

Curriculum Vitae

Dr. Bernadette SPIELER, BSc MSc

Born on 23rd of April 1988, Deutschlandsberg
Austrian citizenship



PROFESSIONAL EXPERIENCE

- 08/2018 University Assistant (postdoctoral), University of Technology Graz/Austria
– today
- 07/2017 University Assistant, University of Technology Graz/Austria
– 08/2018 Institute for Software Technology, Catrobat team (www.catrobat.org)
Head of Development / Android Development
- Pocket Code app (<https://catrob.at/pc>)
 - Luna&Cat app (gender sensitive version for girls and young women)
- Workshops and (teacher-) trainings:
- Conducting gender unbiased coding workshops at high schools
 - Summer program “Girls Coding Week”, off-school coding courses
 - Coaching of teachers/trainers in coding and gender-sensitive computer science education
- 01/2015 Project Assistant, University of Technology Graz/Austria
– 06/2017 Institute for Software Technology
EU Horizon 2020 project „No One Left Behind“ (<http://no1leftbehind.eu/>)
- Development of the Create@School app for academic purposes
 - Planning and conducting of school lessons, teacher coaching, and school workshops (with a focus on female students)
 - Conducting scientific analysis and develop new designs for the app
 - Coordination of several teams of the Catrobat project
 - Interviews, focus group discussions with female students, and development of new concepts for coding activities
- 04/2012 Software developer, Office of Styrian Government/Austria
– 05/2014 Department Organization and Information Technology
Information Management, eGovernment

ACADEMIC EDUCATION

- 01/2015 Doctoral program in Engineering Sciences, TU Graz/Austria
– 05/2018 Academic degree: Doctor of Engineering Sciences (Dr. techn.), equivalent to the Doctor of Philosophy (PhD)
Focus on: Application Development, SW-Development, Computer Science Education, Constructionism, Gender Mainstreaming, Diversity Management,
Dissertation Title: *Development and Evaluation of Concepts and Tools to Reinforce Gender Equality by Engaging Female Teenagers in Coding*
Link: <https://catrob.at/SpielerPhD>
- 09/2012 Master program eHealth, FH JOANNEUM, Graz/Austria
– 10/2014 Academic degree: Master of Science in Engineering
Focus on: Health Sciences, Medical Informatics, Application Development
Master Thesis: *Concept and Implementation of a Web Application for the Digital Assessment in Physiotherapy*
- 09/2008 Bachelor program Information Management, FH JOANNEUM, Graz/Austria
– 07/2012 Academic Degree: Bachelor of Science in Engineering
Focus on: Software Development, Digital Media, Game Design, Usability
Bachelor Thesis 2: *Computer games in therapy: Conception and evaluation of digital games for children and adolescents with ADHD*
Bachelor Thesis 1: *Scratch in Action*

TEACHING EXPERIENCE

- 2018/2017 Programming 0: Playful introduction to programming
Language: German (4 ECTS), TU Graz
Basics of Computer Science (Grundlagen der Informatik), Language: German (2 ECTS)
- SS 2018 Software Technology/Mobile Application: techniques and methods in software technology
Language: English (3 ECTS)
Software Development and Knowledge Management: Simulation of a software project
Language: English/German (3 ECTS)
Design your own App: Playful introduction to programming
(1.5 ECTS) at Karl-Franzens-University of Graz

