

# Jerônimo Gustavo Grandi

PH.D ASSISTANT AT FEDERAL UNIVERSITY OF RIO GRANDE DO SUL, BRAZIL

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## Education

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### PhD. in Computer Science

FEDERAL UNIVERSITY OF RIO GRANDE DO SUL - UFRGS

Porto Alegre, RS, Brazil

2014 - Current

- THESIS (PROVISIONARY TITLE): DESIGN OF COLLABORATIVE 3D USER INTERFACES FOR VIRTUAL AND AUGMENTED REALITY
- 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

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### Human-Computer Interaction

NON-CONVENTIONAL INTERFACES, MULTIMODAL INTERACTION, COLLABORATIVE MANIPULATIONS

### Virtual, Augmented and Mixed Reality

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

### Medical Applications

SURGERY PLANNING, VISUALIZATION OF INTERNAL STRUCTURES, VOLUMETRIC RENDERING

## Experience

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### Research Assistant Intern

COMPUTER GRAPHICS GROUP - UFRGS

Porto Alegre, RS, Brazil

2012 - Current

- SUPPORTED BY CAPES (2012-2016) AND BY THE NATIONAL COUNCIL FOR SCIENTIFIC AND TECHNOLOGICAL DEVELOPMENT (CNPQ) (2017)

### 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

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### Honorable Mention for Best Paper - IEEE VR Conference on Virtual Reality and 3D User

2018      **Interfaces**, Design and Assessment of a Collaborative 3D Interaction Technique for Handheld Augmented Reality

Reutlingen,  
Germany

2017      **Best 3DUI Contest Award - IEEE 3D User Interfaces (3DUI)**, Collaborative 3D manipulation using mobile phones

Los Angeles, USA

2016      **Best 3DUI Contest Award - IEEE 3D User Interfaces (3DUI)**, Collaborative Manipulation of 3D Virtual Objects in Augmented Reality Scenarios using Mobile Devices

Greenville, USA

2012      **Poster Award - MMVR: Medicine Meets Virtual Reality**, Anatomic Hepatectomy Planning through Mobile Display Visualization and Interaction

Newport Beach,  
USA

2010      **1st PRIZE - International Congress and Exhibition of Computer Assisted Radiology and Surgery**, Interactive spatially aware visualization of medical images

Geneva,  
Switzerland

## Publications

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### Design and Assessment of a Collaborative 3D Interaction Technique for Handheld Augmented Reality

IEEE CONFERENCE ON VIRTUAL REALITY AND 3D USER INTERFACES

Reutlingen, Germany

2018

**GRANDI, JERÔNIMO G.; DEBARBA, HENRIQUE; BERNDT, IAGO; NEDEL, LUCIANA AND MACIEL, ANDERSON.**

### 3DAthlon: 3D Gestural Interfaces to Support a 3-Stage Contest in VR (Short paper)

IEEE CONFERENCE ON VIRTUAL REALITY AND 3D USER INTERFACES

Reutlingen, Germany

2018

**GRANDI, JERÔNIMO G.; DEBARBA, HENRIQUE; FRANZ, JULIANO; OLIVEIRA, VICTOR; TICONA, ABEL; SOUZA, GABRIELLE; BERTI, IZADORA; VILLA, STEEVEN; NEDEL, LUCIANA AND MACIEL, ANDERSON.**

### Collaborative Manipulation of 3D Virtual Objects in Augmented Reality Scenarios using Mobile Devices (Short paper)

IEEE SYMPOSIUM ON 3D USER INTERFACES (3DUI)

Los Angeles, U.S.A

2017

**GRANDI, JERÔNIMO G.; BERNDT, IAGO; DEBARBA, HENRIQUE; NEDEL, LUCIANA AND MACIEL, ANDERSON.**

### Design and Evaluation of a Handheld-based 3D User Interface for Collaborative Object Manipulation

ACM CONFERENCE ON HUMAN FACTORS IN COMPUTING SYSTEMS (CHI)

Denver, U.S.A

2017

**GRANDI, JERÔNIMO G.; DEBARBA, HENRIQUE; NEDEL, LUCIANA AND MACIEL, ANDERSON.**

### Collaborative 3D manipulation using mobile phones (Short paper)

IEEE SYMPOSIUM ON 3D USER INTERFACES (3DUI)

Greenville, U.S.A

2016

**GRANDI, JERÔNIMO G.; BERNDT, IAGO; DEBARBA, HENRIQUE; NEDEL, LUCIANA AND MACIEL, ANDERSON.**

### Multidimensional Similarity Search for 2D-3D Medical Data Correlation and Fusion (Poster)

CONFERENCE ON GRAPHICS, PATTERNS AND IMAGES. WORKSHOP OF THESES AND DISSERTATIONS (SIBGRAPI)

2014

**GRANDI, JERÔNIMO G.; MACIEL, A**

### Spatially aware mobile interface for 3D visualization and interactive surgery planning

IEEE 3RD INTERNATIONAL CONFERENCE ON SERIOUS GAMES AND APPLICATIONS FOR HEALTH (SEGAH)

Rio de Janeiro, Brazil

2014

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

### Disambiguation Canvas: a precise selection technique for virtual environments

INTERNATIONAL CONFERENCE ON HUMAN-COMPUTER INTERACTION (INTERACT)

Cape Town, South Africa

2013

DEBARBA, HENRIQUE; **GRANDI, JERÔNIMO G.; MACIEL, A; NEDEL, LUCIANA P.; BOULIC, RONAN**

## Artistic and Cultural Production

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### Tagued Idols

PRESENTED AT: **8º INTERNATIONAL IMAGE FESTIVAL** (8º FESTIVAL INTERNACIONAL DE LA IMAGEN),

2008

MANIZALES, COLOMBIA / **13º NATIONAL LITERARY JOURNEY** (13º JORNADA NACIONAL DE

LITERATURA), PASSO FUNDO, BRAZIL / **7º INTERNATIONAL MEETING OF ART AND TECHNOLOGY** (7º

ENCONTRO INTERNACIONAL DE ARTE E TECNOLOGIA), BRASÍLIA, BRAZIL.

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**

2007

**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.

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

## Technical Knowledge

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**Languages**, Portuguese (native), English (proficient), Spanish (basic)

**Programming**, C++, C#, Java, R, Latex, Phyton

**Game/Graphics Engines**, Unity 3D, OpenGL

**Mobile Devices Development**, Android (SDK and NDK), iOS

**I/O Devices**, Mobile Devices, Wiimote, Kinect, touch screens, inertial sensors, Bratrack (tracking system), tiled displays, HMDs, CAVE

**Tools**, Vuforia, QtCreator, Visual Studio, XCode, GIT, Linux, Windows, InkScape, Mac OSX, ITK, OpenCV

## Other Experiences

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**Reviewer**, Sibgrapi, SVR, SBGames, IHC, CASA, CSBC, WRVA

**Undergraduation Co-Advisor**, 3D Interface for Ultrasound Simulation (2015), Francis M. Mwanz

**Teaching Assistant**, 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: amaciell@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 - UnB, Brazil. Contact: dgdomingues@gmail.com