About the Authors

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Jim Angus joined the National Institutes of Health (USA) in 2001 as Web project manager. He has a diverse background with undergraduate degrees in biology and geology, and graduate training in immunology and molecular biology. His prior employment was at the Natural History Museum of Los Angeles County where he established and managed the Museum’s Molecular Systematics Laboratory. In 1992 he became interested in information technology as applied to scientific research and assisted in the development of the Museum’s IT infrastructure. In 1994 he produced one of the first museum Web sites, which was subsequently named “best educational use” at the 1997 Best of the Web awards sponsored by Archives and Museum Informatics. He currently serves on the board of directors of several professional organizations including the Museum Education Roundtable and frequently speaks on Web design and accessibility of Web sites.

Patricia Barbanell holds a doctorate from Columbia University and has extensive experience in both K-12 education and museum education. She has worked for more than 20 years developing integrated programs that serve both museums and schools. Her specialties are integrated arts, multicultural programming and technology integration. She has presented scores of presentations at professional conferences and has published several papers in professional journals. She is past president of NYS Art Teachers and NY Council of Educational Associations and helped to write the NYS Learning Standards for the Arts.

Saulo Faria Almeida Barretto (saulo@umc.br) teaches mechanical engineering courses at Universidade de Mogi das Cruzes, São Paulo, Brazil. He received his BS in civil engineering from Universidade Federal de Sergipe (1986) and his MS in finite element methods from Universidade de São Paulo (1990). He received his doctoral degree in boundary element methods from Universidade de São Paulo (1995). In 1999 he moved his research interests to work with learning Web environments and since then he has been conducting research projects funded by Brazilian funding agencies (FAPESP and CNPq) and the European Community.

Alpay Beler is an information systems architect and digital technologies/new media strategist. He has more than 10 years experience of development and management experience in the educational and heritage sectors, with particular knowledge of digitization technologies, e-commerce, R&D, cross platform networks and Web product design. Alpay has recently completed a major Web infrastructure at The Science Museum (London), managing the development of a £1.2m government-funded Web site that draws on the resources of three national museums and which offers personalized activities and community building tools. He was also a key team member of a pilot project for educational content delivery to mobile phones, consulted on the JPEG2000 standard for the British Standards Institution, and currently is responsible for the implementation of an online student information system at Birkbeck College.
Jim Bennett is the director of the Museum of the History of Science, University of Oxford (UK), which has a strong commitment to making its exhibitions and collections available on the Web. He also directs the master’s course offered by the Museum. Previously Jim was at the Whipple Museum of the History of Science, University of Cambridge. He is attached to Linacre College and the Faculty of Modern History at the University of Oxford. His research work is on the history of practical mathematics from the sixteenth to the eighteenth century, the history of scientific instruments and the history of astronomy.

Roxane Bernier has been a researcher at the Department of Sociology of Université de Montréal (Canada) since 1999 and investigates visitors’ perception with regards to the usability of information technologies in cultural institutions. She was affiliated three years with the Centre d’Étude et de Recherche sur les Expositions et les Musées at Université Jean Monnet (France) in the mid-1990s and since 2003 has been a fellow member at the Centre Interuniversitaire de Recherches sur les Sciences et la Technologie in Quebec. Dr. Bernier has worked as a consultant for the Direction des musées de France, the Cité des Sciences et de l’Industrie in Paris, the Quebec Museum of Civilization in Quebec city, the Canadian Museum of Civilization in Gatineau, and more recently for the Canadian Heritage Information Network in doing audience analysis. She coordinated a special issue on IT for the European museology journal Publics et Musées and contributed to peer-reviewed journals like the Educational Computing Research, Behavior and Information Technology and Program. Additionally, Bernier was invited to write articles for the cyberart magazines Parachute and Archée as well as participated in international conferences including CATaC 2000, AoIR 2001, Museums and the Web 2002 & 2003 and the Visitors Studies Association Conference 2004.

Bronwyn Bevan is director of the Center for Informal Learning and Schools, which is based at the Exploratorium in San Francisco. Her work focuses on partnerships between cultural institutions, science agencies, and schools. Bevan has also conducted numerous research and evaluation studies examining arts integration into the K-12 curriculum, and the role of arts-based cultural institutions in supporting instructional change.

