

CURRICULUM VITAE

LUIZ NAVEDA

PERSONAL INFORMATION

NAME Luiz Naveda
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* Addresses, phone numbers, motivation letters and scanned proofs of all items in this document are available upon request.
Please contact email above.

Content reviewed by the author in Tuesday 15th July, 2014.

FORMAL EDUCATION/DEGREES

2006-2011	Doctor in Art Science	Ghent, Belgium
INSTITUTION	Ghent University	http://www.ugent.be
DEPARTMENT	Institute for Psychoacoustics and Electronic Music - IPEM	
AREA	Musicology	
THESIS:	"Gesture in samba: A cross-modal analysis of dance and music from the Afro-Brazilian culture" — Advisor: Prof. Dr. Marc Leman	
GRANTS:	Funded by a BOF scholarship – Ghent University and partially supported by CAPES (Brazil)	
WEBSITE:	http://www.ipem.ugent.be/samba	
2000-2002	Master in Music	Belo Horizonte, Brazil
INSTITUTION	UFMG – Federal University of Minas Gerais	http://www.ufmg.br
DEPARTMENT	School of Music	
AREA	Music Performance	
THESIS:	"The timbre and the loudness of the classical guitar: An acoustic and psychoacoustic approach" (Portuguese) — Advisor: Prof. Dr. Maurício Alves Loureiro	
1994-1999	Bachelor in Music	Belo Horizonte, Brazil
INSTITUTION	UEMG – State University of Minas Gerais	http://www.uemg.br/
DEPARTMENT	School of Music	
AREA	Music performance	
INSTRUMENT	Guitar	
1991-1994	Technical Degree in Electronics	Belo Horizonte, Brazil
INSTITUTION	UFMG – Federal University of Minas Gerais	http://www.ufmg.br
DEPARTMENT	Coltec	
AREA	Electronics	

AWARDS

AWARDS AND GRANTS

1. Naveda, L. (2011). "Young Research Award 2011 for the best paper - SACCoM/SEMPRE". In: *X Encontro de Ciências Cognitivas de la Música*. **Research award**. Buenos Aires, Argentina: SACCoM-Sociedad Argentina para las Ciencias Cognitivas de la Música. http://www.saccomm.org.ar/2011_xencuentro/premio/resultado.html.
2. Naveda, L. (2009). *Best Paper Award: SBCM 2009*. **Research award**. Recife, Brazil: 12th Brazilian Symposium on Computer Music.
3. Naveda, L. (2006). *First prize in the national selection for doctoral grant CAPES-Brazil*. **Research award**. Brasília, Brazil: CAPES.
4. Naveda, L. (2002). *Young Musician Award*. **Artistic award**. Belo Horizonte, Brazil.
5. Naveda, L. (1998). *Natividade Domini - Work in Architectural Origami (Award: Jury reference)*. **Artistic award**. Belo Horizonte, Brazil: Telemig.

GRANTS

6. Naveda, L. and F. Gouyon (2010). *Grant for scientific Mission at Inesc-Porto*. **Travel grant**. Brussels, Belgium: FWO.
7. Naveda, L. (2009). *Short-Term Scientific Mission SID-COST*. **Travel grant**. Porto, Portugal: SID-COST. http://www.cost.esf.org/library/newsroom/node_7437.
8. Naveda, L. (2007-2011). *BOF PHD Scholarship*. **Doctoral grant**. Ghent, Belgium: Ghent University.
9. Naveda, L. (2006). *Full doctoral scholarship for international studies - CAPES*. **Doctoral grant**. 1st national prize in the area of Arts. Brasília, Brazil: CAPES.
10. Naveda, L. (2005). *Grant for research and technological development*. **Research grant**. Research project (SHA-1614/04). Belo Horizonte, Brazil: Fapemig.
11. Naveda, L. (1998). "Undergraduate scientific grant". In: **Research grant**. FAPEMIG.

PARTICIPATION IN COURSES

12. Naveda, L. (2009). **Participation in Course**. Brussels, Belgium: IMAL.
13. Naveda, L. (2008). *Academic english: writing skills*. **Language course**. Ghent, Belgium: UCT - UGENT.
14. Naveda, L. (2008). *Eyesweb Week 2008*. **Participation in Course**. Genova, Italy: Infomus.
15. Naveda, L. (2007). *Third International Summer School in Systematic Musicology*. **Participation in Course**. Ghent, Belgium: Ghent University.
16. Naveda, L. (2006). *Second International Summer School in Systematic Musicology*. **Participation in Course**. Ghent, Belgium: Ghent University.
17. Naveda, L. (2006). *Upper-Intermediate academic English*. **Language course**. 30 h. Ghent, Belgium: UCT - Ghent University.
18. Naveda, L. (2005). *Fundamentals of musical interactive systems*. **Participation in Course**. Diamantina, Minas Gerais, Brazil: Festival da Inverno da UFMG.
19. Naveda, L. (2004). *Final Cut Pro 4*. **Participation in Course**. São Paulo, Brazil: Interface - Apple.
20. Naveda, L. (2003). *Iniciando um Pequeno Negócio (internet)*. **Participation in Course**. 30 h. Belo Horizonte, Brazil: Sebrae-MG.
21. Naveda, L. (1998). **Participation in Master-Class**. 4 h. Belo Horizonte, Brazil: ESMU-UEMG.
22. Naveda, L. (1998). *Guitar Master-Class: Eduardo Fernandez*. **Participation in Master-Class**. 40 h. Porto Alegre, Brazil.
23. Naveda, L. (1997). *Guitar Master-Class: Eduardo Isaac*. **Participation in Master-Class**. Rio de Janeiro, Brazil.
24. Naveda, L. (1997). *Guitar Master-Class: Mark Delpriora*. **Participation in Master-Class**. 40 h. Porto Alegre, Brazil.
25. Naveda, L. (1996). *Guitar Master-Class: Eduardo Fernandez*. **Participation in Master-Class**. Rio de Janeiro, Brazil: Uni-Rio.
26. Naveda, L. (1996). *VII International festival of Brazilian Colonial music and old music*. **Participation in Course**. 140 h. Juiz de Fora, Brazil: Prêmio Música - UFJF.

