

# Jerônimo Gustavo Grandi

POSTDOCTORAL ASSOCIATE AT DUKE UNIVERSITY, USA

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## Education

### Postdoctoral Associate

DUKE UNIVERSITY

*Durham, NC, United States*

*2018 - current*

- PROJECT: NEXT GENERATION PUBLIC-SAFETY USER INTERFACES

### Ph.D. in Computer Science

FEDERAL UNIVERSITY OF RIO GRANDE DO SUL - UFRGS

*Porto Alegre, RS, Brazil*

*2014 - Oct. 2018*

- THESIS: COLLABORATIVE 3D INTERACTIONS AND THEIR APPLICATION ON VIRTUAL, AUGMENTED AND MIXED REALITY INTERFACES
- ADVISER: PROF. DR. ANDERSON MACIEL

### MSc. in Computer Science

FEDERAL UNIVERSITY OF RIO GRANDE DO SUL - UFRGS

*Porto Alegre, RS, Brazil*

*2012 - 2014*

- THESIS: MULTIDIMENSIONAL SIMILARITY SEARCH FOR 2D-3D MEDICAL DATA CORRELATION AND FUSION
- ADVISER: PROF. DR. ANDERSON MACIEL

### BSc. in Digital Technologies

UNIVERSITY OF CAXIAS DO SUL - UCS

*Caxias do Sul, RS, Brazil*

*2005 - 2011*

- THESIS: COLLABORATIVE SPATIALLY AWARE VISUALIZATION OF MEDICAL IMAGES
- ADVISER: PROF. DR. ANDERSON MACIEL

## Research Interests

### Human-Computer Interaction

3D USER INTERFACES, NON-CONVENTIONAL INTERFACES, HANDHELD DEVICES, MULTIMODAL INTERACTION, COLLABORATIVE INTERACTION

### Virtual, Augmented and Mixed Reality

INTERACTION IN VR AND AR ENVIRONMENTS, PERCEPTUAL STUDIES, HMDs, CAVES

### Medical Applications

SURGERY PLANNING, VISUALIZATION OF INTERNAL STRUCTURES, VOLUMETRIC RENDERING

## Work Experience

### Research Assistant Intern

GRAPHICS, VISUALIZATION AND INTERACTION LAB - UFRGS

*Porto Alegre, RS, Brazil*

*2012 - Current*

- SUPPORTED BY CAPES (2012-2016) AND BY THE NATIONAL COUNCIL FOR SCIENTIFIC AND TECHNOLOGICAL DEVELOPMENT (CNPq)

### Graphics and Interaction Developer

URIZEN TECHNOLOGIES

*Caxias do Sul, RS, Brazil*

*2010 - 2011*

### Research Assistant Intern

NTAV ARTECNO GROUP

*Caxias do Sul, RS, Brazil*

*2005 - 2011*

- SUPPORTED BY NATIONAL COUNCIL FOR SCIENTIFIC AND TECHNOLOGICAL DEVELOPMENT (CNPq)

## Awards

2018	<b>Ph.D. in Computer Science with distinction ("Cum Laude Distinction")</b> , Collaborative 3D Interactions and Their Application on Virtual, Augmented and Mixed Reality Interfaces	Porto Alegre, Brazil
2018	<b>Honorable Mention for Best Paper - IEEE VR Conference on Virtual Reality and 3D User Interfaces</b> , Design and Assessment of a Collaborative 3D Interaction Technique for Handheld Augmented Reality	Reutlingen, Germany
2017	<b>Best 3DUI Contest Award - IEEE 3D User Interfaces (3DUI)</b> , Collaborative 3D manipulation using mobile phones	Los Angeles, USA
2016	<b>Best 3DUI Contest Award - IEEE 3D User Interfaces (3DUI)</b> , Collaborative Manipulation of 3D Virtual Objects in Augmented Reality Scenarios using Mobile Devices	Greenville, USA
2012	<b>Poster Award - MMVR: Medicine Meets Virtual Reality</b> , Anatomic Hepatectomy Planning through Mobile Display Visualization and Interaction	Newport Beach, USA
2010	<b>1st PRIZE - International Congress and Exhibition of Computer Assisted Radiology and Surgery</b> , Interactive spatially aware visualization of medical images	Geneva, Switzerland