SCIENTIFIC PUBLICATIONS

- 2018 SPIELER, B., AND SLANY, W. 2018. Game Development-Based Learning Experience: Gender Differences in Game Design, 12th European Conference on Games Based Learning, 4-5 October 2018, Sophia Antipolis, France.
SLANY, W., LUHANA, K. MÜLLER, M., SCHINDLER, C., AND SPIELER B. 2018. Rock Bottom, the World, the Sky: Catrobat, an Extremely Large-scale and Long-term Visual Coding Project Relying Purely on Smartphones, In Proceedings of Constructionism 2018, 20-25 August, 2018, Vilnius, Lithuania.
LODI, M. MALCHIODI, D, MONGA, M., MORPURGO, A., AND SPIELER, B. 2018. Learning to program in a constructionist way, In Proceedings of Constructionism 2018, 20 – 25 August, 2018, Vilnius, Lithuania.
SPIELER, B. AND SLANY, W. 2018. Female Teenagers and Coding: Create Gender Sensitive and Creative Learning Environments, In Proceedings of Constructionism 2018, 20. - 25. August, 2018, Vilnius, Lithuania.
SPIELER, B. 2018. Reinforcing Gender Equality by Analysing Female Teenagers' Performances in Coding Activities: A Lesson Learned. In *GenderIT: Gender IT*, May 14-15, 2018, Heilbronn, Germany. ACM, New York, NY, USA, 12 pages. <https://doi.org/10.1145/3196839.3196871>
- 2017 SPIELER, B., SCHINDLER, C., SLANY, W., MASHINSKA, O., BELTRÀN, M.E., BOULTON, H.; AND D. BROWN. 2017. Evaluation of Game Templates to support Programming Activities in Schools. In *Proceedings of the 11th European Conference on Games Based Learning*. October 5-6, 2017, Graz, Austria. p. 600-609.
SPIELER; B.; SCHINDLER, C., SLANY, W., AND MASHINSKA. 2017. App Creation in Schools for different Curricula Subjects - Lessons Learned. In *Proceedings of the 9th International Conference on Education and New Learning Technologies*. July 3-5, 2017. Barcelona, Spain, p. 5814-5824. DOI: 10.21125/edulearn.2017
AYYAL AWWAD; A.M.; SCHINDLER, C., KUMAR LUHANA, K., ALI, Z., AND SPIELER, B. 2017. Improving Pocket Paint's Usability via Material Design Compliance and Internationalization & Localization Support on Application Level. In *Proceedings of the 19th International Conference on Human-Computer Interaction with Mobile Devices and Services*. ACM, New York, NY, USA, Article 99, 8 pages. <https://doi.org/10.1145/3098279.3122142>
- 2016 BOULTON, H., SPIELER, B., PETRI, A., SLANY, W., SCHINDLER, C., AND BELTRÀN, M.E. 2016. The role of game jams in developing informal learning of computational thinking: a cross-European case study. In *Proceedings of the 8th International Conference on Education and New Learning Technologies*. Barcelona, Spain. July 4-6, 2016, p. 7034-7044. doi: 10.21125/edulearn.2016
SPIELER, B., PETRI, A., SLANY, W., SCHINDLER, C., BELTRÀN M.E., AND BOULTON, H. 2016. Pocket Code: A Mobile App for Game Jams to facilitate Classroom Learning through Game Creation. In *Proceedings of the 6th Irish Conference on game-Based Learning*. September 1-2, 2016, Dublin, Ireland, p. 61-79.

- PETRI, P., SLANY, W., AND SCHINDLER, C., AND SPIELER, B. 2016. Game Design with Pocket Code: Providing a Constructionist Environment for Girls in the School Context. In *Proceedings: Constructionism in Action 2016*. February 1-5, 2016, Bangkok, Thailand, p. 109-116.
- 2015 PETRI, A., SCHINDLER, C., SLANY, W., AND SPIELER, B. 2015. Pocket Code Game Jams: a Constructionist Approach at Schools. In *Proceedings of the 17th International Conference on Human-Computer Interaction with Mobile Devices and Services Adjunct*. August 24-25, 2015. Copenhagen, Denmark, p. 1207-1211. <http://dx.doi.org/10.1145/2786567.2801610>
- BELTRÀN, M.E., URSA, Y., PETRI, A., SCHINDLER, C., SLANY, W., SPIELER B., CABERA-UMPIERREZ, M.F., ARREDONDO, M.T., AND DE LOS RIOS, S. 2015. Inclusive gaming creation by design in formal learning environments: 'girly-girls' user group in No One Left Behind. In *Design, User Experience, and Usability: Users and Interactions*. Los Angeles, USA, Vol. 9187, p. 153-161. https://doi.org/10.1007/978-3-319-20898-5_15
- SPIELER, B., BURGSTEINER, H., MESSER-MISAK, K., GÖDL-PURRER, B., AND SALCHINGER, B. 2015. Development and Evaluation of a web-based Application for Digital Findings and Documentation in Physiotherapy Education. In *Health Informatics meets eHealth. IOS Press*. Vienna, Austria, p. 182-189. doi: 10.3233/978-1-61499-524-1-182

CONTRIBUTIONS TO SCIENTIFIC CONFERENCES

- 2018 European Conference on Game based Learning
Session chair, Sophia Antipolis/France, 10/2018
- Creative Bodies-Creative Minds Conference <https://creative-bodies.uni-graz.at/>
Conference organizing committee, session chair, workshop: Game Jam
Karl-Franzens University of Graz, Graz/Austria, 03/2018
- DigBiz Award 2018 / Student's Conference
Talk: Women in Technology – Design the world of tomorrow
Graz/Austria, 03/2018
- 2017 Student's Conference 2017 „DIGITALIZATION“
Chamber of Commerce Austria, Wien/Austria, 10/2017
Expert talk: Options of young people in the digital world
Workshop: Design your own app with Pocket Code
- 2016 Media festival mla:connect 2016
Talk: How can Computer Science succeed in School Life?
Dschungel Vienna, Vienna/Austria, 10/2016
- Scratch@MIT: Many Paths, Many Styles, Many Connections
Workshop: Engaging and playful activities with smartphones in school
MIT/Lifelong Kindergarten Lab, Boston/USA, 08/2016
- Conference on internet, the economy and society / NetFuture 2016
Workshop: Pocket Code: Learn how to program by creating games/apps
The Egg, Brussels/Belgium, 04/2016