Ann Borda has held strategic and operational roles in academic and cultural organizations and recently held the position of head of multimedia collections at The Science Museum, London. Among the projects in which Ann has been involved are Fathom.com, an e-learning collaboration led by Columbia University, and a large-scale Web initiative to bring cultural collections online across several national organizations in the UK. Ann received her PhD at the University of London in Information Science (1999) and has published in the areas of e-learning, informatics, metadata applications and content delivery. Ann is the chair of the CIDOC multimedia group and assistant editor of the journal Multimedia and Information Technology (MmIT) (www.mmit.org.uk). Currently she is a visiting research fellow at the Institute for Computing Research, London South Bank University.
Jonathan P. Bowen (www.jpbowen.com) is professor of computing at London South Bank University, where he is deputy director of the Institute for Computing Research. Previously he was at the University of Reading, the Oxford University Computing Laboratory and Imperial College. He has been involved with the field of computing in both industry and academia since 1977. As well as computer science, his interests also extend to online museums. Bowen established the Virtual Library museums pages (VLmp) in 1994, a Web-based directory of museum Web sites worldwide that has since been adopted by the International Council of Museums (ICOM). He was honorary chair at the first Museums and the Web conference in 1997 and has given presentations at each conference since then. He guest edited two special issues of the Museums International journal concerning online museums. In 2002, Bowen founded Museophile Limited (www.museophile.com), a spinout company from London South Bank University with the aim to help museums online, especially in the areas of accessibility, discussion forums and collaborative e-commerce. Bowen is a fellow of the Royal Society for the Arts and holds an MA in engineering science from Oxford University.

Horace Dediu is a software developer and programmer who founded the consulting firm Handheld Media (USA) in 2001. Horace has published articles in the areas of information retrieval theory and electronic document formats. He teaches corporate seminars on product usability and mobile information access. Horace researches user interface design and human factors in computing, and helped shape the Open Ebook file format standards. His ability to explain the technology and its potential for broadening information access services, have made him a popular speaker at conferences such as Seybold and Library. In addition, Horace counts as clients companies such as Nokia, JP Morgan Chase and Verizon.

Suzanne Dewald has been the development officer of the Schenectady City School District (USA) for more than a decade and has led the authoring of dozens of successful grants that have helped to move the Schenectady City Schools into a leadership role in integrated technologies. She has 20 years of experience authoring funded programs and directing projects.

Nicoletta Di Blas graduated in classics and obtained a PhD in linguistic sciences from the Catholic University of Milan, Italy. She currently teaches theory of communication at the Polytechnic of Milan. Her research interests focus on linguistic themes, on usability and advanced educational applications, particularly in the cultural heritage field.

Lynn D. Dierking is associate director at the Institute for Learning Innovation (USA) and completed her PhD at the University of Florida. She is internationally recognized for her research on the behavior and learning of children, families and adults in free-choice learning settings and has published and spoken extensively in these areas. Her research priorities include the long-term impact of free-choice learning experiences on individuals and families and the development and evaluation of community-based programs. Dr.
Dierking has worked in a variety of settings: the Smithsonian Office of Educational Research, University of Maryland’s College of Education and at the Smithsonian’s National Museum of American History.

**Denise P. Domizi** is a doctoral student in instructional technology at The University of Georgia (UGA) (USA). She holds a BA in psychology (1991) and an MEd in instructional technology (2003), also from UGA. Her research interests include: informal learning environments, designing and implementing technology-infused learning opportunities in science centers and museums, and learning communities. Ms. Domizi is currently employed as a research assistant in the Learning and Performance Support Laboratory at UGA.

**Michael Douma** is the executive director of IDEA (the Institute for Dynamic Educational Advancement) (USA) where he designs and implements information systems that use technology to facilitate the learning process. His research and teaching interests center on interactive teaching methods, user interface design, and accessibility. Michael has presented papers on the interface between learning and technology in *Archimuse “Museums and the Web,”* American Chemical Society, the British Museum, and Centre de la Recherche Scientifique. Through IDEA, Michael recently collaborated on educational initiatives with Brandeis University, Native American Cancer Research, the National Gallery of Art, and the Prado Museum (Madrid).

**John Falco** has served as superintendent of the 9,000 student urban school system of Schenectady, NY for three years and served for six years as deputy superintendent. In addition to Project VIEW, he has led development of several transformational projects in the Schenectady Schools’ Capital Region Science Education Partnership (CRSEP) (USA), a multi-district Local Systemic Change Initiative funded by the National Science Foundation. Dr. Falco has been named NYSCATE Superintendent of the Year for outstanding leadership in integrating technology. Dr. Falco holds a doctorate in educational administration from Seton Hall University, where his research centered on improving reading skills for struggling emergent readers.