## Publications

<b>Design and Assessment of a Collaborative 3D Interaction Technique for Handheld Augmented Reality</b>	Reutlingen, Germany
IEEE CONFERENCE ON VIRTUAL REALITY AND 3D USER INTERFACES	2018
GRANDI, JERÔNIMO G.; DEBARBA, HENRIQUE; BERNDT, IAGO; NEDEL, LUCIANA AND MACIEL, ANDERSON.	
<b>3DAthlon: 3D Gestural Interfaces to Support a 3-Stage Contest in VR (Short paper)</b>	Reutlingen, Germany
IEEE CONFERENCE ON VIRTUAL REALITY AND 3D USER INTERFACES	2018
GRANDI, JERÔNIMO G.; DEBARBA, HENRIQUE; FRANZ, JULIANO; OLIVEIRA, VICTOR; TICONA, ABEL; SOUZA, GABRIELLE; BERTI, IZADORA; VILLA, STEEVEN; NEDEL, LUCIANA AND MACIEL, ANDERSON.	
<b>Collaborative Manipulation of 3D Virtual Objects in Augmented Reality Scenarios using Mobile Devices (Short paper)</b>	Los Angeles, U.S.A
IEEE SYMPOSIUM ON 3D USER INTERFACES (3DUI)	2017
GRANDI, JERÔNIMO G.; BERNDT, IAGO; DEBARBA, HENRIQUE; NEDEL, LUCIANA AND MACIEL, ANDERSON.	
<b>Design and Evaluation of a Handheld-based 3D User Interface for Collaborative Object Manipulation</b>	Denver, U.S.A
ACM CONFERENCE ON HUMAN FACTORS IN COMPUTING SYSTEMS (CHI)	2017
GRANDI, JERÔNIMO G.; DEBARBA, HENRIQUE; NEDEL, LUCIANA AND MACIEL, ANDERSON.	
<b>Collaborative 3D manipulation using mobile phones (Short paper)</b>	Greenville, U.S.A
IEEE SYMPOSIUM ON 3D USER INTERFACES (3DUI)	2016
GRANDI, JERÔNIMO G.; BERNDT, IAGO; DEBARBA, HENRIQUE; NEDEL, LUCIANA AND MACIEL, ANDERSON.	
<b>Multidimensional Similarity Search for 2D-3D Medical Data Correlation and Fusion (Poster)</b>	Rio de Janeiro, Brazil
CONFERENCE ON GRAPHICS, PATTERNS AND IMAGES. WORKSHOP OF THESES AND DISSERTATIONS (SIBGRAPI)	2014
GRANDI, JERÔNIMO G.; MACIEL, A	
<b>Spatially aware mobile interface for 3D visualization and interactive surgery planning</b>	Rio de Janeiro, Brazil
IEEE 3RD INTERNATIONAL CONFERENCE ON SERIOUS GAMES AND APPLICATIONS FOR HEALTH (SEGAH)	2014
GRANDI, JERÔNIMO G.; DEBARBA, HENRIQUE; ZANCHET, DINAMAR; MACIEL, ANDERSON;	
<b>Disambiguation Canvas: a precise selection technique for virtual environments</b>	Cape Town, South Africa
INTERNATIONAL CONFERENCE ON HUMAN-COMPUTER INTERACTION (INTERACT)	2013
DEBARBA, HENRIQUE; GRANDI, JERÔNIMO G.; MACIEL, A; NEDEL, LUCIANA P.; BOULIC, RONAN	
<b>Towards a disambiguation canvas (Short paper)</b>	Lake Buena Vista, U.S.A
IEEE VIRTUAL REALITY (VR)	2013
DEBARBA, HENRIQUE G.; GRANDI, JERONIMO G.; MACIEL, ANDERSON; NEDEL, LUCIANA P.; BOULIC, RONAN	

## Anatomic Hepatectomy Planning through Mobile Display Visualization and Interaction

v.173, p.111 - 115

STUDIES IN HEALTH TECHNOLOGY AND INFORMATICS

2012

DEBARBA, HENRIQUE; **GRANDI, JERÔNIMO G.**; MACIEL, ANDERSON; ZANCHET, DINAMAR J.

