

Curriculum Vitae (Short Version)

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Professor Min Chen, BSc, PhD, FBCS

Department of Computer Science
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1. Personal Details

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2. Education and Employment

- **April 2001 ~ Present.**
Professor (personal chair) of Computer Science in University of Wales Swansea (renamed as Swansea University in 2007).
- **Sept. 1998 ~ March 2001.**
Senior lecturer in the Department of Computer Science, University of Wales Swansea.
- **Nov. 1990 ~ Sept. 1998.**
Lecturer in the Department of Computer Science, University of Wales Swansea.
- **April 1987 ~ Oct. 1990.**
Research assistant in the Department of Electronic and Electrical Engineering, University of Wales Swansea. Awarded the 1988 Tektronix Traveling Scholarship for parts of my PhD work in Computer Graphics.
- **April 1984 ~ March 1987.**
Postgraduate student in the Departments of Computer Science and Electronic and Electrical Engineering, University of Wales Swansea, under the joint supervision of Professors Townsend and Tony Barker. Received my PhD degree in July 1991.
- **Aug. 1982 ~ March 1984.**
Research assistant in the Department of

Computer Science, Fudan University, Shanghai, while taking a course for an advanced English examination.

- **Sept. 1978 ~ July 1982.**
*Undergraduate student in the Department of Computer Science, Fudan University, Shanghai. Received my BSc degree in Computer Science in July 1982. Being one of the top students (in a class of 120 students), I was awarded a *World-Bank International Studentship*.*

3. Summary of Achievements

I arrived at University of Wales Swansea in 1984 to pursue my PhD program. For the past 20 years, whilst my family and I have enjoyed our life in Wales and the UK enormously, I have developed my research career and a research team that is highly active in several areas of *Visual Computing*, including *Visualization*, *Computer Graphics* and *Multimedia and Interactive Systems*.

- **Group Leader.** In 1992, I established the *Visual and Interactive Computing Group* at Swansea. I have been leading the group since, which currently consists of 6 academic staff and some 20 research assistants and research students.
- **Personal Research.** I have made valuable contributions in areas of volume graphics and visualization. Those of significant importance include:
 - *constructive volume geometry,*
 - *volume morphing and deformation,*
 - *volume graphics API,*
 - *non-photorealistic volume rendering,*
 - *image-based comparative visualization,*
 - *spectral volume rendering,*
 - *video visualization,*
 - *facial aging simulation, and*
 - *Knowledge-assisted visualization.*I published over 100 refereed research publications, including 31 journal articles. I have been awarded over £8.6M in research grants and support from various funding bodies and industrial partners.
- **Interdisciplinary Research.** I have been enthusiastic about interdisciplinary research, and have worked with engineers, physicists, biologists, mathematicians, psychologists, glaciologists, marine geologists, medical

researchers and clinical staff, and industrialists through various research projects.

- **Industry.** Since 2002, I have been the co-director of the Centre for Computing and Software Technologies (CAST), which is one of a network of 18 Centres of Excellence for Technology and Industrial Collaboration (CETIC), accredited by the Welsh Assembly Government. Between 2003 and 2008, CAST has engaged in a total of 62 industrial projects with contract values of £2.9M, and provided consultancy services to around 170 companies per year.
- **Research Collaboration.** I have funded collaborative projects with *Stuttgart* (Germany), *Rutgers* (USA) and *Utah* (USA), as well as *Bath*, *Bangor*, *Leeds* and *Manchester* (UK). In addition, I have also co-authored papers with colleagues in *Purdue* (USA), *Simon Fraser* (Canada) and others.
- **Teaching.** I taught courses on *computer graphics*, *operating systems*, *computer networks*, and *algorithms*. My third year course on *Computer Graphics II* has been consistently among the most popular options in the Department.

I have served as the external examiner of two MSc programs in Leeds (1999-2002) and Bath (2004-2007) respectively.

- **Supervision.** Since 1992, under my supervision or co-supervision, 21 PhD and 3 MPhil students have successfully completed their research programs. Between 1994 and 2002, under my supervision, 10 final-year project students won a total of 14 prizes (over £15,000 in total) in the annual competitions for the *WDA Technology Prizes* and the *UK Students of the Year Awards*.
- **Administration.** Since 1990, I have undertaken a variety of administration duties in the Department. During 1997~2005, I was the *Director of Research*, and played an important role in the research success of Computer Science at Swansea, which was awarded a 5 rating in RAE2001 (improving from a 4 rating in RAE1996). I am currently the Deputy Head of Department.
- On 29 October 2001, I was most honored to be invited by the then Prime Minister and Mrs. Blair to *No. 10 Downing Street* for a party to celebrate the excellence in the UK higher education.