**Silvia Filippini-Fantoni** is a research student at the Sorbonne University in Paris, where she is working on her PhD based on *Personalisation through IT in museums*. She graduated in contemporary history from the University of Milan and has experience in working as a researcher at the European Centre for Digital Communication (Heerlen, The Netherlands), the McLuhan Institute (Maastricht, The Netherlands) and the Louvre Museum (Paris), where she focused on developing personalization applications for the new Web site. The results of work carried out so far have been presented at international conferences and seminars (EVA, ICHIM, Museums and the Web), where positive contributions toward the hypothesis have already been received and have led to interesting collaborations with Dédale on a European Union study about *Cultural Institutions as New Learning Environments*, La Cité des Sciences et de l’Industrie in Paris and the Canadian Heritage Information Network (CHIN).
**Stefan Göbel** received a diploma in computer science at the Technical University of Darmstadt, Germany in 1997. He worked as a researcher in the GIS Department at the Fraunhofer-Institute for Computer Graphics. The topic of his graduation deals with graphic-interactive user guidance to geospatial data archives. Since July 2002 he has been head of the Digital Storytelling Department at ZGDV Darmstadt e.V. Here, he is the project leader of numerous activities and projects within the research field of interactive digital storytelling and edutainment applications. Since 2003, he has chaired the international conference “Technologies in Interactive Digital Storytelling and Entertainment” (TIDSE) and the Forum for Knowledge Media Design (KMD-Forum) as speaker.

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**Michael J. Hannafin** is the Charles H. Wheatley-Georgia research alliance eminent scholar in technology-enhanced learning, professor of instructional technology, and director of the Learning and Performance Support Laboratory (LPSL) at the University of Georgia (USA) — positions he has held since 1995. After earning his doctorate in educational technology from Arizona State University in 1981, he held academic positions at the University of Colorado, Penn State University and Florida State University, and directed centers at both Penn State and Florida State. As director of the LPSL, he provides leadership for and supports the efforts of several university research scientists, technical support staff, and graduate students as they identify, pursue, and implement R&D initiatives related to learning and performing with technology. He has served as principal investigator (PI) or co-PI on research funded by the U.S. National Science Foundation, Department of Education, and the Department of Defense as well as through several private foundations. Dr. Hannafin has published more than 100 journal articles, textbooks, chapters and reviews, and has earned international awards for both journal articles and textbooks. He has given numerous invited addresses throughout the world related to research focusing on developing and testing frameworks for the design of student-centered learning environments. His current work includes a focus on evidence-based inquiry — the use of direct evidence featuring real-time video capture, coding, and analysis of performance data in assessing the effectiveness of learning environments.

**Susan Hazan** is currently curator of new media and head of the Internet Office at the Israel Museum, Jerusalem (since 1992), identifying, and implementing electronic architectures for the gallery, and outreach programs. Selected projects include QuickTime, VRML environments, video conferencing, an interactive, and online school curriculum, (museum@school), as well as the comprehensive institutional Web site in English,
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**Andrew Hodges** was born in London in 1949 and studied mathematics at the University of Cambridge. His postgraduate and postdoctoral work was with Sir Roger Penrose in the development of twistor theory, applicable to problems in fundamental physics. He is now attached to the Mathematical Institute at the University of Oxford (UK) and is a lecturer at Wadham College, Oxford. His interest in the computing pioneer Alan Turing developed partly through mathematics. His *magnum opus* is the definitive biography entitled *Alan Turing: The Enigma*.

**Anja Hoffmann** holds a diploma degree in media system design from the University of Applied Sciences in Darmstadt, Germany. As a member of the Digital Storytelling Group at the Computer Graphics Centre, she has conducted research in this area since 1998. Her interests concentrate on interactive digital storytelling and interaction design for augmented and mixed reality applications. She has devised concepts and interfaces for digital systems, which allow users to create and experience interactive narratives. Her understanding of human cognition, technology and design led her to focus on user-centred knowledge media design.