SKILLS

AREAS OF EXPERTISE

MUSICOLOGY	Music notation, rhythm and meter analysis and theory, computational analysis of music, topics in systematic musicology, music and cognition, restoration of music archives (sound and image). (See [oliveira2011topology, 79, 87])
MOVEMENT ANALYSIS	Analysis of movement in dance and in music performance, processing of movement information, gesture analysis. (See [70, 69, 67])
COMPUTER MUSIC	Algorithms for cross-modal analysis, interactive systems, sensors and capturing, realtime multimedia applications. (See [71, 124, 18])
MUSIC PERFORMANCE	Classical guitar, guitar pedagogy, chamber music, classical and latin american repertoire, interactive systems, music pedagogy and computer music. (See sections Artistic production and Academic appointments)
MUSIC EDUCATION	Instrumental teaching, music cognition, musical development, computer interaction and music pedagogy. (See [72, 86] and Academic appointments).
PAPER ENGINEERING	Project and production of design in paper: paper engineering, architectural origami, pop-up and card design. (See section Academic and professional experience)

HARDWARE AND SOFTWARE EXPERTISE

PLATFORMS	Experience in OS X, Windows, IOS, Linux
SOUND AND MUSIC	Intermediate ProTools user, advanced user of sound editing, analysis, sequencing and capturing software/hardware. Certified Soundtrack (FinalCut) user. Experienced user of Sibelius, Garage Band, Audacity, Vegas, SonicVisualizer and others.
SIGNAL PROCESSING	Matlab: image, video and sound processing for scientific and creative applications. Experience with toolbox and algorithm development, deployment of OSX applications, GUI design.
INTERACTIVE SYSTEMS	Design, prototyping, advising and teaching applications for interactive performances and experiments in Pure Data, Processing, Millumim, VVVV, EyesWeb, Max/Msp.
MOTION CAPTURE	Recording and editing in Arena/Optitrack systems. Development in hardware and software for synchronization and experimental setups for movement analysis. Advanced user of Matlab toolboxes for motion analysis (e.g., MoCap Toolbox).
VIDEO AND IMAGE	Certified Apple Final Cut Pro user. Experienced user of professional photographic equipment, experience with image capturing (video and photo) and signal processing for music and movement applications and research. Advanced user of Illustrator and Photoshop.
TYPESETTING, WEB AND PUBLISHING	Advanced user of L ^A T _E X, BibTex, Microsoft Office and Apple IWork applications, CMS and Blog platforms (Joomla, Tumblr, Wordpress) and e-commerce (online marketing, Analytics, Adwords).
ELECTRONICS	Basic design of analog and digital circuits, implementation projects (see technical degree in electronics in Formal Education/Degrees).

OTHER INTERESTS

SUBJECTS	Politics, sustainable economy, cultural industries, robotics, running performance, biomechanics, information society, technology, human intelligence.
HOBBIES	Photography, electronics, contemporary dance, popular dance, running, archery, swimming, traveling.

LANGUAGES

PORTUGUESE Native language

Languages	Understanding		Speaking		Writing
	Listening	Reading	Spoken Interaction	Spoken Production	
English	Proficient	Proficient	Proficient	Proficient	Proficient
Spanish	Proficient	Independent	Independent	Basic	Basic
Dutch	Basic	Basic	Basic	Basic	Beginner
French	Basic	Independent	Basic	Basic	Beginner

ACADEMIC AND PROFESSIONAL EXPERIENCE

ACADEMIC APPOINTMENTS

PERIOD	July, 2013 — present	Belo Horizonte, Brazil
EMPLOYER	UEMG - State University of Minas Gerais	http://www.uemg.br/
DEPARTMENT	School of Music	
JOB TITLE	Professor	
DESCRIPTION:	Research, advising, teaching and administration	
TEACHING:	Methodology, research, music cognition, media and technology	
LEVELS:	Undergraduate and Post-graduate courses	
RESEARCH:	Music cognition, movement and dance analysis, technologies for music education, gender and movement, multimedia performance.	
PERIOD	Jan. 2011 – Set. 2011	Ghent, Belgium
EMPLOYER	Ghent University	http://www.ipem.ugent.be/
DEPARTMENT	IPEM - Institute for Psychoacoustics and Electronic Music	
JOB TITLE	Postdoc researcher	
DESCRIPTION	Research and development: music and dance relationships in the context of popular dances.	
PERIOD	Fev. 2001 — Aug. 2006	Belo Horizonte, Brazil
EMPLOYER	UEMG - State University of Minas Gerais	http://www.uemg.br/
DEPARTMENT	School of Music	
JOB TITLE	Lecturer	
DESCRIPTION	Teaching, advising, research and administration	
TEACHING:	Guitar performance, guitar pedagogy, musical acoustics, advising.	
LEVELS:	Preparatory, Undergraduate and Post-graduate courses	
RESEARCH:	Applied research, administration and applications for research projects (see Awards and Research interests). Research topics: music education, interactive systems, restoration of music archives, music technology, sound recording and sound design, musical acoustics.	
PERIOD	Fev. 2004 – Aug. 2006	Belo Horizonte, Brazil
EMPLOYER	FUMEC - Minas Gerais Foundation for Education and culture	http://www.fumec.br/
DEPARTMENT	Architecture and Engineering faculty	
JOB TITLE	Lecturer	
DESCRIPTION	Teaching and student advising	
TEACHING:	Sound design and interactive systems for video and design applications. Advising students on course appointments related to music and sound design.	
LEVELS:	Undergraduate courses	
PERIOD	Fev. 2005 – Aug. 2006	Diamantina, Brazil
EMPLOYER	FEVALE - Educational Foundation of Vale do Jequitinhonha	http://www.fevale.edu.br/
DEPARTMENT	School of Music	
JOB TITLE	Lecturer	
DESCRIPTION	Teaching	
TEACHING:	Guitar performance, guitar pedagogy.	
LEVELS:	Undergraduate courses	

