Stimati studenti,

Va rog sa citit cu atentie urmatoarele informatii pentru ca pana joi 10 aprilie, cel tarziu, sa imi trimiteti pe adresa liviu_dragomirescu@yahoo.com titlul si data prezentarii referatului sau traducerii ce va constitui baza obtinerii notei la disciplina NEUROFEEDBACK.

Referatele / traducerile vor fi facute in Word (.doc) si rezumatele lor in Power Point (.ppt). Vor fi prezentate la lucrarile practice (LP). Prezentarile le veti planifica pentru una din zilele 10, 17, 24 aprilie. Punctajele pe care le veti obtine vor fi bonificate proportional cu apropierea datei de prezentare. Altfel spus, cei care prezinta pe 10 vor primi cele mai mari bonificatii la nota, iar cei care sustin pe 24, cele mai mici bonificatii.

NB: Este mai mult decat recomandabil sa fie parcurse link-urile urmatoare, atat ca introducere in domeniu, cat si pentru exemplificarea standardelor de lucru.

Un model de programa analitica din anii anteriori:
http://www.liviu-dragomirescu.ro/nf/programa-neurofeedback.pdf
O fisa sintetica de prezentare a cursului:
http://www.liviu-dragomirescu.ro/nf/Fisa%20Neurostiinte2-Neurofeedback.pdf

A. Modele de referate gasiti la
http://www.liviu-dragomirescu.ro/nf/REFERATE/Model%20referat1.pdf
http://www.liviu-dragomirescu.ro/nf/REFERATE/TudorSelescu.pdf
ca sa nu fiti acuzati de plagiat.

B. Doua modele de traducere-rezumat in:
http://www.liviu-dragomirescu.ro/nf/REFERATE/Cum%20putem%20salva%20neuronii%20noi%20formati.pps
http://www.liviu-dragomirescu.ro/nf/noutati.htm

LISTA DE TEME DE REFERATE PROPUSE PT CURSUL DE NEUROFEDBACK LA ANUL I, 2013-14

1. ~~Documentare senzori de miscare. Aplicatie la aparatul RESPeRATE~~
2. ~~Documentare pletismograf. Aplicatie la aparatul emWave.~~
3. Documentare asupra utilizarii softului pt. NF Bioexplorer cu DVD cu filme.
4. ~~Documentare biofeedback prin conductivitatea pielii si testarea Wild Divine pe internet cu "active feedback hardware".~~
5. ~~Documentare asupra senzorilor de temperatura si utilizarea lor in biofeedback.~~
6. Transformata Fourier in analiza spectrala a semnalelor EEG
7. Analiza, traducere si prezentare demo-uri despre NF de pe internet
8. Dispozitive de stimulare luminoasa cu palpaire (pROSHI)
9. qEEG si baze de date (http://books.google.ro/books?id=9eZK61EKVMMC&pg=PA67&lpg=PA67&dq=NxLink+QEEG+Database.htm&source=bl&ots=b1I-uVE-Z2&sig=Qjj8XjsfZfZACyWz6d9egZdxXp4&hl=ro&sa=X&ei=fV5TUYumAdHbsgax-4CoBg&ved=0CEcQ6AEwBA#v=onepage&q=NxLink%20QEEG%20Database.htm&f=false)

10. Brain Master & Brain Avatar (http://www.youtube.com/watch?v=Wi-rqzK0kgQ, http://www.youtube.com/watch?v=KSKIkXvqruI) si programul de evaluare Brain DX software (http://www.braindx.net/)
~~11. BF/NF in ADHD (http://www.adhd.com.au/QEEG.htm)~~
~~12. BF/NF in crestere de performanta~~
~~13. BF/NF in depresie~~
~~14. BF/NF in anxietate~~

16. Centralizare si comentare impresii post experimente cu pROSHI in grup, in diverse situatii experimentale.
~~17. Prezentarea a doua cazuri antrenate prin protocolul complex de BF, stimulare luminoasa, meloterapie si (D&I).~~
~~http://www.liviu-dragomirescu.ro/nf/AC.pdf; http://www.liviu-dragomirescu.ro/nf/AC.pdf~~
18. Prezentare marturii ale unor subiecti antrenati prin protocolul D&I