**Ido Iurgel** has a master’s degree in philosophy, social psychology and linguistics from the Ruhr-University of Bochum, and a master’s (“Diplom”) in computer sciences from the Technische Universität Darmstadt. His special interest is in the integration of humanistic sciences and computer science. From 1995 to 1996, he worked in Brazil, his native country, in the industrial application of computer graphics. In 1996, he became a member of the research group “Phenomenology and Contemporary French Philosophy,” led by Professor B. Waldenfels at the University of Bochum. From 1996 to 1999, he was granted a postgraduate research scholarship from the German Research Council (“Deutsche Forschungsgemeinschaft”) and worked on philosophy of emotion and metaphor. From 1999 on, he was a research assistant at the Department of Digital Storytelling at the ZGDV in Darmstadt, where he has been developing graphics and AI of virtual characters. He finalized his degree in computer sciences with a master about virtual personalities in a mixed virtual/real human dialogue group. Since 2002, he has been a full time scientist in
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**Billie J. Jones** is assistant director for writing support at Shippensburg University (USA), in Shippensburg, Pennsylvania. She completed her doctoral work at Bowling Green State University in 1998, and has been teaching writing in Pennsylvania since then. Her training in rhetorical analysis has prepared her to look at subjects as diverse as trauma narratives, memorials and museums, including their Web presences. In all of this work, she treats these diverse subjects as rhetorical texts that make meaning through their words and design.

**Andreas Lorenz** completed his master’s degree in computer science at the University of Kaiserslautern (Germany) in 2001, and joined the research group “Information in Context” at the Fraunhofer-Institute for Applied Information Technology in Sankt Augustin (Germany) in spring 2002. He is a research associate and commenced his PhD in the research field of multi-agent systems. His further research interests include user-adaptive systems, mobile and nomadic systems, evolutionary algorithms, and software engineering. He was responsible for software-design and implementation in the LISTEN-project.

**Daniel Tan Teck Meng** graduated with a BSc (Honors) from the National University of Singapore, majoring in zoology. He is currently a senior manager (Exhibition Group) at the Singapore Science Centre. Prior to this, he was chief operations officer of ChainFusion Ltd., a software development house specializing in the development of enterprise level Web applications for major multinational corporations. Earlier, he had spent five years as a senior scientific officer at the Singapore Science Centre, developing life sciences programs and organizing various scientific exhibitions and national scientific competitions.

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About the Authors

project, documented at http://nordbotten.ifi.uib.no/VirtualMuseum/VMwebSite/VEDweb-site.htm, in collaboration with Bergen Museum. The project has funding from the Norwegian Research Council to develop tools for integration and presentation of multimedia data from multiple museum sources.

**Teresa Numerico** (PhD, history of science) teaches humanities computing courses at the Philosophy Faculty, Computing for Museums in the Science Museums Management master’s courses of the University of Bologna (Italy) and new media theory and techniques at the University of Salerno. She co-edited (with A. Vespignani) *Informatica per le Scienze Umanistiche* (Computer Science for Humanities Studies, Mulino, 2003), has published various papers on the history and philosophy of computer science and is about to publish a book on *Alan Turing and Machine Intelligence*. She has also worked as a business development and marketing manager for different media companies. Currently she is a visiting researcher at London South Bank University, having been awarded a Leverhulme Fellowship.

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David T. Schaller is principal and founding partner of Educational Web Adventures, LLP (USA), based in St. Paul, MN. He is responsible for the overall creative direction of the company and the perpetual quest for the sweet spot where learning theory, Web technology, and fun meet. Dave has over 15 years of experience in natural history and social science interpretation, working in print, exhibit, and Web media. In recent years he has led Eduweb’s research and evaluation efforts, publishing several papers and frequently presenting at museum conferences. Dave holds an MA in geography and museum studies from the University of Minnesota and a BA in humanities from Macalester College.

Oliver Schneider holds a diploma degree in television technology from the University of Applied Sciences, Wiesbaden, Germany. His special research interest are narrative and authoring environments. From 1991 to 2000 he worked as a sound engineer and from 1996 to 2000 he worked also as a camera assistant. Additionally he had been a trainer for camera assistants from 1997 to 2000. From 1999 to 2000 he was responsible for a film compositing software as an application engineer. Since 2000, he is a full time scientist at the Department of Digital Storytelling at the ZGDV Darmstadt e.V. (Germany) and from 2002 he has held a supplementary teaching position for sound engineering at the University of Applied Sciences in Ulm/Germany.

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