

Curriculum Vitae – Dr. Anne Roudaut

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Born September 23rd, 1982

Career summary

I am a researcher in Human Computer Interaction (HCI). I have developed engineering and research skills in the best schools of engineering in France and Germany, Telecom ParisTech and Hasso Plattner Institut ranked 6th and 1st nationally. My track record shows that I am able to pursue a research agenda that is innovative, far-reaching and rooted in HCI. The international peer-community is already recognising me as an emerging leader in HCI, in particularly in the area of shape-changing devices.

- I published mainly in the best HCI archival venues (typically ACM CHI with an acceptance around 20%) and in the past 5 years I have published 6 papers at the conference CHI.
- Two of my papers [7, 10] have received over 60 citations in the last 6 years and the paper [3] from 2013 already has 11 citations. This is quite extraordinary since conference proceedings are only published once a year and citation counts in HCI tend to grow a lot slower than that.
- I served as an associate chair in the best HCI archival venues for the past 4 years, demonstrating further my leadership exposure.
- I have extensive media coverage of my research. E.g. [3] was covered by international medias (first page of The Daily Telegraph on 20/04/2013, Wired, the Verge, Discovery, Sky News etc.).
- I am invited to give talks around the world, e.g. recently at the University of Canterbury (NZ), Nokia (UK) and University College London (UK).
- My exposure reaches other fields as I was invited to write an editorial piece in a material magazine [1].

Employments

- University of Bristol, UK. (2015-). Leverhulme fellow, Interaction and Graphic group.
- University of Bristol, UK. (2012-2015). Research assistant, Interaction and Graphic group.
- Hasso Plattner Institut (HPI), Germany. (2010-2012). Post-doctoral researcher, HCI lab.
- Telecom ParisTech, France. (2006-2010). Teaching assistant.

Education

- Telecom ParisTech, France. (2006-2010). Ph.D. in Computer Science and Network, supervised by E. Lecolinet. Obtained 5/02/10 with highest honours.
- Université Joseph Fourier, France. (2004-2006). MSs Computer Science, with honours, valedictorian.
- Université Joseph Fourier, France. (2003-2006). MSc Computer Science (double diploma), with honors.

Program committee activities

- Associate chair at ITS'15.
- Associate chair at CHI'14, Expanding Interaction through Technologies, Systems, and Tools.
- Chair at IHM'13, posters.
- Associate chair at MobileHCI'13.
- Associate chair at CHI'13, Expanding Interaction through Technologies, Systems, and Tools.
- Associate chair at MobileHCI'12.
- Associate chair at CHI'12, category work in progress.
- Associate chair at CHI'11, Interaction techniques and devices.
- Associate chair at CHI'11, category alt.chi.
- Associate chair at UIST'11, posters.

Grants and prizes

- 2014: 36 months **Leverhulme Early Career Fellowship** (50% of total salary costs up to a maximum of £23k per annum and up £6k annual research expenses) on building shape-changing interactive devices.
- 2013: won contest to be in the research crew on the Mars Desert Research Station (MDRS), designed around the NASA Design Reference Mission proposal, to prepare for future space missions. I am responsible for building a glove that transfers shapes to astronauts skin in order to enrich sensory experience during extra vehicular activities.
- 2012: EPSRC building global engagement (5790£) on reconfigurable metamorphic structures for mobile devices.
- 2004: merit scholarship (4000€) from the University Joseph Fournier de Grenoble.

Curriculum Vitae – Dr. Anne Roudaut

Industrial transfer

- The interaction technique I created in 2008 [10] is currently **featured in the 2014 Chrome** application for Android whose market reached 1.9 billion devices in the world in 2013.
- I collaborated with Bell-Labs Alcatel Lucent (2006-2010) and I wrote a C# toolkit library for mobile devices that they use to create applications for their ubiquitous network infrastructure.

Publications

All of my publications are in highly competitive peer-reviewed conferences with acceptance rates of 19% to 29% (typically CHI, whose downloads from the digital library are higher than any other SIG, accepts about 20% of submissions). Full papers at ACM CHI are archival contributions equivalent to journal publications in other fields. I published 12 papers without my Ph.D. advisor and 5 of those 12 were published at CHI. The following lists the ten most influential papers of mine from the last 6 years.

1. Roudaut A., Subramanian, S. Creating the future of interactive devices, together. **Journal Material Today** (2013).
2. Roudaut A., Reed R., Hao T., Subramanian, S. Changibles: Analyzing and Designing Shape Changing Constructive Assembly. **CHI'14**. (Acceptance 22.8%).
3. Roudaut A., Karnik A., Löchtfeld, M., S. Subramanian. Morphees: Toward High "Shape Resolution" in Self-Actuated Flexible Mobile Devices. **CHI'13**. (Acceptance 19.7%).
4. Roudaut A., Raus A., Sterz C. Plauth M., Lopes P., Baudisch P. Gesture Output: Eyes-Free Output Using a Force Feedback Touch Surface. **CHI'13**. (Acceptance 19.7%).
5. Chen L., Muller S., Roudaut A., Baudisch P. Sensing Stacks of Building Blocks, Dials and Sliders on Capacitive Touch Screens. **CHI'12**, 2189-2192. (Acceptance rate: 23%).
6. Roudaut A., Pohl H., Baudisch P. Touch input on curved surfaces. **CHI'11**, 1011-1020. (Acceptance rate: 26%).
7. Roudaut A., Lecolinet E., Guiard Y. MicroRolls: expanding touch-screen input vocabulary by distinguishing rolls vs. slides of the thumb. **CHI'09**, 927-936. (Acceptance rate: 25%).
8. Roudaut A., Baglioni M., Lecolinet E. TimeTilt: Using Sensor-Based Gestures to Travel through Multiple Applications on a Mobile Device. *IEEE Interact 2009*, 830-834. (Acceptance rate: 29%).
9. Roudaut A., Bailly G., Lecolinet E., Nigay, L. Leaf Menus: Linear Menus with Stroke Shortcuts for Small Handheld Devices. *IEEE Interact 2009*, 616-619. (Acceptance rate: 29%).
10. Roudaut A., Huot S., Lecolinet E. TapTap and MagStick: improving one-handed target acquisition on small touch-screens. *ACM AVI 2008*, 146-153. (Acceptance rate: 27%).