OTHER PROFESSIONAL EXPERIENCE IN MUSIC

27. Naveda, L. (2001). *Workshop on plucked strings. Music teaching*. Belo Horizonte, Brazil: Centro Cultural Inter-regional Lagoa do Nado.
28. Naveda, L. (2000). "Music workshop". In: *Oficinas de arte e cultura. Music teaching*. Belo Horizonte, Brazil: Secretaria Municipal de Cultura - PBH.
29. Naveda, L. (Jan. 1999 - Dec. 2002). *Music teacher - music theory. Music teaching*. Belo Horizonte, Brazil: Projeto Arena da Cultura: Secretaria Municipal de Cultura - PBH.
30. Naveda, L. (1998-1999). *Music teacher - Guitar. Music teaching*. *Divinópolis, Minas Gerais, Brazil*.
31. Naveda, L. (1994). *Music teacher - Guitar. Music teaching*. *Itaúna, Minas Gerais, Brazil*: Teclado.

OTHER PROFESSIONAL EXPERIENCE

32. Naveda, L. and D. Mota (2013). "1er workshop internacional en tecnologías de mediación para la investigación de las artes temporales". In: *Laboratorio para el Estudio de la Experiencia Musical. Workshop*. La Plata, Argentina: FBA-UNLP. <http://fba.unlp.edu.ar/1eem>.
33. Naveda, L. (May 2012). *Product manager and developer. Company position*. Development and management for software and hardware for music education (<http://www.tomplay.com>). Belo Horizonte, Brazil: PPV. <http://www.tomplay.com>.
34. Naveda, L. and G. Sioros (2012). "Pure Data Workshop". In: *Networked Hacklab. Workshop*. Belo Horizonte, Brazil: Conservatório de Música UFMG. <http://hacklabbh.blogspot.com.br/>.

35. Naveda, L. (2006). *Introduction to architectural Origami and creativity in paper*. **Workshop**. Ouro Preto, Minas Gerais, Brazil: Festival da Inverno da UFMG.
36. Naveda, L. (2006). *Workshop of Origami architecture*. **Workshop**. Itabira, Minas Gerais, Brazil.
37. Naveda, L. (2006). *Workshop on architectural origami*. **Workshop**. Ipoema.
38. Naveda, L. (2003). *Introduction to architectural Origami*. **Workshop**. Ouro Preto, Minas Gerais, Brazil: Festival de Inverno da Uni-bh.
39. Naveda, L. (2003). *Workshop of Origami*. **Workshop**. Belo Horizonte, Brazil: PUC Minas.
40. Naveda, L. (2001). "Workshop of Origami". In: **Workshop**. Belo Horizonte, Brazil: ESMU-UEMG.
41. Naveda, L. (2001). *Workshop on architectural origami*. **Workshop**. Belo Horizonte, Brazil: Centro Cultural S√ ϵ oBernardo.
42. Naveda, L. (2000). *Origami Arquitet√ ν nico(Architectural Origami)*. **Workshop**. Belo Horizonte, Brazil: Faculdades Izabela hendrix.
43. Naveda, L. (2000). *Workshop on architectural origami*. **Workshop**. Belo Horizonte, Brazil.
44. Naveda, L. (1999). *Workshop on architectural origami*. **Workshop**. Belo Horizonte, Brazil.
45. Naveda, L. (1995). *Internship: Electronic maintenance department of UFMG*. **Internship**. Belo Horizonte, Brazil: UFMG.

TECHNICAL PRODUCTION

46. Naveda, L. (2013). *Move - Visualization of Rich Motion Capture (projeto em andamento)*. **Software**. UEMG.
47. Naveda, L., D. Mota, and M. Leman (2013). *Samba Toolbox (projeto em andamento)*. **Software**. Belo Horizonte, Brazil: UEMG.
48. Naveda, L. and I. Santana (2013). *Topos (projeto em andamento)*. **Software**. UEMG - UFBA.
49. Naveda, L., M. Leman, and D. Mota (2010). *DAS - Dance Analysis Suite*. **Software**. Ghent University. <http://das.naveda.info>.
50. Santana, I. and L. Naveda (2010). *E-Pormundos Afeto Espectaculo de danza telematica*. **Motion Capture work**. Buenos Aires, Argentina: 12o festival de videodanza de buenos aires.
51. Naveda, L. (2005). **Project Proposal**. Belo Horizonte, Brazil: Escola de M√ \int sicadaUEMG.
52. Naveda, L. (1996). **Workshop**. Belo Horizonte, Brazil.

RESEARCH AND PROJECTS

RESEARCH INTERESTS

MAIN TOPICS	Interdisciplinary studies involving music, music and dance phenomenon in society, movement analysis, dance studies, popular music and dance, rhythm, music cognition, music performance and interactive systems, computer music, electronics, sound design, restoration of music archives, music education, musical acoustics and psychoacoustics.
OTHER	Paper architecture, photography, robotics, architecture, cultural industries, economy, ethnography, geography, image processing, iconography.

RESEARCH PROJECTS

53. Naveda, L. and M. Leman (2006-2011). *Gesture in Samba*. **Research Project**. Funding: UGENT/BOF scholarship and partially funded by CAPES (Brazil). Ghent, Belgium: Ghent University and CAPES.

Music and dance cannot be easily dissociated in the culture of Afro-Brazilian samba. Together, these experiences convey a sort of unified gesture, or cross-modal gesture, which is acquired and performed through sound, movement and other modalities. In this study, we investigate how this gesture is modeled through sound and movement and how the interdependence between these modalities has influenced samba music and samba dances. Starting from commercial audio excerpts and field recordings, we demonstrated that samba is characterized by particular micro-timing deviations, as well as an unclear configuration of periodicities in the metrical structure of music. From motion capture and video recordings of dance, we developed methods that allow the description of gestures in terms of shapes and spatiotemporal reference frames. The applications of these methods to data-sets of motion capture recordings of samba dances show that the musical meter is indeed strongly represented in the gestures and in the dance space. In addition, we argue that the metric signature of

samba music may actually be dependent on the metric structure of dance. The research shows that the sounding structure of samba cannot be fully understood without taking into consideration the role of the human body and the structure of dances. However, characteristic models of samba dances and music are beyond invariant properties of repetitive gestures or rhythm motives. More research is needed in order better understand the involvement of cultural factors in the structure of dances and music forms.

