Medical Association

Owerri Neuroscience Group

Society of Neuroscientists of Africa

Whelan Research Academy

Honors and Awards

1990, Jane McKinney Award in Neurosonology, American Society of Neuroimaging, Bowman Gray School of Medicine, Wake Forest University, North Carolina, USA, Effect of Psychological Stimuli on Middle Cerebral Artery Flow Velocity: A Transcranial Doppler Study

1990, Honorable Mention, American Society of Neuroimaging, Department of Neurology, St. Louis University Medical Center, St. Louis Missouri, USA, Cerebral lateralization and Color Perception: A Transcranial Doppler Study

1986, Magna cum Laude, Ministry of Health USSR, Rostov State Medical Institute, Rostov-on-Don Russian Federation, General Medicine

1985, All USSR Student's Scientific Award, Academy of Sciences USSR, Rostov State Medical Institute and Institute of Neurocybernetics, Rostov University, Rostov on Don USSR, Influence of unilateral acupuncture and electrostimulation on spontaneous and evoked electrogenesis of the cerebral cortex

1982, Academic Orbeli, USSR Academy of Sciences, Rostov State Medical Institute, Rostov-on-Don, Influence of Peripheral Resistance on the form of sphygmograms

Previous Positions

1997-1998, International Fellow, National Aeronautic and Space Administration, Center for Health Applications of Aerospace Related Technologies, Remote Sensing and Geographic Information Systems Technologies

1994-1996, Principal Investigator, National Aeronautic and Space Administration, Lydon Johnson Space Center, Houston Texas, Neurolab, Life Sciences

1991, Assistant Research Professor, Saint Louis University, Medical Center, Neurology, Souer's Stroke Institute

1990, Senior Research Associate, Saint Louis University, Medical Center, Neurology, Souer's Stroke Institute

1989, Research Associate, London University, Guy's Hospital, Radiology, Angiology

1989-1990, International Fellow, Wake Forest University, Bowman Gray School of Medicine, Neurology, Neurosonology

Patents

Noninvasive transcranial doppler ultrasound face and object recognition testing system, Patent Number: 6773400, 2004, Self-owned, United States of America. [Abstract](#) [USPTO Full-Text](#)

Transcranial doppler spectroscopy for assessment of brain cognitive functions, Patent Number: 20040158155, 2004, Self-owned, United States of America. [Abstract](#) [USPTO Full-Text](#)

Intelligent Transcranial Doppler Probe, Patent Number: 6547737, 2003, Self-owned, United States. [Abstract](#) [USPTO Full-Text](#)

Noninvasive transcranial doppler ultrasound face and object recognition testing system, Patent Number: 20030187359, 2003, Self-owned, United States. [Abstract](#) [USPTO Full-Text](#)

Transcranial Doppler Ultrasound Device for Odor Evaluation, Patent Number: 6663571, 2003, United States of America. [Abstract](#) [USPTO Full-Text](#)

Neural Network System for Modeling Ecological and Biological Systems, Patent Number: 6490573, 2002, Self-owned, United States. [Abstract](#) [USPTO Full-Text](#)

Noninvasive transcranial Doppler Ultrasound Computerized Mental Performance Testing System, Patent Number: 6390979, 2002, Self-owned, United States. [Abstract](#) [USPTO Full-Text](#)

Implantable Telemetric Transcranial Doppler Device, Patent Number: 6468219, 2002, Self-owned, United States. [Abstract](#) [USPTO Full-Text](#)

Physiologic G-suit modulator., Patent Number: 5121744, 1992, Self-owned, United States. [Abstract](#) [USPTO Full-Text](#)

Funding Received

- National Aeronautics and Space Administration (NASA): Visual Cortex Blood Flow in Perceptual and Psychomotor Tasks, \$90,000 per year, Jan 21, 1994 to Mar 5, 1998.

Publications

- Njemanze PC (2006) Cerebral lateralisation for facial processing: Gender-related cognitive styles determined using Fourier analysis of mean cerebral blood flow velocity in the middle cerebral arteries, *Laterality*, 12 (1), 31-49
- Dozie IN, Onwuliri CO, Nwoke BE, Chukwuocha UM, Chikwendu CI, Okoro I, Njemanze PC (2006) Onchocerciasis and epilepsy in parts of the Imo river basin, Nigeria: a preliminary report., *Public Health*, 120 (5), 448-550
- Njemanze Philip C. (2005) Asymmetry of Cerebral Blood Flow Velocity Response to Color