~~23. Traducerea, rezumarea si prezentarea http://www.aapb.org/files/LegitimateDevices.pdf~~
~~24. Traducerea, rezumarea si prezentarea glosarului~~
~~http://www.aapb.org/i4a/pages/index.cfm?pageid=3446~~
27-28 Ce este NF: Traducerea, rezumarea si prezentarea http://www.isnr.net/neurofeedback-info/WhatIsNeurofeedbackUpdate.pdf
29-30 NF in pain management
(materiale, la cerere pe liviu_dragomirescu@yahoo.com)
~~31 NF si tulburarile de comportament~~
32 “Real-Time Changes in Connectivities During Neurofeedback” din
https://www.researchgate.net/search.Search.html?query=liviu+dragomirescu
(sau la cerere pe liviu_dragomirescu@yahoo.com
Unde sunt puse doua numere trebuie sa se asocieze cate doi studenti pentru a imparti materialul. Nu se admite acoperirea doar a unei jumatati.
OBSERVATIE: Referintele bibliografice le veti procura de pe INTERNET.

Lista articole de TRADUS din Journal of Neurotherapy vol.7 numerele 3 / 4 2003

OBS: Toate articolele contin o proportie importanta de figuri, fotografii, tabele si scheme care nu trebuie traduse.

a. Quantitative EEG Normative Databases: A Comparative Investigation (pp. 53-68)

Tamara D. Lorensen, BSc Grad Dip
Paul Dickson, BSocSc Bpsych

SUMMARY. *Introduction.* No clearly defined or universally accepted standards exist which practitioners and researchers can use to determine which quantitative electroencephalographic (QEEG) database is suitable to their needs. Diverse computational and methodological approaches across QEEG databases have been vigorously defended by their respective proponents and commonly misunderstood by practitioners. The purpose of this paper is to facilitate widespread discussion from which a universal set of standards can be agreed upon and applied to QEEG databases.

Method. A broad set of criteria was developed from an extensive liter-ature review and included issues of sampling, acquisition, hardware / software, control of confounding variables, and additional issues associated with disclosure, accessibility, and the screening of potential users. These criteria were then applied to the Hudspeth, John, Sterman-Kaiser, and Thatcher databases.
Results. Results revealed reasonable concordance in data acquisition methods despite departures in inclusion/exclusion criteria and sample sizes. Significant differences were apparent in the controls used for possible confounding variables and the relative importance given to these variables.
Conclusions. Research, clinical, and ethical implications are discussed, and it is recommended that the QEEG scientific community establish peer-review procedures and processes which prevent database manufacturers from seducing peers and clinicians with technocratic information and techniques that appear to confuse the user or oversimplify the complexity and richness of QEEG applications.
KEYWORDS. Quantitative electroencephalogram, QEEG, QEEG database, normative methodology, methods, standards, controversy

b. Quantitative EEG Normative Databases: Validation and Clinical Correlation (pp. 87-122)

Robert W. Thatcher, PhD
Rebecca A. Walker, BS
Carl J. Biver, PhD
Duane N. North, MS
Richard Curtin, MA

SUMMARY. The quantitative digital electroencephalogram (QEEG) was recorded from 19 scalp locations from 625 screened and evaluated normal individuals ranging in age from two months to 82 years. After editing to remove artifact, one-year to five-year groupings were selected to produce different average age groups. Estimates of gaussian distributions and logarithmic transforms of the digital EEG were used to establish approximate gaussian distributions when necessary for different variables and age groupings. The sensitivity of the lifespan database was determined by gaussian cross-validation for any selection of age range in which the average percentage of Z-scores ?2 standard deviations (SD) equals approximately 2.3% and the average percentage for ?3 SD equals approximately 0.13%. It was hypothesized that measures of gaussian cross-validation of Z-scores is a common metric by which the statistical sensitivity of any normative database for any age grouping can be calculated. This theory was tested by computing eyes-closed and eyes-open average reference and current source density norms and independently cross-validating and comparing to the linked ears norms. The results indicate that age-dependent digital EEG normative databases are reliable and stable and behave like different gaussian lenses that spatially focus the electroencephalogram. Clinical correlations of a normative database are determined by content validation and correlation with neuropsychological test scores and discriminate accuracy. Non-parametric statistics were presented as an important aid to establish the alpha level necessary to reject a hypothesis and to estimate Type I and Type II errors, especially when there are multiple comparisons of an individual's EEG to any normative EEG database.
KEYWORDS. EEG normativ databases, gaussian distributions, error Estimates

c. Use of Databases in QEEG Evaluation (pp. 31-52)

