

# Tom Van Laerhoven

°: 29/10/1977

T: +32(0)479 367409

E: tom.vanlaerhoven@twitec.be

## Experience

### **Lead Android Developer, Twitec/Androme/Telenet**

May 2014 - present — Wetenschapspark 4, 3590 Diepenbeek

As technical lead and member of the Android development team for Telenet's mobile OTT video app 'Yelo', my responsibilities include native app development in an agile team, co-creation and close collaboration with graphics designers and UX experts, and giving demonstrations to stakeholders. For Android, 'Yelo' currently has an install base of around 470k devices.

#### *Accomplishments*

- In cooperation with UX designers our team conceived a state-of-the-art user interface with innovative elements for streaming video, navigating and managing media content, and 'swiping' content to and from STBs.
- I helped integrating a media player with DRM capabilities in a mobile application, allowing customers to stream DRM-protected content.
- I co-developed a cross-platform code library collecting shared business logic covering iOS, Android and Windows platforms.

### **Technical Director, Ultra Pictura**

October 2010 - December 2015 — Wetenschapspark 4, 3590 Diepenbeek

I participated in developing an innovative digital platform for creating highly stylised digital artwork with media such as watercolor, gouache and crayon. In close collaboration with artists and animators I leveraged the creational process and contributed to several animation productions and research projects.

#### *Accomplishments*

- I helped to establish a specialised user interface tailored towards the needs of creative professionals.
- I co-developed a flexible and extensible software solution facilitating the creation of stylised images and animations.
- In co-creation with animators and graphics artists, I researched and developed special-purpose software solutions for several animation productions:
  - 'Picnic with Pie', an animated series and cross-media adaptation of the international best-seller picture book by Thé Tjong-Khing (2012).
  - 'Pinocchio', an Italian animated feature film by Enzo D'Alò (2012).
  - 'He & Sea', a short animation film by Kris Genijn and Pieter Vanluffelen (2016).
  - 'Winnie the Witch', based on Korky Paul's hugely successful picture books.

## Senior Researcher, Hasselt University

August 2006 - November 2013 — Wetenschapspark 2, 3590 Diepenbeek

As a senior researcher my goal was to manage and cooperate in research projects, exploring innovative ways to facilitate users in creating digital artwork. My findings were presented on international-level conferences and published in peer-reviewed journals. I was also part of the academic staff, taught various courses and guided undergraduate students in their projects and dissertations.

### Accomplishments

- I co-authored numerous proceedings, journal papers and book chapters, among which "*IntuPaint: Bridging the Gap between Physical and Digital Painting*" received a best-paper award on IEEE TableTop and Interactive Surfaces 2008.
- I cooperated in several research projects, including "CUSTODIEV" (European research project IST-2001- 37116), "SANTE: Stylised Animation TEchnology" (IWT), "SANTA Bumo: Stylised Animation - Technology and Business Modeling" (IBBT-IWT) and "SATANIC: Stylized Animation: Three-dimensional Animation and Networked Interactive Collaboration" (IBBT).
- I co-organised the 20th *International Conference on Computer Animation and Social Agents*, June 11-13, 2007 in Hasselt; I was also co-editor and member of the local program committee.
- I attended the course "*IT Project Management*" at Universiteit Antwerpen Management School 2006-2007.

## Research Assistant, Hasselt University

August 2000 - November 2006 — Wetenschapspark 2, 3590 Diepenbeek

My role as a research assistant consisted of teaching both bachelor and master classes, guiding undergraduate students in their projects and dissertations, grading exams and co-authoring course books.

### Accomplishments

- I was part of the academic staff for both bachelor and master courses: "*Imperative Programming in C*", "*Computer Systems*", "*Object-oriented Programming*", "*Computer Animation*", "*Architecture and Algorithms of Computer Games*", "*Software Engineering*", "*Advanced Software Engineering*", "*Advanced Programming Techniques*", "*Multimedia and Communication Technology*" and "*Capita Selecta of the Multimedia*"; and guided students in several project courses: "*Project 2nd Bachelor*", "*Project 3.3*", "*Project 4.1*" and "*Project OO programming and data structures*".
- I gave an invited talk entitled "*Fluids for Games*" at the Microsoft Student Council, Hogeschool Antwerpen, Antwerpen, België, 11 februari 2005.

## Phd Student, Hasselt University

August 2000 - November 2006 — Wetenschapspark 2, 3590 Diepenbeek

My research activities were situated in the domain of physically-based modeling and simulation. More specifically I developed an extensible, component-based software

architecture targeting the creation of physical simulations, with a case study that integrated an interactive, physically-based painting platform using programmable graphics hardware (GPU) and parallel computing. My findings were presented on international level conferences and published in peer-reviewed journals.

#### *Accomplishments*

- In 2005, I presented my work “*Real-time Simulation of Thin Paint Media*” at ACM SIGGRAPH, recognised as the world’s premier technology conference on computer graphics.

## Education

### **Hasselt University**

2000-2006 — PhD, Doctor of Philosophy in Computer Science

Performing research in the field of Computer Graphics.

PhD title: “*An Extensible Simulation Framework Supporting Physically-based Interactive Painting*”, defended in front of an international jury.

My advisor was Prof. dr. Frank Van Reeth.

### **Hasselt University (former Limburgs Universitair Centrum)**

1998-2000 — Master of Science – Knowledge Engineering, option Computer Science/Multimedia

Graduated cum laude.

Dissertation entitled “*Physically-based Modeling – Rigid Body Dynamics*”. My advisor was Prof. dr. Frank Van Reeth. Graded 80%.

I attended a summer-school exchange program at Baylor University, Texas, USA, July/August 1998.

### **Hasselt University (former Limburgs Universitair Centrum)**

1996-1998 — Bachelor Computer Science

Graduated cum laude.

### **College Eucharistisch Hart Essen**

1990-1996 — Secondary school, Latijn-Wiskunde (8u)

## Skills

- Programming languages: (**excellent**) C, C++, Java, Python, LateX, Cg, HLSL (**good**) C#, PHP, JavaScript, bash.
- Operating systems: (**user/admin**) Linux, Unix, MacOS (**user**) Windows.
- Development: Gradle, OpenGL(ES), Qt, Android (Material Design), SQL.