Workshops organisation

- Minuto A., Nijholt A., Pittarello F., Roudaut A., Hornbæk K., Nojima T., Smart Material Interfaces, ICMI'14.
- Alexander J., Brotman R., Holman D., Younkin A., Vertegaal R., Kildal J., Lucero A., Roudaut A., Subramanian S., Organic experiences: (re)shaping interactions with deformable displays, CHI'13.

Invited talks

I presented all publications at the conferences above in which I am the first author except [2]. I deliver about 15 presentations a year. Below I highlight the most significant ones from the last few years:

- University College London, UK. (November 2013). Toward high-resolution shape changing devices.
- Nokia, Bristol, UK. (September 2013). Toward high-resolution shape changing devices.
- BIG, Bristol, UK. (Apr. 2013). Toward high shape resolution in self actuated flexible mobile devices.
- University of Canterbury, NZ. (Feb. 2013). Toward high shape resolution in self actuated flexible mobile devices.
- FTIG, Lilles, France, (November 2012). The future of interactive devices.
- Girl Geek Dinner, Bristol, UK. (July 2012). Current advances in actuated touchscreens.
- INRIA team Potioc, Bordeaux, France. (December 2011). Adding haptic feedback to touchscreens.
- Team Mint, Lilles, France. (November 2011). Adding haptic feedback to touchscreens.
- BIG Group, Bristol, UK. (November 2011). Interacting on non-planar surfaces.

Specific skills

- Programming: C# (.Net Compact Framework), C/C++, Java, Python, Ada, Prolog, JavaScript, PHP, CSS.
- Computer vision: OpenCV and EMGU.CV for the .Net Framework.
- Computer graphics: Maya 3D programming.
- Robotic: OpenHaptics programming for articulated arms (e.g. PHANToM).
- Electronic: Arduino, Xmos, X-osc, electronic circuits
- Fabrication tool: 3D printers, laser cutters
- Statistic: Experimental design, software: Matlab, Stata, Excel.
- Image, animation and video: Adobe Flash, Photoshop, Premiere pro, After effect.

Curriculum Vitae – Dr. Anne Roudaut

Teaching and supervision

- Postgraduate certificate TLHE obtained in 2013 at the University of Bristol.
- I taught more than 220 hours of lectures to bachelors and master levels on various topics in universities and schools of engineering in France and Germany (see table below).
- I collaborated or helped to supervise 6 Ph.D. students at the University of Bristol and Hasso Plattner Institut (HPI).
- I supervised 26 master students to successful completion at the University of Bristol, HPI, University Paris 6, ENSTA (Superior National School of Advanced Techniques) and Telecom ParisTech.

<i>Year</i>	<i>Quantity</i>	<i>Title</i>	<i>Type</i>	<i>Place</i>
2010 - 2011	1h30 L	Electronic: building a multitouch pad	Hardware	Conference ITS
	1h30 L	Actuators/sensors for haptic interaction	Hardware	HPI
	3h L and \approx 10AL	Electronic: building a robot car	Hardware	HPI
	6h L and \approx 4AL	Electronic: building a multitouch pad	Hardware	HPI
2009 - 2010	14h L	Conception of interactive systems	Software	ENSTA, Telecom
2008 - 2009	31h L	Conception of interactive systems	Software	Paris6, ENSTA, Telecom
	43h AL	Object programming Java/Jawaswing	Software	Telecom
2007 - 2008	24h L	Conception of interactive systems	Software	Paris6 and Telecom
	58h30 AL	Object programming Java/Jawaswing	Software	Telecom
	7h30 AL	Logic programming Prolog	Software	Telecom
2006 - 2007	18h AL	Object programming Java/Jawaswing	Software	Telecom

Total: 81h Lecture (L), 141h Applied Lecture (AL)

Hobbies

- Swimming (8 years practicing in club) and snow surfing (3 years of practice).
- Piano (since the age of 10) and creative arts (e.g. mechanics, drawing, couture).
- Reading and novel writing.
- Neurology and sleep troubles.

Conference acronyms

CHI and UIST are the most selective international conference of HCI, CHI being the second SIG of ACM after SIGGRAPH. IHM is the most selective conference in France.

- AVI, ACM SIGCHI's International Working Conference of Advanced Visual Interfaces.
- CHI, ACM SIGCHI's International Conference on Human Factors in Computing Systems.
- ICMI, ACM SIGCHI's International Conference on Multimodal Interaction.
- IHM, ACM Conférence Francophone Sur l'Interaction Homme-Machine.
- Interact, IFIP Conference on Human-Computer Interaction.
- ITS, ACM International Conference on Interactive Tabletops and Surfaces.
- MobileHCI, ACM SIGCHI's International Conference on Human-Computer Interaction with Mobile Devices and Services.
- UIST, ACM Symposium on User Interface Software and Technology.