Jack Johnstone, PhD
Jay Gunkelman, QEEG-D

SUMMARY. *Background.* Quantitative electroencephalography (qEEG) analysis incorporating the use of normative or reference database comparison has developed from being primarily a research tool into an increasingly widely used method for clinical neurophysiological evaluation.
Method. A survey of several of the most widely used qEEG databases as well as issues surrounding the construction and use of these databases is presented, comparing and contrasting the various features of these databases, followed by a discussion of critical issues in this developing technology.

Results. This review considers the concept of normalcy, norming of qEEG features, and validation of clinical findings. Technical issues such as methods for recording and analysis, filter use, broad bands versus single Hz finer frequency resolution, the number of variables relative to the number of cases, and the problem of multiple statistical testing are addressed. The importance of the recording electrode and montage reformatting for normative EEG data is emphasized. The use of multiple references is suggested.
Discussion. A brief review of the characteristics of several major da-tabases is presented. Each has advantages and disadvantages, and newer databases will exploit new technological developments and increasing sophistication in statistical analysis of EEG data. Implementing new measures such as variability over time and extraction of features such as event-related desynchronization (see Pfurtscheller, Maresch, & Schuy, 1985) and gamma synchrony (Rennie, Wright, & Robinson, 2000) are likely to have important clinical impact. Caution is urged in the use of automated classification by discriminant analysis.
KEYWORDS. qEEG, databases, normalcy, montage reformatting, Laplacian, discriminant analysis.

d. Parametric and Non-Parametric Analysis of QEEG: Normative Database Comparisons in Electroencephalography, a Simulation Study on Accuracy (p.1-30)

Marco Congedo, PhD
Joel F. Lubar, PhD

SUMMARY. Quantitative electroencephalography (QEEG) as a tool for the diagnosis of neurological and psychiatric disorders is receiving increased interest. While QEEG analysis is restricted to the scalp, the recent development of electromagnetic tomography (ET) allows the study of the electrical activity of all cortical structures. Electrical measures from a patient can be compared with a normative database derived from a large sample of healthy individuals. The deviance from the database norms provides a measure of the likelihood that the patient's electrical activity reflects abnormal brain functioning. The focus of this article is a method for estimating such deviance. The traditional method based on z-scores (parametric) is reviewed and a new method based on percentiles (non-parametric) is proposed. The parametric and the non-parametric methods are compared using simulated data. The accuracy of both methods is assessed as a function of normative sample size and gaussianity for three different alpha levels. Results suggest that the performance of the parametric method is unaffected by sample size, given that the sample size is large enough (N > 100), but that non-gaussianity jeopardizes accuracy even if the normative distribution is close to gaussianity. In contrast, the performance of the non-parametric method is unaffected by non-gaussianity, but is a function of sample size only. It is shown that with N > 160, the non-parametric method is always preferable. Results will be discussed taking into consideration technical issues related to the nature of QEEG and ET data. It will be suggested that the sample size is the only constant across EEG frequency bands, measurement locations, and kind of quantitative measures. As a consequence, for a given database, the error rate of the non-parametric database is homogeneous; however, the same is not true for the parametric method.
KEYWORDS. EEG, QEEG, quantitative electroencephalography, normative database, norms, non-parametric.

e. Comparison of QEEG Reference Databases in Basic Signal Analysis and in the Evaluation of Adult ADHD (pp.123-169)

J. Noland White, PhD

SUMMARY. *Introduction.* Despite the relatively widespread investigation of potential quantitative electroencephalographic (QEEG) characteristics of childhood attention deficit hyperactivity disorder (ADHD), relatively little is known about the possible QEEG characteristics of adult ADHD. In addition to general magnitude or power measures, or ratios of these measures, the additional analyses and comparisons provided by QEEG reference databases may prove useful in providing unique markers for adult ADHD.