54. *Laboratory for multimedia, research, recording and performance* (2005). **Research Project**. Funding: FAPEMIG (M.G., Brazil). Belo Horizonte, Brazil: Escola de Música UEMG.

This project aimed at creating an infra-structure and know-how for research and performance multimedia, audio and video recordings and ethnomusicological investigation at the school of music of UEMG. The design of the laboratory was based on digital technology focusing on mobility, multimedia interaction and robust sound recording methods for music performance. The project involved design of the laboratory, coordination of research actions and support to other researchers and training.

55. (2005). **Research Project**. Funding: FAPEMIG (M.G., Brazil). Belo Horizonte, Brazil: Escola de Música UEMG.

Rádio Inconfidência is a radio station serving Belo Horizonte, Minas Gerais and the central portion of the state in Brazil. It was one of the first state radios in Brazil and started to broadcast in 1936. The “Radio Inconfidência archive” is a repository of collections of LP’s and scores that includes items ranging from late 40’s to 1980’s (30000 LP’s and 10000 scores). The project aimed at organizing the routines for accommodation, restoration and cataloging of scores and sound recordings. We developed a set of methodologies to identify and restore audio and score information using a minimum of physical manipulation of records. The methods were strongly based on the use of image processing, annotation and web-services.

56. Naveda, L. (2000-2002). *The timbre and the loudness of the classical guitar: An acoustic and psychoacoustic approach*. **Research Project**. Belo Horizonte, Brazil: UFMG.

The problem of the loudness in the classical guitar was inherited from its ancestors like the lute and *vihuela* and has affected the performance, construction and composition works to this instrument. New technologies have presented solutions such as the use of new materials in guitar’s construction, strings and high fidelity amplification without resulting in broad and significant changes. The guitar player uses technical recourses of guitar performance technique trying to increase the loudness. In this work, some of the most used recourses in guitar technique were analyzed together with a review of the main topics of the guitar acoustics and psychoacoustics. An original methodology based on subjective tests and analysis of spectral components, describe the influence of the main factors in the guitar’s timbre and loudness perception. The results show a loudness dependency to decay and transients at the beginning of the attack. The loudness of the guitar’s recourses often used to increase the loudness such as *apoiado* attack, seems not to depend significantly of the timbre attribute.

57. Naveda, L. (1998). “Scientific initiation programme”. In: **Research Project**. Belo Horizonte, Brazil: UEMG.

Undergraduate project on restoration of scores from the archive of the “Maestro Vespasiano Gregório dos Santos”. For more information go to <http://www.editorapontes.com.br/tmb/vespasiano/> or contact the head of the project, Prof. Márcio Miranda Pontes at the same address.

ONGOING PROJECTS

58. Assinnato, M. V., L. Naveda, and F. Shifres (2013). *Analysis of musical motion for the analysis of sensitive musical/choreographic phenomena*. Ed. by U. de La Plata. **Collaborative project**. Experiments and development of techniques for the analysis of movement data. Brazil and Argentina.
59. Lopes, H. and L. Naveda (2013). Ed. by UEMG. **Collaborative project**. Belo Horizonte, Brazil.
60. Naveda, L. and M. A. Varella (2013). *Psychological aspects of the recognition of gender and style in dance*. **Collaborative project**. Keywords: dance, cognition, psychology, movement analysis. São Paulo, Brazil: USP.
61. Palombine, C. and L. Naveda (2013). Ed. by U. e UEMG. **Collaborative project**. Belo Horizonte, Brazil.
62. Naveda, L. (2012). *Studies on paper engineering and photography*. **Artistic project**. Photographic studies on abstract paper structures. <http://origami.naveda.info/tagged/study>.
63. Naveda, L. and M. Leman (2012). *Gender, style and musical difference in the morphology of the gestures in samba dance*. Ed. by G. University. **Collaborative project**. Keywords: dance, gesture, samba, gender, style. Brazil and Belgium.
64. Naveda, L., F. Shifres, and I. Martinez (2012). *The gesture in the dance and music traditions of Latin-America*. **Collaborative project**. Keywords: gesture, tango, motion capture. Brazil and Argentina: Psychology of Music Research Group of UNLP and Research Commission ZIAP II.
65. Naveda, L., L. Jure, and M. Rocamora (2011). *Timing in the music of the African diaspora in the Americas*. Ed. by U. de la República. **Collaborative project**. Keywords: timing, microtiming, rhythm. Brazil and Uruguay.

PUBLICATIONS

PEER-REVIEWED JOURNAL PUBLICATIONS

66. Oliveira, J., L. Naveda, F. Gouyon, L. Reis, P. Sousa, and M. Leman (2012). A parameterizable spatiotemporal representation of popular dance styles for humanoid dancing characters. *EURASIP Journal on Audio, Speech, and Music Processing* **2012**(1), 18.
67. Naveda, L., F. Gouyon, C. Guedes, and M. Leman (2011). Microtiming patterns and interactions with musical properties in samba music. *Journal of New Music Research* **40**(2), 223–236.
68. Vroman, L., L. Naveda, M. Leman, and L. Thierry (2011). Generating tacit knowledge through motion: A vision on the matter of space. *Art, Design & Communication in Higher Education* **10**(2), 255–270.
69. Leman, M. and L. Naveda (2010). Basic Gestures as Spatiotemporal Reference Frames for Repetitive Dance/Music Patterns in Samba and Charleston. *Music Perception* **28**(1), 71–91.
70. Naveda, L. and M. Leman (2010). The spatiotemporal representation of dance and music gestures using Topological Gesture Analysis (TGA). *Music Perception* **28**(1), 93–111.
71. Naveda, L. and M. Leman (2009). A Cross-modal Heuristic for Periodic Pattern Analysis of Samba Music and Dance. *Journal of New Music Research* **38**(3), 255–283.
72. Naveda, L. (2006). Inovações, anjos e tecnologias nos projetos e práticas da educação musical. *Revista da ABEM* **1**(14), 65–74.

