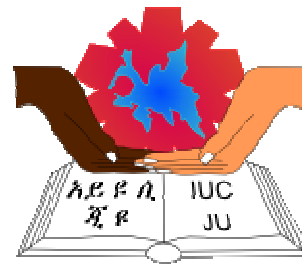


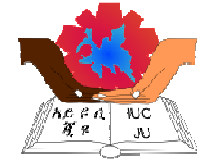
IUC-Jimma University Educational Aspects

Luc Duchateau



IUC-Jimma University

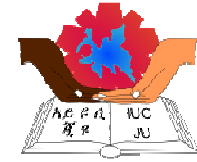
Main theme



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የተለያዩ የሙያ መስሪቶችን ያሳተፈ አቅም ግንባታ

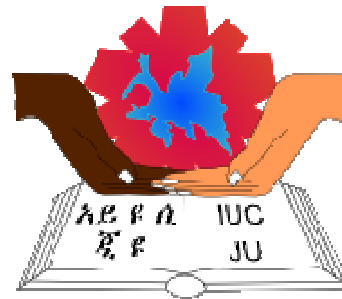


IUC-Jimma University Objectives



Capacity Building:

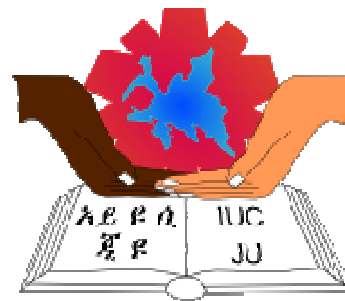
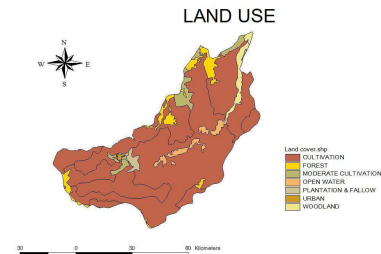
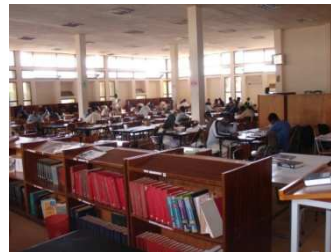
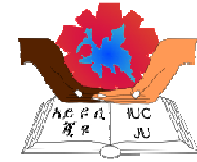
- PhD training
- Development doctoral schools
- MSc training
- Development MSc programmes



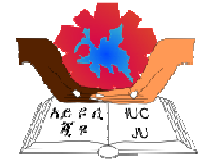
Research

Improve living conditions
In Gilgel Gibe region

IUC-Jimma University Research projects



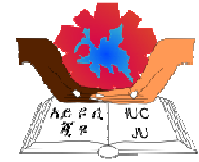
IUC-Jimma University Capacity building: PhD



- IUC-JU has currently 26 PhD scholars
 - Research topics relevant for Gilgel Gibe region
 - Sandwich scholarships
 - North-South collaboration with North PhD promotor
 - Overview: <http://www.iucju.ugent.be/prog/scholar>
- Future in second phase of IUC
 - Development of PhD programme for specific research disciplines (e.g., Ecology)
 - Bidiplome Jimma University-Flemish University

IUC-Jimma University

MSc programme development



- IUC-JU supports existing MSc programmes and takes an active role in setting up new MSc programmes
 - Laboratory techniques
 - Environmental health and ecology
 - Public health
 - Child health and nutrition
 - Biostatistics

NSS project

MSc Biostatistics development



□ Starting point

- Insufficient capacity to establish MSc Biostat in JU
- Existing MSc in Appl. Stats in Hawassa and Addis
- A number of former Ethiopian ICP scholars

□ Conclusion

- Join forces over different universities
- Develop more capacity and adequate course material
- Establish center of excellence

NSS project

MSc Biostatistics development




- For each of the 7 courses under development, 3 Ethiopian scholars (preferably PhD level) come to Flanders, attend course and develop course material based on existing courses in MSc Biostat in Flanders
 - Syllabus
 - Slides
 - Dataset examples
 - Programs
- All material posted on website for students

NSS - Biostat - Internet Explorer aangeboden door Dell
 http://www.nssbiostat.ugent.be/

NSS - Biostat

Jimma-mirror | Print



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The NSS project in Biostatistics constitutes a collaboration between different Flemish, Ethiopian and Mozambique universities under the umbrella of the [Flemish Interuniversity Council](#) (VLIR-UOS). The NSS project in Biostatistics aims at building and extending the Master Programmes in Biostatistics at different Ethiopian Universities. Different courses are developed by North-South teams, starting from existing courses in Flemish Master of Statistics programmes.