Method. This investigation reports the findings of evaluations using three QEEG reference databases for a sample of ten adults previously di-agnosed with ADHD. The packages used in the current investigation included the NeuroRep QEEG Analysis and Report System, the SKIL Topometric QEEG software package, and the NovaTech EEG EureKa3! QEEG analysis package.
Results. As compared with the respective databases, adults with ADHD appear to demonstrate higher levels of 8-10 Hz activity during both eyes-closed and eyes-open resting baselines. They also appear to demonstrate frontal involvement as evidenced by hypercoherence and hypercomodulation in frontal areas.
Conclusions. Each of the three QEEG reference databases appears to offer unique markers for adult ADHD. However, other apparent differences were found to be attributable to specific analysis packages rather than the clinical group itself. An investigation of basic signal analyses also revealed differences between the three packages. Results of the respective analyses and possible implications are discussed.
KEYWORDS. Attention deficit hyperactivity disorder (ADHD), quantitative electroencephalography, QEEG, assessment, coherence, comodulation, database, LORETA

OBSERVATIE: Doar cel care a ales traducerea unui aricol va avea acces, din partea mea, la forma integrala. Altfel, se poate obtine, cel mai probabil, doar contra cost.

Link-uri de referinta:

http://www.isnr.net/
http://www.aapb.org/i4a/pages/index.cfm?pageid=1
Pentru punere in tema:
http://www.liviu-dragomirescu.ro/nf/NF.html
Din media:
5’ http://www.liviu-dragomirescu.ro/index_files/emisiuneBBC-8sep-07.mp3
http://www.liviu-dragomirescu.ro/nf/Fitness%20pentru%20creier.htm
3’ http://www.youtube.com/watch?v=CLqUrDKHgbs&feature=youtu.be
13’ http://www.youtube.com/watch?v=LXmXDKPY8G4
4’ http://www.youtube.com/watch?v=R8RQcPaINMo
http://neurofeedbackexpert.blogspot.com/
Alte link-uri”
https://www.medify.com/ Connection Untrusted
Pentru conectare cu notiuni de baza:
http://www.iem.pub.ro/2013_ISM

N.B.: Pentru redactare va puteti orienta si dupa **Ghidului Absolventului** în format doc pe pagina: http://www.electronica.pub.ro/index.php/studenti/absolvire/informatii-generale (accesata 5 apr. 2013 ora 22:38) din care am extras ce e marcat cu galben mai jos. Ignorati ce este marcat cu negru.

„Referințele bibliografice în text - se citează materiale tipărite (cărți și capitole în cărți, articole și lucrări conferințe tipărite), surse electronice (articole și lucrări conferințe disponibile on line, site-uri consultate) și standarde/propuneri de standarde; referințele în text se fac sub una din următoarele forme:

- numerotare crescătoare, în ordinea citării în text: [1], [2], ...

[redacted]

a. *Bibliografia* - constituie înşiruirea referinţelor bibliografice *citate în text*. Dacă s-a ales varianta numerotării [1][2]..., referinţele se vor lista în ordine crescătoare, [redacted] Se vor respecta următoarele reguli de redactare:

1. Carte:
   Exemplu:
   [1] Neanderthal, H., *Tranzistoare MOS cu grila de piatră*, Editura Papyrus, Stonehenge, 20000 î. Hr.

2. Articol dintr-o revistă sau din volumele unei conferinţe:
   Exemplu:
   [2] Ivanovici, I. I. , "Electronic Nothingness", în *Journal of Emo Electronics*, nr. 5/2012, pp.12-30.

3. Standarde, documente ale unor organizaţii:
   Exemplu:
   [3] RFC90210, *A standard for waterless communications between whales*, International Standards Organization, Section XVIII, 2030

Observaţii:

- Numărul paginii/paginilor se trec dacă citarea se referă la o anumită pagină sau grup de pagini, iar în cazul articolelor publicate într-un volum, pentru găsirea uşoară a articolului în volum.
- **În cazul în care resursa bibliografică a fost accesată pe Internet, se va specifica URL-ul complet şi menţiunea „accesat la data..."**
- **Nu se vor introduce referinţe bibliografice pentru care nu există citare în cuprinsul lucrării**

[redacted]

"

Date de prezentare sunt:
10, 17, 24 APRILIE
Vor fi cate 6-7 prezentari pe LP (2 ore). Fiecare va dura 5-10 minute urmat de 10- 5 minute discutii si evaluari colegiale.