- Processing and Hemodynamic Changes During -6 Degrees 24-Hour Head-down Bed Rest in Men, *Journal of Gravitational Physiology*, 12 (2), 2005
- Njemanze PC (Mar 2005) Cerebral lateralization and general intelligence: gender differences in a transcranial Doppler study, *Brain and Language*, 92 (3), 234-9
 - Njemanze PC (9 2004) Asymmetry in cerebral blood flow velocity with processing of facial images during head-down rest, *Aviation Space and Environmental Medicine*, 75 (9), 800-805
 - Njemanze PC (3 Nov 2003) Crossed Aphasia in a dextral with right hemisphere lesions, *Stroke*, 34, e213-214
 - Njemanze PC (November 2003) Crossed aphasia in a dextral with right hemispheric lesion: a functional transcranial Doppler study, *Stroke; a Journal of Cerebral Circulation*, 34 (11), e213-4; author reply
 - Njemanze PC (3 Oct 2003) Differential effect of body Adiposity and Serum Lipids on Right and Left Carotid Artery Lesions, *Stroke*, 34, 185-186
 - Njemanze PC (July 2002) Cerebral lateralization for motor tasks in simulated microgravity. A transcranial Doppler technique for astronauts, *Journal of Gravitational Physiology*, 9 (1), 33-34
 - Njemanze PC (7 2002) Cerebral lateralization for motor tasks in simulated microgravity a Transcranial Doppler technique for astronauts, *Journal of Gravitational Physiology*, 9 (1), 33-34
 - Njemanze PC, Sunderland A (February 2000) Carotid stenosis determines impairment of ipsilateral dexterity in stroke, *Stroke; a Journal of Cerebral Circulation*, 31 (2), 545-6
 - Njemanze PC, Anozie J, Ihenacho JO, Russell MJ, Uwaeziozi AB (September 1999) Application of risk analysis and geographic information system technologies to the prevention of diarrheal diseases in Nigeria, *The American Journal of Tropical Medicine and Hygiene*, 61 (3), 356-60
 - Njemanze PC, Chidi-Ebere A (August 1999) Three-dimensional vector component analysis of neurological stroke scales, *Stroke; a Journal of Cerebral Circulation*, 30 (8), 1731-3
 - Njemanze PC (June 1996) Cerebral lateralization in random letter task in the visual modality: a transcranial Doppler study, *Brain and Language*, 53 (3), 315-25
 - Njemanze PC. (1996) Satellite technology and aerospace related warning systems (STARWARS) for disease control: strategy for disease prevention in developing countries of Africa, South America and Asia-Pacific Region, *Japanese Journal of Aerospace and Environmental Medicine*, 33, 17-130
 - Njemanze PC (April 1994) Cerebrovascular dysautoregulation syndrome complex--brain hypoperfusion precedes hypotension and cardiac asystole, *Japanese Circulation Journal*, 58 (4), 293-7
 - Njemanze PC, Antol PJ, Lundgren CE (May 1993) Perfusion of the visual cortex during pressure breathing at different high-G stress profiles, *Aviation, Space, and Environmental Medicine*, 64 (5), 396-400
 - Njemanze PC (April 1993) Cerebral circulation dysfunction and hemodynamic abnormalities in syncope during upright tilt test, *The Canadian Journal of Cardiology*, 9 (3), 238-42
 - Njemanze PC (March 1993) Isoproterenol induced cerebral hypoperfusion in a heart transplant recipient, *Pacing and Clinical Electrophysiology : Pace*, 16 (3 Pt 1), 491-5
 - Njemanze PC (1993) Cerebral circulatory changes in case of pacemaker syndrome, *Journal of Cardiovascular Technology*, 11, 105-109
 - Njemanze PC (December 1992) Critical limits of pressure-flow relation in the human brain, *Stroke; a Journal of Cerebral Circulation*, 23 (12), 1743-7
 - Njemanze PC (November 1992) Handedness and carotid plaque lesion, *Stroke; a Journal of Cerebral Circulation*, 23 (11), 1679-80
 - Gomez CR, McLaughlin JR, Njemanze PC, Nashed A (August 1992) Effect of cardiac dysfunction upon diastolic cerebral blood flow, *Angiology*, 43 (8), 625-30
 - Njemanze PC, Gomez CR, Horenstein S (March 1992) Cerebral lateralization and color perception: a transcranial Doppler study, *Cortex; a Journal Devoted to the Study of the Nervous System and Behavior*, 28 (1), 69-75

- Njemanze PC, Mirza WU, Rosenfeld WE, and Njemanze VU. (1992) Cerebral blood flow velocity and EEG amplitude in generalized seizures: a case study, *Journal of Neuroimaging*, 2, 151-155
- Njemanze PC (1992) Cerebrovascular dysautoregulation syndrome in heart-lung transplant recipient, *Journal of Cardiovascular Technology*, 10, 227-232
- Njemanze PC (October 1991) Cerebral lateralization in linguistic and nonlinguistic perception: analysis of cognitive styles in the auditory modality, *Brain and Language*, 41 (3), 367-80
- Njemanze PC (June 1991) Transcranial Doppler evaluation of syncope: an application in aerospace physiology, *Aviation, Space, and Environmental Medicine*, 62 (6), 569-72
- Njemanze PC, Beck OJ, Gomez CR, Horenstein S (June 1991) Fourier analysis of the cerebrovascular system, *Stroke; a Journal of Cerebral Circulation*, 22 (6), 721-6
- Gomez CR, McLaughlin JR, Njemanze PC (October 1990) Effect of intra-aortic balloon pumps on cerebral circulation, *Stroke; a Journal of Cerebral Circulation*, 21 (10), 1512-3
- Njemanze PC, Beck OJ (1989) MR-gated intracranial CSF dynamics: evaluation of CSF pulsatile flow, *AJNR American Journal of Neuroradiology*, 10 (1), 77-80

Profile Details

Last Updated: 4/12/2007

COS Expertise ID #1117860

Reference this profile directly: <http://myprofile.cos.com/chidicon>

Individual Expertise profile of *Philip Chidi Njemanze*, Copyright Philip Chidi Njemanze.

© COS Expertise™, 2007 CSA, Bethesda, Maryland. All rights reserved..