PUBLICATIONS IN PREPARATION

73. Naveda, L., L. Jure, and M. Rocamora (2013). *Timing in the African diaspora in the Americas: Afro-Brazilian samba and Afro-Uruguayan candombe*. **Publication in preparation**.
74. Naveda, L. and M. Leman (2013). *Mapping the morphology of the gesture in the samba dance*. **Publication in preparation**.

PEER-REVIEWED CONFERENCE PROCEEDINGS

75. Naveda, L. (2014). “Topos, a toolkit for pure data: exploring the spatial features of dance gestures for interactive musical applications”. In: *Proceedings of the 40th International Computer Music Conference (ICMC) / 11th Sound Music Computing conference*. Ed. by A. Georgaki and G. Kouroupetroglou. Athens, Greece: University of Athens.
76. Naveda, L. and M. Leman (2013). “Mapping idiomatic elements in the morphology of dance gestures: Meter, gender and cultural idiosyncrasies in the samba dance and music”. In: *Actas de ECCoM. Vol. 1 N1, “Nuestro Cuerpo en Nuestra Musica. 11o ECCoM”*. Ed. by F. Shifres, M. d. I. P. Jacquier, D. Gonnet, M. I. Burcet, and R. Herrera. Vol. 1. 1. Buenos Aires, Argentina: SACCoM.

77. Naveda, L. and M. Leman (2011). Hypotheses on the choreographic roots of the musical meter: a case study on Afro-Brazilian dance and music. In: *X Encuentro de Ciencias Cognitivas de la Música (Young Research Award)*. SACCoM-Sociedad Argentina para las Ciencias Cognitivas de la Música. http://www.sacom.org.ar/2011_xencuentro/premio/resultado.html.
78. Vroman, L., T. Lagrange, and L. Naveda (2011). Architecture Through motion: A vision on the matter of space. In: *EKSIG 2011 - International Conference 2011 of the DRS Special Interest Group on Experiential Knowledge*. Design Research Society. Farnham Castle, UK.
79. Naveda, L., F. Gouyon, and M. Leman (2010). Modeling Musical Structure From The Audience: Emergent Rhythmic Models From Spontaneous Vocalizations In Samba Culture. In: *Proceedings of the 11th International conference on Music Perception and Cognition ICMPC10*. Seattle: University of Washington.
80. Oliveira, J. a. L., L. Naveda, F. Gouyon, M. Leman, and J. a. P. Reis (2010). Synthesis of Variable Dancing Styles Based on A Compact Spatiotemporal Representation of Dance. In: *IROS2010*. Taipei. <http://winnie.kuis.kyoto-u.ac.jp/RMEWS/>.
81. Naveda, L., F. Gouyon, C. Guedes, and M. Leman (2009). Multidimensional microtiming in Samba music. In: *Proceedings of the 12th Brazilian Symposium on Computer Music (Best Paper Award)*. Ed. by M Pimenta, D. Keller, R. Faria, M. Queiroz, G. Ramalho, and G. Cabral. Recife: SBCM, pp.1–12. <http://compmus.ime.usp.br/sbcm/2009/>.
82. Naveda, L., M. Leman, and F. Gouyon (2009). Accessing structure of samba rhythms through cultural practices of vocal percussions. In: *Proceedings of the SMC09-6th Sound and Music Computing Conference*. Ed. by A. Barbosa and X. Serra. SMC. Portugal, pp.259–264.
83. Oliveira, J. L., L. Naveda, F. Gouyon, and J. a. P. Reis (2009). “Towards Human-Machine Sonic Interactions: Mapping Human Dance Gestures onto Robots”. In: ed. by L. Naveda. Ghent: Proceedings of the Second International Conference of Students of Systematic Musicology SysMus09, pp. 37–41.
84. Naveda, L. and M. Leman (2008). Representation of Samba dance gestures, using a multi-modal analysis approach. In: *Proceedings of the 5th Enactive International Conference ENACTIVE 2008*. Edizione ETS, pp.68–74. ISBN: ISBN 978-884672252-2.
85. Naveda, L. and M. Leman (2008). Sonification of Samba dance using periodic pattern analysis. In: *ARTECH 2008. 4th International Conference on Digital Arts*. Ed. by A. Barbosa. Porto, Portugal: Universidade Católica Portuguesa, pp.16–26.
86. Naveda, L. (2003). “Estratégias curriculares na Licenciatura em Violaão: projetos coletivos e projetos pessoais”. In: *XII Encontro anual da ABEM*. Florianópolis, Brazil: UDESC. http://www.abemeducaomusical.org.br/Masters/anais2003/ABEM_2003.pdf.
87. Naveda, L. (2003). “O Timbre e o Volume Sonoro do violão: Uma abordagem experimental (The timbre and the loudness of the guitar: an experimental approach)”. In: *XIV Encontro da ANPPOM*. Porto Alegre, Brasil: ANPPOM. http://www.anppom.com.br/anais/ANPPOM_2003.pdf.
88. Naveda, L. (2001). “Cognitive bases for actions on music education in the periphery of Belo Horizonte: an experimental approach on the student’s musical viewpoint”. In: Universidade Federal de Uberlândia. <http://www.abemeducaomusical.org.br/anais.html>.

