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 Faculty of Science | University of Calgary

### SECTION 2 – TEACHING

SECTION 2 – TEACHING .....	9
2.1. TEACHING EXPERIENCE .....	9
2.1.1. CREDIT COURSES AT UNIVERSITY OF CALGARY .....	9
2.1.2. OTHER TEACHING DURING UNIVERSITY OF CALGARY .....	9
2.1.2.1. SABBATICAL LEAVES .....	9
2.1.2.2. CONFERENCE COURSES & TUTORIALS .....	10
2.2. TEACHING PRIOR TO UNIVERSITY OF CALGARY .....	12
2.3. HIGHLY QUALIFIED PERSONNEL (HQP) TRAINING .....	13

## SECTION 2 – TEACHING

### 2.1. TEACHING EXPERIENCE

#### 2.1.1. Credit Courses at University of Calgary

- Course description link @ <course number>
- In parenthesis after the course title: number of times I taught the course, enrollment

##### 1. Graduate Level

- CPSC 601 – **Special Topics in Computer Science** (10X, avg. enroll. = 8)
- Interactive Visual Computing in Geoscience & Petroleum Engineering (2X)
  - Visualization & Analytics for Reservoir Simulation (2X)
  - Interactive Visual Computing in Science, Medicine & Engineering (1X)
  - Illustrative Visualization (2X)
  - Non-Photorealistic Rendering (3X)

##### 2. Undergraduate (4<sup>th</sup> yr. *ugrad prgm*) / Graduate Level (a.k.a, Cross-Listed course)

- CPSC 591/691 – **Rendering** (9X, avg. enroll. = 20)
- CPSC 587/687 – **Fundamentals of Computer Animation** (2X, avg. enroll. = 19)

##### 3. Undergraduate Level

4<sup>th</sup> yr. *ugrad prgm*

- CPSC 585 – **Games Programming** (2X, avg. enroll. = 11)
- CPSC 503 – **Project** (4X, avg. enroll. = 8)
- CPSC 502 – **Honours Thesis** (2X, avg. enroll = 5)

3<sup>rd</sup> yr. *ugrad prgm*

- CPSC 453 – **Introduction to Computer Graphics** (5X, avg. enroll. = 48)
- CPSC 441 – **Computer Communications** (1X, enroll.= 35)

2<sup>nd</sup> yr. *ugrad prgm*

- CPSC 331 – **Data Structures, Algorithms, and Their Analysis** (1X, enroll. = 75)
- CPSC 319 – **Data Structures, Algorithms, and Their Applications** (3X, avg. enroll. = 59)

#### 2.1.2. Other Teaching during University of Calgary

##### 2.1.2.1. Sabbatical Leaves

##### 1. IMPA – National Institute of Pure and Applied Mathematics, Brazil

- *Period:* December 2007 – April 2008
- *Rsrch Group/Lab (Head):* VISGRAF: Computer Graphics Lab (Dr. Luiz Velho)
- *Position:* **Visiting Researcher**

*Teaching* (Graduate Level):

- **Interactive Illustrative Graphics and Visualization**
- **3D Graphics Systems**

### 2.1.2.2. Conference Courses & Tutorials

#### 2008 [1 entry] Conferences Courses & Tutorials: Organization & Lecturers (Refereed)

##### 1. Costa Sousa *et al.* '08

###### Interactive Tools for Scientific and Medical Illustration Composition.

**Eurographics** (EG '08), Tutorial #8 (Half-Day)  
Crete, Greece, 2008/04.

###### ➤ Co-Organizers:

- Costa Sousa M. (*U. of Calgary, CAD*)
- Ebert DS. (*Purdue U. , USA*)
- Viola I. (*U. Bergen, NOR*)

###### ➤ Research Themes (Sec. 4): RT-(1, 2, 3)

###### ➤ Web link

###### ➤ Lecturers:

- Andrews B. (*Medical College of Georgia, USA*)
- Bruckner S. (*TU Vienna, AUT*)
- Chen W. (*Zhejiang U. , CHN*)
- Correa C. (*U. of California - Davis, USA*)
- Costa Sousa M. (*U. of Calgary, CAD*)
- Ebert DS. (*Purdue U. , USA*)
- Viola I. (*U. Bergen, NOR*)

#### 2007 [1 entry] Conferences Courses & Tutorials: Organization & Lecturers (Refereed)

##### 2. Costa Sousa '07

Costa Sousa M. (2007). **Sketch-based Interfaces and Modeling + Non-Photorealistic Rendering for Implicit Surfaces.** *Computer Graphics International* (CGI '07), Tutorial #2 - An Introduction to Implicit Modelling Techniques. Petropolis, RJ, Brazil, 2007/05-06.

