NicolasPavie
Software Engineer

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languages
French: native
English: good
German: base

programming
♥ GLSL, C++, C, Python
NASM x86
LaTeX
Java (+ Android)
SQL, PHP
HTML5/CSS3/Javascript
XML/DTD/XSLT

OS
Windows (7,8,10)
Linux (Ubuntu deriv.)
MacOS X (10.11+)

softwares
Visual Studio (2015 & +)
gcc / gdb
Xcode
Eclipse / Netbeans
Android Studio
Inkscape / GIMP
MS Office / LibreOffice
Oxygen XML Editor

APIs / libraries
OpenGL 4.1+
OpenCL 1.2+
Assimp, glew, glfw
Reveal.js
Angular, React

work experience

2017 - * **IT manager** IGS-CP, Angoulême, France
IT and software development teams manager.
Clients and internal web sites maintenance (database, back-end and front-end).
Image processing, editorial and printing softwares maintenance and monitoring.
Assisting in XSLTs maintenance for ePub 3 generation process, XML structuration/correction following clients' DTDs and proprietary Java-based XML files convertor software maintenance.
Project manager and software developer on research projects: Database model for spectral measurements of production papers, generation of print-ready PDF files from styled word documents, ReactJS-based ink calculator for white paper simulation, production files long-term archiving process.

2016 - 2017 **Software engineer** IGS-CP, Angoulême, France
Clients and internal web sites maintenance (database, back-end and front-end),
Image processing, PDF conversions and printing softwares maintenance and monitoring.
Assisting editorial developers in XML structuration/correction following clients' DTDs.
Project manager and software developer on research projects: Spooler contoler and job scheduler application for production printers, © FOGRA certification and printing process conformance, virtual desktops creation for XML structuration by subcontractors, image processing softwares development following clients' specifications.

2012 - 2016 **Ph. D. student / Research assistant** XLIM institute, Limoges, France
Research fields: procedural noises for texture synthesis, real-time rendering, point-based volume rendering on GPU. Assisting in the development, maintenance and optimisation of GobLim, the real-time rendering engine of the Realistic Image synthesis team based on OpenGL 4.3. Exploring deployment techniques of the engine for Windows and Linux operating systems.

June 2011 **Intern Developer - 3 months** IGS-CP, Angoulême, France
Analysis of the production process of digital books in ePub format,
Assisting in the implementation of the process in an existing ERP.
Writing of a simplified documentation for the new ERP module.

teaching experience

2012-2016 **Lecturer at the Faculty of Science and Technology** University of Limoges, France
Teaching in the department of Information Technologies:
C language, algorithmic, Computers' Architecture, HMI for android devices, GPGPU, parallel computing, programming for Unix-based system.

2012-2015 **Lecturer at the University Institute of Technology** University of Limoges, France
Teaching in the MMI department (multimedia and digital technologies):
Algorithmic and Image Processing

education

2012–2016	**Ph. D. in Computer Graphics**	Limoges University, France

Thesis on *Procedural generation of natural details in realistic image synthesis*
The increase of demanding quality and complexity of computer-generated natural sceneries raises several needs: more appropriate content authoring methods, more efficient storage and interactive display techniques. This thesis focus on answering to those needs, using procedural approaches to produce natural stochastic phenomenon (clouds, complex vegetation ..) with a low memory requirement while keeping efficient rendering of very detailed natural sceneries.

2010–2012	**Master in Computer Graphics**	Limoges University, France

publications internationales

[1] Volumetric Spot Noise for Procedural 3D Shell Texture Synthesis
Nicolas Pavie, Guillaume Gilet, Jean-Michel Dischler, Eric Galin, Djamchid Ghazanfarpour
Proceedings of the Conference on Computer Graphics & Visual Computing, 2016, Bournemouth, United Kingdom.

[2] Procedural Texture Synthesis by Locally Controlled Spot Noise
Nicolas Pavie, Guillaume Gilet, Jean-Michel Dischler, Djamchid Ghazanfarpour
Proceedings of WSCG, 2016.

communication skills

June 2016	**International Conference Presentation**	WSCG 2016, Pilsen, Czech Republic

Presented my research results on the use of a Locally Controlled Spot Noise for procedural texture synthesis.

Apr. 2014	**Student Volunteer**	Eurographics 2014, Strasbourg, France

Helped to welcome and check in attendees to the Eurographics conferences.

Nov. 2013	**Assistant organizer**	AFIG Days 2013, Limoges, France

Helped to welcome and check in attendees to the conference organized by the French Computer Graphics Association (AFIG).

Nov. 2013	**Assistant organizer**	The month of Computer Graphics, Limoges, France

Helped to welcome and check in attendees to 4 conferences for general public about research in computer graphics.

Mar. 2013	**Oral Presentation**	GTRendu, Workshop on rendering, Paris, France

Presented my results to the french computer graphics researchers community.

interests

professionnals: Rendering algorithms, Procedural modeling techniques, 3D real-time API, web-related technologies (API/frameworks), compression and cyphering methods
personnals: Video games, Personal Computer hardware, computer-animated films, music