OTHER PUBLICATIONS

89. Naveda, L. (2011). “Gesture in Samba: A cross-modal analysis of dance and music from the Afro-Brazilian culture”. PhD thesis. Ghent University.
90. Leman, M. and L. Naveda (2009). Spatial cognition of Samba and Charleston. *Cognitive Processing* **10**, S142–S142.
91. Naveda, L., ed. (2009). *Proceedings of the Second Conference of Students of Systematic Musicology*. Ghent: Ghent University. ISBN: 9789087560201.
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96. Naveda, L. (2002). "O Timbre e o Volume Sonoro do viol√{a}o: Uma abordagem ac√{u}stica e Psicoac√{u}stica (translation: The timbre and the loudness of the classical guitar: a acoustic and psychoacoustic approach)". Master Thesis. Belo Horizonte, Brazil: UFMG.

ACADEMIC ACTIVITIES

PARTICIPATION IN CONFERENCES

97. Naveda, L. (2011). *X Encontro de Ciencias Cognitivas de la M√{u}sica*. **Participation in Conference**. Buenos Aires, Argentina: SACCoM-Sociedad Argentina para las Ciencias Cognitivas de la M√{u}sica.
98. Naveda, L. (2010). *ICMPC11 - International Conference of Music Perception and Cognition*. Ed. by S. Demorest. **Participation in Conference**. Seattle, US: Washington University.
99. Naveda, L. and I. Santana (2010). "Space, music and body dynamics in three excerpts of dance improvisation". In: *DRHA2010*. **Presentation in Conference**. London, UK: Brunel University.
100. Naveda, L. (2009). *ICSC09-4th International Conference in Spatial Cognition*. **Participation in Conference**. Rome, Italy: Sapienza University of Rome.
101. Naveda, L. (2009). *SBCM 2009 - 12th Brazilian Symposium on Computer Music*. **Participation in Conference**. Recife, Brazil: Brazilian Computer Society.
102. Naveda, L. (2009). *Sound Music Computer Conference*. **Participation in Conference**. Porto, Portugal: SMC.
103. Naveda, L. (2008). *Artech2008*. **Participation in Conference**. Porto, Portugal: Universidade Catolica Portuguesa.
104. Naveda, L. (2008). *The Mirror System Hypothesis: On Being Moved*. **Participation in Seminar**. Cologne, Germany.
105. Naveda, L. (2005). *XIV Encontro Anual Da Abem*. **Participation in Conference**. Belo Horizonte, Brazil: UEMG.
106. Naveda, L. (2001). "Possibilities in Psychology of Music Education". In: **Presentation in Seminar**. Belo Horizonte, Brazil: UFMG.

INVITED TALKS

107. Naveda, L. (2012). "Rhythm, groove and interaction design". In: *Networked Hacklab*. **Invited lecturer**. Belo Horizonte, Brazil: Conservat√{o}ria UFMG.
108. Naveda, L. (2012). "The time in the technological poetics". In: *10 dimensions project*. **Debate**. Natal, Brazil: Federal University of Rio Grande do Norte.
109. Naveda, L. (2012). "Time, dance, music and other blind spots of the same experience." In: *10 dimensions Project*. **Invited lecturer**. Natal, Brazil: Federal University of Rio Grande do Norte.
110. Naveda, L. (2011). Ed. by I. Coimbra. **Participation in Conference**. Belo Horizonte, Brazil: Centro Cultural da UFMG.
111. Naveda, L. (2011). **Invited lecturer**. Montevideo, Uruguay: eMe-estudio de M√{u}sicaelectroac√{u}stica, Universidad de la Rep√{u}blica.
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113. Naveda, L. (2011). "Dance, language and technological spaces". In: ed. by I. Coimbra. **Invited lecturer**. Belo Horizonte, Brazil: Centro Cultural da UFMG.
114. Naveda, L. (2011). "Extracting high-level information from Motion Capture and Sound: case studies in Afro-Brazilian dance and music". In: *Motion in Place Platform Workshop*. **Invited lecturer**. Brighton: School of Media, Film and Music, Sussex University.
115. Naveda, L. (2011). "Gesture in Samba: A cross-modal analysis of dance and music from the Afro-Brazilian culture". In: **Invited lecturer**. Belo Horizonte, Brazil: Escola de M√{u}sica UFMG.
116. Naveda, L. (2011). *Motion Capture applied to the digital arts and dance*. **Invited lecturer**. Salvador, Bahia, Brazil.
117. Naveda, L. (2011). *Motion Capture applied to the digital arts and dance*. **Invited lecturer**. Belo Horizonte, Brazil: Escola de Belas-Artes, UFMG.
118. Naveda, L., M. Wanderley, J. A. S. Kelso, F. Iazzetta, S. Fonseca, J. Manzolli, and H. C. Yehia (2011). *The music and its measures*. **Participation in Debate/Conference**. Belo Horizonte, Brazil: IEAT/UFMG.

119. Naveda, L. (2010). *Gesture analysis in dance and music: the case of Afro-Brazilian Samba*. **Invited lecturer**.
120. Naveda, L. (2010). *Motion capture and dance*. **Invited lecturer**. Salvador, Bahia, Brazil.
121. Naveda, L. (2009). *Embodied music: between music and body design*. **Invited lecturer**. Belo Horizonte, Brazil: Fumec - Faculdade de Engenharia e Arquitetura.
122. Naveda, L. (2009). *Opendeur 2009*. **Presentation in Event**. Ghent, Belgium: Ipem - Ghent University.
123. Naveda, L. (2006). "Art and interactive systems". In: **Invited lecturer**. Belo Horizonte, Brazil: Escola Guignard - UEMG.
124. Naveda, L. (2006). "Gesture Transit between Sound and Image: Project and Performance in Multimodal Interactive Systems". In: *Festival da Inverno da UFMG*. **Invited lecturer**. Diamantina, Brazil: UFMG.
125. Naveda, L. (2004). "Curriculum in the instrumental teaching: context, flexibility and rigor". In: *1ro Colóquio de Pesquisada Escola de Música da UEMG*. **Presentation in Seminar**. Belo Horizonte, Brazil: ESMU-UEMG.
126. Naveda, L. (2002). **Participation in Seminar**. Belo Horizonte, Brazil: Escola de Música da UEMG.
127. Naveda, L. (2001). "Acoustics and Psychoacoustics of the Guitar". In: **Presentation in Event**. Belo Horizonte, Brazil: UEMG.
128. Naveda, L. (2001). "Vision and audition". In: **Presentation in Seminar**. Belo Horizonte, Brazil: ESMU-UEMG.
129. Naveda, L. (2000). "Influence of the technical strategies in the loudness and timbre of the classical guitar: a psychoacoustic analysis". In: **Presentation in Seminar**. Belo Horizonte, Brazil: UFMG.