Referatele (alcatuite ca document .doc) si rezumatele lor (scrise ca fisiere .ppt) vor fi trimise cu cel putin o zi inaintea prezentarii, pe adresa: liviu_dragomirescu@yahoo.com

(Nota este data de punctajul obtinut la prezentarea referatului, calitatea rezumatului .ppt, calitatea referatului .doc, bonificatia de stimulare a prezentarii la o data cat mai recenta, puncte obtinute prin participarea la discutii si punctaje pentru prezenta in cele trei zile de curs / LP: 10,17,24 aprilie)

Conf. Dr. Liviu Dragomirescu

Tabel cu evidenta prezentei (24 aprilie):

Nr. crt.	**Nume şi prenume**	**Absolvent de**	**Nr. prez**	**Nr. Tema/ Litera Rez. Ales & data prez.**
1	ANDREI Alexandru	Ştiințe Aplicate	0	
2	BUŞAGĂ Lucian Constantin	Tehnică dentară	2	Tema 24. Data: 10 aprilie
3	CIUCULETE Diana Maria	SIM - Ing Med	3	Tema 14. Data: 24 aprilie
4	CIUREA Nicolae Marian	Medicină generală	0	
5	DEACONESCU Grigore Ciprian	Medicină generală	0	
6	DIMITRIU Alexandru Lisias	Medicină generală	0	
7	DRĂGAN Nicolae	Electrotehnică	4	Tema 23. Data: 24 aprilie
8	DUMITRU Costin	Medicină generală	0	
9	DUMITRU Loredana	Ing. Mecanică	3	Tema 5. Data: 24 aprilie
10	GUŞĂ Eliza Daniela	FILS Electronică, fr	2	Tema 1. Data: 24 aprilie
11	LOVIN Andrei Cătălin	Ing. Mecanică	2	Tema 12. Data: 24 aprilie
12	MARTINAŞ Eduard Ionuț	Electr. Şi Tc.	3	Tema 17. Data 17 aprilie
13	MATEI Cristina	SIM - Ştiința mater.	2	Tema 31. Data 17 aprilie
14	MITITELU Andrei	Electr. Şi Tc.	0	
15	NEAGOE Mihaela Lorena	SIM - Ing Med	3	Tema 13. Data: 17 aprilie
16	NEAGU Andrei Octavian	Rel.Ec.Internaț.	2	Tema 29-30 Data 24 aprilie
17	PĂSĂLAN Teodora Mihaela	SIM - Ing Med	4	Tema 11. Data: 17 aprilie
18	RADU Alina Alexandra	SIM - Ing Med	4	Tema 4. Data: 17 aprilie
19	ROŞCA Daniel Ştefan	Ing. Mecanică	3	Tema 2. Data: 10 aprilie

Calcul note la Neurofeedback
Master Iginerie Medicala anul I, 2013

		NC		BDP	B4P		Scor=NC+BDP+B4P	
		nota coleg	data prez	bonif. data prez.	numar prezente	bonif 4 prezente	scor	**Nota=Scor trunchiat la 10**
BUŞAGĂ	Lucian Constantin	5	10	1	2		6	**6**
CIUCULETE	Diana Maria	6	24		3		6	**6**
DRĂGAN	Nicolae	6	24		4	0.5	7	**7**
DUMITRU	Loredana	5	24		3		5	**5**
GUŞĂ	Eliza Daniela	9	24		2		9	**9**
LOVIN	Andrei Cătălin	6	24		2		6	**6**
MARTINAŞ	Eduard Ionuţ	6	17	0.5	4	0.5	7	**7**
MATEI	Cristina	10	17	0.5	2		11	**10**
NEAGOE	Mihaela Lorena	10	17	0.5	3		11	**10**
NEAGU	Andrei Octavian	7	24		2		7	**7**
PĂSĂLAN	Teodora Mihaela	9	17	0.5	4	0.5	10	**10**
RADU	Alina Alexandra	10	17	0.5	4	0.5	11	**10**
ROŞCA	Daniel Ştefan	6	10	1	4	0.5	8	**8**
	Medi:	*7*		*0.64*	*3*	*0.50*		*7.77*

Nota:

In nota colegiala este cuprinsa si o apreciere din partea mea asupra calitatii fisierelor .doc, .ppt, a prezentarii si a respectarii regulilor anuntate.