The following courses have been developed or under development:

- (1) [Statistical inference](#)
- (2) [Linear Models](#)
- (3) [Non parametric statistics](#)
- (4) [Mixed Models](#)
- (5) [Generalized linear models](#)
- (6) [Survival Analysis](#)
- (7) [Bayesian Data analysis](#)

Comments on the content: Luc.Duchateau@ugent.be. Last modified January 27 2009 20:08:18.

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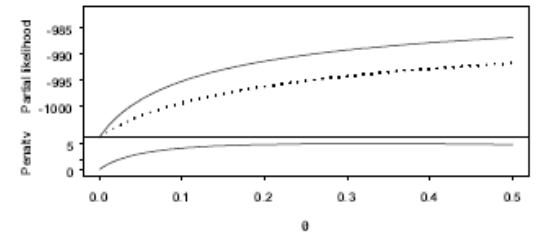


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Inbox in Luc.Duchat... Eerste studie doctor... Microsoft Excel - ge... NSS - Biostat - Inter...

NL 10:22

Figure 16.6: Profile denialised partial likelihood for θ : in (a) the denialised partial likelihood (dashed line) and the partial likelihood part (solid line); in (b) the penalty term.



Survival Analysis

Yehenew Getachew
 Befekadu Gashaw
 Fentaw Abegaz
 Paul Janssen
 Ingrid Van Keilegom
 Luc Duchateau

$$\frac{\partial l_{\text{den}}}{\partial w_a} = \frac{1 - \exp(w_a)}{\theta}$$

The partial derivative of the denialised partial likelihood with respect to w_a is

$$\frac{\partial l_{\text{total}}}{\partial w_a} = d_a - H_{a,c}(v_a) \exp(w_a) - \frac{1 - \exp(w_a)}{\theta} \quad (16.16)$$

with

$$H_{a,c}(v_a) = \prod_{i=1}^{n_a} \exp(x_{a,i}^t \beta) H_0(v_{a,i})$$

Now consider the solution for u_a from the modified EM algorithm for a particular value $\theta^{(l)}$. When the algorithm has converged at step $k+1$ within outer loop iteration l , the estimate for u_a , $\hat{u}_{a,\theta^{(l)}}$, can be taken as the expected value in (16.8), but with $\theta^{(k)}$ replaced by the fixed value for θ , $\theta^{(l)}$, as only the inner loop of the modified EM algorithm is currently considered. Similarly, we consider $H_{a,c}^{(k)}(v_a)$ to be, upon convergence, the estimate $\hat{H}_{a,c,\theta^{(l)}}(v_a)$. We need to convert the estimated frailty $\hat{u}_{a,\theta^{(l)}}$ to the random effect $\hat{w}_{a,\theta^{(l)}}$ to evaluate it in the context of the denialised partial likelihood approach, so denote by $\hat{w}_{a,\theta^{(l)}}$ the logarithm of the estimate $\hat{u}_{a,\theta^{(l)}}$. We then have, by transforming (16.8), that

$$\hat{H}_{a,c,\theta^{(l)}}(v_a) = \exp(-\hat{w}_{a,\theta^{(l)}}) d_a + 1/\theta^{(l)} \quad (16.17)$$

If we substitute this expression in the score equation (16.16) and evaluate it at the estimates β and w derived from the EM algorithm, we obtain

NSS project

The future



- Further support with new courses
- Establish center of excellence
 - Biostat MSc programmes in Addis, Hawassa and Jimma give mutual support and reinforce each other
 - Quality control
 - Research opportunities for PhD collaborators
 - Bidiplome with ICP programme
- Prevention of brain drain, aiming at brain gain