ACADEMIC SERVICES

REFEREE

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131. Naveda, L. (set. 2012). *Journal of New Music Research*. **Journal Reviewer**. Taylor Francis.
132. Naveda, L. (2012). *SysMus12 - Fourth International Conference of Students of Systematic Musicology*. **Reviewer**. Montreal, Canada.
133. Naveda, L. (2011). *NIME 2011 New Interfaces for Musical Expression++*. Ed. by A. R. Jensenius. **Reviewer**. Oslo, Norway: Department of Musicology, University of Oslo.
134. Naveda, L. (2011). *SBCM 2011 - 13rd Brazilian Symposium on Computer Music (SBCM)*. Ed. by M. Queiroz. **Reviewer**. Vitória, Brazil: Sociedade Brasileira de Computação (Brazilian Computer Society).
135. Naveda, L. (2010). *ICMC 2010 International Computer Music Conference*. Ed. by F. Gouyon. **Reviewer**. New York, US: New York and Stony Brook University.
136. Naveda, L. (2010). *Music Perception*. Ed. by P. Toiviainen and P. Keller. **Journal Reviewer**. University of California Press.
137. Naveda, L. (2010). *NIME 2010 New Interfaces for Musical Expression++*. Ed. by A. Chen. **Reviewer**. Sydney, Australia: University of Technology Sydney.
138. Naveda, L. (2010). *The First IROS 2010 Workshop on Robots and Musical Expressions*. **Reviewer**. Taipei: IEEE/RSJ International Conference on Intelligent Robots and Systems - .
139. Naveda, L. (2009). *SysMus09 - Second International Conference of Students of Systematic Musicology*. **Reviewer**. Ghent, Belgium: Ghent University.
140. Naveda, L. (2005). In: **Reviewer**. Diamantina, Brazil: UEMG.

OTHER SERVICES

141. Naveda, L. (2013). *Undécimo Encuentro de Ciencias Cognitivas de la Música*. **Reviewer**. Buenos Aires, Argentina: SACCoM-Sociedad Argentina para las Ciencias Cognitivas de la Música.
142. Mota, D. (Oct. 2012). *Analysis of synchronization patterns in clarinet duos using acoustic and kinematic parameters*. **Participation in Master Committee**. Belo Horizonte, Brazil: Escola de Música da UFMG.
143. Rodrigues, A. C. O. (2012). *Effect of musical training in the capacities of visual cognition: attention and memory*. **Participation in Doctoral Committee**. Belo Horizonte, Brazil.
144. Naveda, L. (2011). *X Encuentro de Ciencias Cognitivas de la Música*. **Moderator**. Buenos Aires, Argentina: SACCoM-Sociedad Argentina para las Ciencias Cognitivas de la Música.
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148. Naveda, L. (2005). "Communication chair". In: *XIV Encontro Anual da ABEM*. **Academic service**. Belo Horizonte, Brazil: UEMG.
149. Naveda, L. (2005). "Coordinator of Debate: Music education and new approaches". In: *XIV Encontro Anual da ABEM*. **Participation in Debate/Conference**. Belo Horizonte, Brazil: UEMG.

ARTISTIC PRODUCTION

CONCERTS

150. Naveda, L. and I. Lara (2003). *Canciones*. **Concert**. Belo Horizonte, Brazil: ESMU-UEMG.
151. Naveda, L. and I. Lara (2003). *Conciones:popular songs for guitar and voice*. **Concert**. ASCIPAN - Arte Nossa.
152. *Alma Barroca* (2002). **Concert**. Vienna, Austria: B $\sqrt{\partial}$ sendorfersaal, B $\sqrt{\partial}$ sendorferKlabierfabrikGmbH.
153. *Alma Barroca Ensemble* (2002). **Concert**. Munich, Gemany: Gasteig, Calr Orff Saal.
154. *Concert at Akademie Brasil-Europa* (2002). **Concert**. Cologne, Germany: Akademie Brasil-Europa.
155. *Ensaaios Barrocos* (2002). **Concert**. Belo Horizonte, Brazil: Museu de Arte da Pampulha.
156. Naveda, L., D. Christ $\sqrt{\geq}$ *faro, S.A.Meira, And V.Duarte* (2002). *Guitar Recital: Luiz Naveda*. **Concert**. Belo Horizonte, Brazil: ESMU-UEMG.
157. Naveda, L., D. Christ $\sqrt{\geq}$ *faro, S.A.Meira, And A.C.Ramos* (2002). *Master-degree recital - I*. **Concert**. Belo Horizonte, Brazil: Escola de M $\sqrt{\int}$ *sicadaUFMG*. <http://naveda.info/tagged/musicp>.
158. Naveda, L., M. Pereira, R. Marreco, and A. C. Ramos (2002). *Master-degree recital II*. **Concert**. Belo Horizonte, Brazil: Escola de M $\sqrt{\int}$ *sicadaUFMG*. <http://naveda.info/tagged/musicp>.
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160. Naveda, L. and A. C. Ramos (2002). "Concertino for Guitar and Piano". In: **Concert**. <http://naveda.info/tagged/musicp>.
161. Naveda, L., A. C. Ramos, D. Chist $\sqrt{\geq}$ *faro, And V.Duarte* (2002). *Guitar Recital: Luiz Naveda*. **Concert**. Belo Horizonte, Brazil: ESMU-UEMG.
162. Ramos, A. C. and L. Naveda (2001). **Participation in Concert**. Belo Horizonte, Brazil: ESMU-UEMG.
163. Ramos, A. C., L. Naveda, and M. Pereira (2001). *Recital of Brazilian music*. **Participation in Concert**. Belo Horizonte, Brazil.
164. Naveda, L. (2000). *Concert: Guitar and Oboe*. **Concert**. Belo Horizonte, Brazil.
165. Naveda, L. (2000). *Encontro de violeiros (Guitar players' meeting)*. **Participation in Concert**. Belo Horizonte, Brazil: Centro Cultural da Pampulha- Sec. Municipal de Cultura.
166. Naveda, L. and C. A. Grossi (2000). *Concert: Guitar and Oboe*. **Concert**. Belo Horizonte, Brazil: Faculdades Metodistas Integradas Izabela Hendrix.
167. Naveda, L. and M. Pereira (2000). "Recital de mestrado". In: **Concert**. Belo Horizonte, Brazil: Escola de M $\sqrt{\int}$ *sicadaUFMG*.
168. Naveda, L. and C. A. Grossi (1998). "Concert Guitar and Oboe". In: *Fotos e M $\sqrt{\int}$ sica*. **Concert**. Belo Horizonte, Brazil.
169. Naveda, L. and C. A. Grossi (1998). "Duo Alberti: guitar and oboe". In: *Domingo com arte*. **Concert**.
170. Naveda, L. (1997). *Chamber Music recital*. **Participation in Concert**. Belo Horizonte, Brazil: Escola de M $\sqrt{\int}$ *sicadaUFMG*.
171. Naveda, L. (1994). *Guitar Recital*. **Participation in Concert**. Belo Horizonte, Brazil: UEMG.
172. Naveda, L. (1994). *III dance festival - Sountrack (Guitar)*. **Participation in Concert**. Belo Horizonte, Brazil: Coltec - Federal Univerisity of Minas Gerais (UFMG).