4. Selected Publications

- H. Jänicke, R. Borgo, J. S. D. Mason, and M. Chen, "SoundRiver: Semantically-Rich Sound Illustration", to appear in *Computer Graphics Forum*, **29**(x), 2010.
- M. Chen, D. Ebert, H. Hagen, R. S. Laramée, R. van Liere, K.-L. Ma, W. Ribarsky, G. Scheuermann and D. Silver, "Data, Information and Knowledge in Visualization", *IEEE Computer Graphics and Applications*, **29**(1):12-19, 2009.
- B. Mora, R. Maciejewski, M. Chen and D. S. Ebert, "Visualization and computer graphics on isotropically emissive 3D displays", *IEEE Transactions on Visualization and Computer Graphics*, **15**(2):221-234, 2009.
- O. Gilson, N. Silva, P.W. Grant and M. Chen, "From web data to visualization via ontology mapping", *Computer Graphics Forum*, **27**(3):959-966, 2008. Best Paper Award in EuroVis2008, Eindhoven.
- D. Hubball, M. Chen and P. W. Grant, "Exploring the relationship between faces and aging in image-based age transformation", *Computer Graphics Forum*, **27**(2):607-616, 2008.
- R. P. Botchen, S. Bachthaler, F. Schick, M. Chen, G. Mori, D. Weiskopf, T. Ertl, "Action-based multi-field video visualization", to *IEEE Transactions on Visualization and Computer Graphics*, **14**(4):885-899, 2008.
- C. Correa, D. Silver, M. Chen, "Illustrative deformation for data exploration", *IEEE Transactions on Visualization and Computer Graphics*, **13**(6):1320-1327, 2007.
- M. Chen, R. Botchen, R. R. Hashim, D. Weiskopf, T. Ertl and I. Thornton, "Visual signatures in video visualization", *IEEE Transactions on Visualization and Computer Graphics*, **12**(5):1093-1100, 2006.
- A. Abdul-Rahman and M. Chen, "Spectral volume rendering based on the Kubelka-Munk theory", *Computer Graphics Forum*, **24**(3):413-422, 2005.
- G.W. Daniel and M. Chen, "Video visualization", *Proc. IEEE Visualization*, 409-418, Seattle, 2003.
- M. Chen and J.V. Tucker, "Constructive volume geometry", *Computer Graphics Forum*, **19**(5):281-293, 2000.

5. Selected Grants

- **Industry:** Business Data Visualization, PI, £46K, 2009.
- **Industry:** Video Visualization, PI, £50K, 2009.
- **HEFCW:** Welsh Assembly Government Institute of Visual Computing, co-PI, £5M (£1.1M to Swansea), 2009.
- **EPSRC:** Video Visualization, PI, £1M, 2008.
- **Industry:** Large-scale Data Management, PI, £84K, 2007.
- **WAG:** CETIC Program (Phase II extension), PI, £100K, 2006.
- **RUCK:** Fellowship, CI, £125K, 2006.
- **WDA/KEF:** ViStar (extension), PI, £70K, 2006.
- **EPSRC:** Data Management in Visualization, PI, £15K, 2005.
- **Royal Academy:** Video & Flow, PI, £4.6K, 2005.
- **BBSRC:** Virtual Heart Engineering, CI, £627K, 2005.
- **WDA/KEF:** Vista, PI, £275K, 2005.
- **DTI/KTP:** Workflow and Data flow management, PI, £149K, 2004.
- **WDA:** CETIC Program (Phase II), PI, £300K, 2004.
- **EPSRC:** Visual Supercomputing, PI, £149K, 2003.
- **EPSRC:** Volume Animation, PI, £148K, 2003.

6. Selected Professional Activities

6.1 Journal Editorial Services

- *IEEE Transactions on Visualization and Computer Graphics* — Associate editor (2007-2010).
- *Elsevier Computers & Graphics* — editorial board member, 2008 - present.
- *IEEE CG&A* — Guest Editor of special issue on Knowledge Assisted Visualization, 2010.
- *Graphical Models* — Guest Editor of Special Issue on Volume Modeling, **63**(6), 2001.

6.2 Major Conference Organization Services

- Program co-chair: *Eurographics 2011*, Wales.
- Workshop co-chair: *REVISE2009*, VisWeek, Atlantic City, New Jersey.
- Conference co-chair: *WSCG2009*, Plzen, Czech.

- Papers co-chair: *IEEE Visualization 2008*, VisWeek, Columbus, Ohio.
- Steering Committee co-chair: *Workshop on Knowledge-assisted visualization 2008*, VisWeek, Columbus, Ohio.
- Papers co-chair: *IEEE Visualization 2007* Sacramento, CA.
- Steering Committee co-chair: *Workshop on Knowledge-assisted visualization 2007*, Sacramento, CA.
- Workshop co-chair and Steering Committee member: *Eurographics/IEEE VGTC Volume Graphics 2006*, Boston, Massachusetts.
- Area chair: *IMA Conference on Video, Vision and Graphics (VVG2005)*, Edinburgh, UK.
- IPC member: *WSCG2005*, Plzen, Czech.
- Topic chair: *Eurographics 2004*, Grenoble, France.
- Tutorial co-chair: *Eurographics 2001*, Manchester, UK.
- Main organizer: *Eurographics UK Chapter Conference 2000*, Swansea, UK.
- Program co-chair: *International Workshop on Volume Graphics 1999 (VG99)*, Swansea, UK.
- Program co-chair: *International Workshop on High Performance Computation for Graphics and Visualisation 1995 (HPCGV)*, Swansea, UK.

6.3 Invited Research Speeches

- Keynote speaker in *Eurographics Ireland Chapter Conference*, 2007.
- Keynote speaker in *WSCG2009*, Plzen, Czech.
- Keynote speaker in *TPCG2009*, Cardiff, UK.
- Many seminar speeches in the UK and abroad, including
 - *SUNY Stony Brook, USA (1996, 2007)*,
 - *Universität Tübingen, Germany (2003)*,
 - *IBM UK (2004)*,
 - *Rutgers, NJ, USA (2004)*,
 - *CTC London (2004)*,
 - *University of Stuttgart, Germany (2005)*,
 - *University of Saarbruecken, Germany (2005)*,
 - *University of Utah, USA (2006, 2007)*,
 - *University of Kaiserslautern, Germany (2007)*,
 - *Simon Fraser, Canada (2007)*.

6.4 External PhD Examinations

Over 10 appointments of external PhD examiners.