###### ➤ Organizer: Wyvill B. (*U. of Calgary, CAD*)

###### ➤ Research Themes (Sec. 4): RT-(1, 2)

#### 2006 [3 entries] Conferences Courses & Tutorials: Organization & Lecturers (Refereed)

##### 3. Ebert & Costa Sousa '06a

**Illustrative Visualization for Medicine and Science.** *IEEE Visualization* (Vis '06), Tutorial #3 (Full Day). Baltimore, MD, USA, 2006/10-11.

###### ➤ Co-Organizers:

- Ebert DS. (*Purdue U. , USA*)
- Costa Sousa M. (*U. of Calgary, CAD*)

###### ➤ Research Themes (Sec. 4): RT-(1, 3)

###### ➤ Web link

###### ➤ Lecturers:

- Andrews B. (*Medical College of Georgia, USA*)
- Bruckner S. (*TU Vienna, AUT*)
- Costa Sousa M. (*U. of Calgary, CAD*)
- Ebert DS. (*Purdue U. , USA*)
- Gooch B. (*Northwestern U., USA*)
- Stredney D. (*Ohio Supercomputer Ctr. , USA*)
- Svakhine N. (*Purdue U. , USA*)
- Tietjen C. (*U. of Magdeburg, DEU*)
- Viola I. (*TU Vienna, AUT*)

## 4. Ebert &amp; Costa Sousa '06b

**Illustrative Visualization for Medicine and Science.**

**SIGGRAPH 2006**, Course #6 (Full Day), Level: Intermediate.  
Boston, MA, USA, 2006/08.

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| <ul style="list-style-type: none"> <li>➤ <b>Co-Organizers:</b> <ul style="list-style-type: none"> <li>• Ebert DS. (<i>Purdue U.</i>, USA)</li> <li>• <b>Costa Sousa M.</b> (<i>U. of Calgary</i>, CAD)</li> </ul> </li> <li>➤ Research Themes (Sec. 4): RT-(1, 3)</li> <li>➤ Web link</li> </ul> | <ul style="list-style-type: none"> <li>➤ <b>Lecturers:</b> <ul style="list-style-type: none"> <li>• Andrews B. (<i>Medical College of Georgia</i>, USA)</li> <li>• Bruckner S. (<i>TU Vienna</i>, AUT)</li> <li>• <b>Costa Sousa M.</b> (<i>U. of Calgary</i>, CAD)</li> <li>• Ebert DS. (<i>Purdue U.</i>, USA)</li> <li>• Gooch B. (<i>Northwestern U.</i>, USA)</li> <li>• Stredney D. (<i>Ohio Supercomputer Ctr.</i>, USA)</li> <li>• Svakhine N. (<i>Purdue U.</i>, USA)</li> <li>• Viola I. (<i>TU Vienna</i>, AUT)</li> </ul> </li> </ul> |
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## 5. Viola et al. '06

**Illustrative Visualization for Medicine and Science.**

**Eurographics** (EG '06), Tutorial #11 (Half-Day)  
Vienna, Austria, 2006/09.

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| <ul style="list-style-type: none"> <li>➤ <b>Co-Organizers:</b> <ul style="list-style-type: none"> <li>• Viola I. (<i>TU Vienna</i>, AUT)</li> <li>• <b>Costa Sousa M.</b> (<i>U. of Calgary</i>, CAD)</li> <li>• Ebert DS. (<i>Purdue U.</i>, USA)</li> </ul> </li> <li>➤ Research Themes (Sec. 4): RT-(1, 3)</li> <li>➤ Web link</li> </ul> | <ul style="list-style-type: none"> <li>➤ <b>Lecturers:</b> <ul style="list-style-type: none"> <li>• Andrews B. (<i>Medical College of Georgia</i>, USA)</li> <li>• <b>Costa Sousa M.</b> (<i>U. of Calgary</i>, CAD)</li> <li>• Ebert DS. (<i>Purdue U.</i>, USA)</li> <li>• Gooch B. (<i>Northwestern U.</i>, USA)</li> <li>• Preim B. (<i>U. of Magdeburg</i>, DEU)</li> <li>• Svakhine N. (<i>Purdue U.</i>, USA)</li> <li>• Tietjen C. (<i>U. of Magdeburg</i>, DEU)</li> <li>• Viola I. (<i>TU Vienna</i>, AUT)</li> </ul> </li> </ul> |
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## 2005 [2 entries] Conferences Courses &amp; Tutorials: Organization &amp; Lecturers (Refereed)