OTHER MUSICAL ACTIVITIES

173. Naveda, L. (2003). "O Gato Noir". In: *Poemas Musicais: ondas, meninas, estrelas e bichos*. **Musical arrangement**. Belo Horizonte, Brazil: Sonhos e Sons.
174. *Poemas Musicais: ondas, meninas, estrelas e bicho (CD)* (2003). **Recording**. Arrangement and guitar on "Noir e o gato". Belo Horizonte, Brazil: Sonhos e Sons.

175. Santana, I. and L. Naveda (2014). *Embodied Varios Darmstadt 58*. Ed. by S. T. S. Palladium. **Artistic project**. Interactive systems and soundtrack for dance performance. Belo Horizonte, Minas Gerais, Brazil: Mix Dan√a.
176. Santos, F., D. Herrmann, P. Chamone, J. Villas, and L. Naveda (Junho 2014). *Miradas do Caos II (Chaos Looks II)*. Ed. by T. O. F. K. Vianna. **Artistic project**. Interactive systems and soundtrack for dance performance. Belo Horizonte, Brazil: Oi Futuro. <http://miradasdochaos.com/>.
177. Naveda, L. (2013). "Illustrations for the book "Dom"". In: *Dom*. Ed. by C. C. Fran√a. Illustration work, design. Book illustrations. Belo Horizonte, Brazil: Fino Tra√o. <http://naveda.info/tagged/computerartp>.
178. Naveda, L., J. Bethonico, and L. N√@zio (2013). "O Ouvido". In: *Espa√oInterativodeCi√nciasdaVida*. **Interactive installation**. Interactive work. Belo Horizonte, Minas Gerais, Brazil: Museu de Hist√ ≥ riaNaturaleJardimBot√nicodaUFMG. <http://naveda.info/tagged/computerartp>.
179. Santana, I. and L. Naveda (2013). *Embodied Varios Darmstadt 58*. **Artistic project**. Dance, Pure Data, Gem, Interaction design. Salvador, Barcelona, Cidade de Mexico: Iberescena.
180. Santos, F., P. Chamone, J. Villas, and L. Naveda (2013). *Miradas do Caos I (Chaos Looks I)*. **Artistic project**. Dance, Pure Data, Gem, Interaction design. Belo Horizonte, Brazil: PBH - Prefeitura Municipal de Belo Horizonte. <http://miradasdochaos.com/>.
181. Naveda, L. (Nov. 2012). "Monteiro Lobato: timeline". In: *Literata2012*. **Art Installation**. Interactive work. Sete Lagoas, Minas Gerais, Brazil: Quarteto Produ√√mes. <http://naveda.info/tagged/computerartp>.
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183. Naveda, L. (Nov. 2011). "The Wall and the Book". In: *Literata2011*. **Installation**. Interactive work. Sete Lagoas, Minas Gerais, Brazil: Quarteto Produ√√mes. <http://naveda.info/tagged/computerartp>.
184. Santana, I., L. Naveda, C. Veiga, J. Santos, and J. Victor (Dec. 2011). "Experiment 1 : Literature - Dance - Image - Interactivity". In: *Laboratorium Mapa D2*. **Interactive art**. Interactive work for Mapa D2. Rio de Janeiro, Brazil: Vivo Lab.
185. Naveda, L. (2007). "Energy". In: *Accenta Fair*. **Art Installation**. Ghent, Belgium: Ghent University.
186. Naveda, L. (2006). *Architectural origami: historical heritage*. **Exhibition**. Exhibition of paper engineering works on the architecture of Diamantina. Diamantina, Brazil: Festival da Inverno da UFMG - Galeria da Casa de Cultura.
187. *Poemas Musicais: ondas, meninas, estrelas e bicho (Book)* (2003). **Illustration work, Electronic music notation, design**. Cover Illustrations. Belo Horizonte, Brazil: Sonhos e Sons. <http://naveda.info/tagged/computerartp>.
188. Naveda, L. (1996). *Cenas de Belo Horizonte*. **Exhibition**. Exhibition of architectural origami (Theme: city of Belo Horizonte). Belo Horizonte, Brazil: Biblioteca P√blicaInfantileJuvenildeBeloHorizonte.