## Video Stitching based on Optical Tracking (Poster)

Ouro Preto, Brazil

CONFERENCE ON GRAPHICS, PATTERNS AND IMAGES. WORKSHOP OF WORKS IN PROGRESS (SIBGRAPI)

2012

**GRANDI, JERÔNIMO G.**; MACIEL, ANDERSON

## Bratrack 2: Evolução do sistema de rastreamento óptico de alta precisão para integração no projeto SIMTRACK

Rio Grande, Brazil

WORKSHOP EM SISTEMAS EMBARCADOS PARA A INDÚSTRIA DE ÓLEO, GÁS E ENERGIA

2012

**GRANDI, JERÔNIMO G.**; KUNZEL, GUSTAVO; GREFF, ALEXANDRE; NEDEL, LUCIANA P.

## Interactive spatially aware visualization of medical images (Poster)

Geneva, Switzerland

24TH COMPUTER ASSISTED RADIOLOGY AND SURGERY (CARS)

2010

**GRANDI, JERÔNIMO G.**; MACIEL, ANDERSON

## WindWalker: Using Wind as an Orientation Tool in Virtual Environments

Porto Alegre, Brazil

SYMPOSIUM ON VIRTUAL AND AUGMENTED REALITY (SVR)

2009

**GRANDI, JERÔNIMO G.**; DEBARBA, HENRIQUE; OLIVESKI, ADRIANO; DOMINGUES, DIANA MARIA GALLICCHIO; MACIEL, ANDERSON.; NEDEL, L. P.

## Artistic and Cultural Production

### Tagued Idols

PRESENTED AT: **8° INTERNATIONAL IMAGE FESTIVAL** (8° FESTIVAL INTERNACIONAL DE LA IMAGEN), MANIZALES, COLOMBIA / **13° NATIONAL LITERARY JOURNEY** (13° JORNADA NACIONAL DE LITERATURA), PASSO FUNDO, BRAZIL / **7° INTERNATIONAL MEETING OF ART AND TECHNOLOGY** (7° ENCONTRO INTERNACIONAL DE ARTE E TECNOLOGIA), BRASÍLIA, BRAZIL.

2008

DOMINGUES, DIANA G.; **GRANDI, JERÔNIMO G.**; ARTECNO GROUP;

### The Cavern of Trance - Series TRANS-E: my body my blood 1997/2007

PRESENTED AT: **MEMORIES OF THE FUTURE: TEN YEARS OF ART AND TECHNOLOGY IN ITAÚ**

**CULTURAL** (MEMÓRIAS DO FUTURO: DEZ ANOS DE ARTE E TECNOLOGIA NO ITAÚ CULTURAL), SÃO PAULO, BRAZIL / **A PRESENÇA DO CURSO DE ARTES NOS 40 ANOS DA UCS**. UCS CAVE. CAXIAS DO SUL, BRAZIL.

2007

DOMINGUES, DIANA G.; **GRANDI, JERÔNIMO G.**; ARTECNO GROUP;

## Relevant Experiences

<b>CAVES</b>	Installation and configuration, software and hardware development, tour guide
<b>Laboratory Management</b>	Lab leader for 4 year, equipment purchase, organization, installation and skills in technical problem-solving

## Technical Knowledge

<b>Languages</b>	Portuguese (native), English (proficient), Spanish (basic)
<b>Programming</b>	C++, C#, Java, R, Latex, Phyton
<b>Game/Graphics Engines</b>	Unity 3D, OpenGL
<b>Mobile Devices Dev.</b>	Android (SDK and NDK), iOS
<b>I/O Devices</b>	Mobile Devices, Wiimote, Kinect, Touch screens, Tracking system, Tiled displays, HMDs
<b>Tools</b>	Vuforia, QtCreator, Visual Studio, XCode, GIT, Linux, Windows, InkScape, Mac OSX, ITK, OpenCV

## Other Experiences

<b>Reviewer</b>	VR, CHI, 3DUI, Sibgrapi, SVR, SBGames, IHC, CASA, CSBC, WRVA
<b>Undergrad. Co-Advisor</b>	3D Interface for Ultrasound Simulation (2015), Francis M. Mwanz
<b>Teaching Assistant</b>	Basic Programming C (2015), Human-Computer Interaction (2014), Cyberspace and Creation in Digital Culture I (2007), Games and Multi-user Worlds (2008), Computer Graphics I (2009)

## References

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**Anderson Maciel**

Associate Professor at UFRGS, Brazil. Contact: amaciel@inf.ufrgs.br

**Luciana Nedel**

Associate Professor at UFRGS, Brazil. Contact: nedel@inf.ufrgs.br

**Henrique G. Debarba**

Senior Researcher at Artanim, Switzerland. Contact: henrique.debarba@artanim.ch

**Diana Domingues**

Founder and Head of Laboratory of Research in Art and TechnoScience (LART), University of Brasília, Brazil. Contact: dgdomingues@gmail.com