## 6. Ebert &amp; Costa Sousa '05

**Computer-Generated Medical, Technical, and Scientific Illustration.**

**SIGGRAPH 2005**, Course #31 (Half- Day), Level: Intermediate.  
Los Angeles, CA, USA, 2005/08.

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| <ul style="list-style-type: none"> <li>➤ <b>Co-Organizers:</b> <ul style="list-style-type: none"> <li>• Ebert DS. (<i>Purdue U.</i>, USA)</li> <li>• <b>Costa Sousa M.</b> (<i>U. of Calgary</i>, CAD)</li> </ul> </li> <li>➤ Research Themes (Sec. 4): RT-(1, 3)</li> <li>➤ Web link</li> </ul> | <ul style="list-style-type: none"> <li>➤ <b>Lecturers:</b> <ul style="list-style-type: none"> <li>• Costa Sousa M. (<i>U. of Calgary</i>, CAD)</li> <li>• Ebert DS. (<i>Purdue U.</i>, USA)</li> <li>• Gooch A. (<i>Northwestern U.</i>, USA)</li> <li>• Stredney D. (<i>Ohio Supercomputer Ctr.</i>, USA)</li> </ul> </li> </ul> |
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7. **Viola et al. '05****Illustrative Visualization.**

**IEEE Visualization** (Vis '05), Tutorial #5 (Full Day).  
Minneapolis, MN, USA, 2005/10.

- **Co-Organizers & Lecturers:**
  - **Costa Sousa M.** (*U. of Calgary, CAD*)
  - Ebert DS. (*Purdue U. , USA*)
  - Gröller E. (*TU-Vienna, AUT*)
  - Hadwiger M. (*VRVis Rsrch. Ctr. , AUT*)
  - Preim B. (*U. of Magdeburg, DEU*)
  - Stredney D. (*Ohio State U. , USA*)
  - Viola I. (*TU-Vienna, AUT*)
- Research Themes (Sec. 4): RT-(1, 3)
- Web link

## 2003 [1 entry] Conferences Courses &amp; Tutorials: Organization &amp; Lecturers (Refereed)

8. **Costa Sousa '03****Theory and Practice of Non-Photorealistic Graphics: Algorithms, Methods, and Production Systems.**

**SIGGRAPH 2003**, Course #10 (Full Day), Level: Intermediate.  
Los Angeles, CA, USA, 2003/07.

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| <ul style="list-style-type: none"> <li>➤ <b>Organizer:</b> <ul style="list-style-type: none"> <li>• <b>Costa Sousa M.</b> (<i>U. of Calgary, CAD</i>)</li> </ul> </li> <li>➤ Research Themes (Sec. 4): RT-1</li> <li>➤ Web link</li> </ul> | <ul style="list-style-type: none"> <li>➤ <b>Lecturers:</b> <ul style="list-style-type: none"> <li>• Achorn B. (<i>Walt Disney Feature Animation, USA</i>)</li> <li>• Teece D. (<i>Walt Disney Feature Animation, USA</i>)</li> <li>• Carpendale S. (<i>U. of Calgary, CAD</i>)</li> <li>• <b>Costa Sousa M.</b> (<i>U. of Calgary, CAD</i>)</li> <li>• Ebert DS (<i>Purdue U. , USA</i>)</li> <li>• Gooch B. (<i>U. of Utah, USA</i>)</li> <li>• Interrante V. (<i>U. of Minnesota, USA</i>)</li> <li>• Streit L. (<i>U. of British Columbia, CAD</i>)</li> <li>• Veryovka O. (<i>Electronic Arts, CAD</i>)</li> </ul> </li> </ul> |
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**2.2. TEACHING PRIOR TO UNIVERSITY OF CALGARY****1. Department of Computing Science, University of Alberta, Canada**

- *Period:* July 1999 – July 2000
- *Position:* **Faculty lecturer**

*Teaching* (1<sup>st</sup> yr, undergraduate level)

- **CMPUT 101 – Introduction to Computing** (1X, enroll. = ~120)
- **ENCMP 100 – Computer Programming for Engineers** (1X, enroll. = ~100)

**2. Department of Informatics, Catholic University of Petropolis (UCP), Brazil**

- *Period:* July 1990 – July 1995
- *Position:* **Sr. Faculty Lecturer**

*Teaching* (Undergraduate level):

- **3D Computer Graphics - Modeling and Rendering** (2X, avg. enroll. = ~20)
- **Linear Algebra** (7X, avg. enroll. = ~60)
- **Interactive Computer Graphics - Systems and Concepts** (3X, enroll. = ~30)
- **Data Abstraction and Polymorphic Data Types in C** (2X, enroll. = ~20)
- **User Interface Design** (2X, enroll. = ~20)
- **Introduction to Software Engineering** (3X, enroll. = ~50)

**2.3. HIGHLY QUALIFIED PERSONNEL (HQP) TRAINING**

Please refer to Section 3.