PRIZES & AWARDS

- 2018 Nominee for the award for Excellent Teaching of the TU Graz 2017/2018
- 2017 Closing the Gender Gap Award
NetIdee (<https://www.netidee.at>), Vienna/Austria, 11/2017
Winner of "Best Educational App" Best Mobile App Awards,
<https://bestmobileappawards.com>, 06/2017
- 2016 Winner of the first prize “Reimagine Education Award Europe”
Wharton School of the University of Pennsylvania, Philadelphia/USA, 11/2016

Internet for Refugees Award
NetIdee (<https://www.netidee.at>), Vienna/Austria, 11/2016

- 2015 Silver Winner of the “Lovie Awards” and Winner of the People's Lovie Awards
The International Academy of Digital Arts and Sciences, London/UK, 10/2015
- ICT 2015 'Young Minds' - Grand Prix Best Connect Exhibitor Award
European Commission, Lisbon/Portugal, 10/2015
- First Prize FOPI Innovation Award 2015
Forum of the research-based pharmaceutical industry, Vienna/Austria, 09/2015
- Second Prize EEALTH Research Award 2015
Platform of Health Economy, Vienna/Austria, 05/2015

ACQUISITION OF RESEARCH PROJECTS

- 09/2018 FEMtech (FFG) “Code’n’Stitch”:
– 08/2020 Extension of Pocket Code for the usage in gender-sensitive
stitch/coding courses during handicraft lessons
- 01/2018 RemoteMentor, NetIdee (<https://www.netidee.at/remotementor>)
– 12/2018 Remote mentoring for girls to learn how to program with Pocket Code
- 01/2017 BD Pocket Code, NetIdee (<https://www.netidee.at/pocket-code>)
– 12/2017 Bidirectional extension of Pocket Code, UI to support for RTL languages, e.g. ,
Arabic, Pashto, and Dari

PEER REVIEW ACTIVITIES

- 2018 Constructionism Conference, 04/2018
MobileSoft, IEEE/ACM International Conference on Mobile Software
Engineering and Systems, 01/2018
- 2017 Conference on Gender IT 2018 / GEWINN-Konferenz 2018, 11/2017
IJCCI 2017: 9th International Joint Conference on Computational Intelligence, 04/2017
MobileSoft, IEEE/ACM International Conference on Mobile Software
Engineering and Systems, 03/2017

ADDITIONAL EDUCATION AND TRAINING PROGRAMS

- 11/2017 Program „Gender, Diversity and Intersectionality “
– 06/2018 Gender Institution “GenderWerkstätte” Graz/Austria
Modular course with certificate for gender expert, 6 modules (10 ECTS)
https://www.genderwerkstaette.at/download_file/force/93/171
- 01/2017 Career program for female scientists: competencies, strategies, and networks
– 12/2018 Gender Studies and Gender Equality Office, TU Graz/Austria, 6 ECTS
- 2016 Didactics 2: Lectures in Academic Education
Internal training at University of Technology Graz/Austria
- Didactics 1: Principles of Teaching and Learning in Academic Education, Internal training
at University of Technology Graz/Austria
- Gender-sensitive Didactics in Academic Education
Gender Institution “GenderWerkstätte” and Department of Gender Studies University of
Graz/Austria, 12 hours
- Teaching in English
Montclair State University (MSU) New York/USA, 2.5 ECTS
- 2015 Academic Writing, Internal training at University of Technology Graz/Austria
Effective Scientific Writing in English, Internal training at University of Technology
Graz/Austria

EXPERIENCES

- since 05/2017 Professional group informatics didactics
2016 - 2018 Google Summer of School (GSoC) mentor <https://summerofcode.withgoogle.com/>
2018/2017 Google Code-In mentor <https://codein.withgoogle.com/>

2010 - 2018 Promotion programs for female teenagers (FunTech/FIT)
Workshops at high schools, summer camps, girls coding courses
Scratch education: <https://scratch.mit.edu/>

COMPUTER SKILLS

- SW Dev. Java , VBA, Python, C#
Agile development, Test-Driven Development, Continuous Integration
Visual prog. Pocket Code, Scratch, Snap!, App Inventor, Blockly, Netblocks, Make Code
Mobile / Java (Eclipse IDE), Android Studio
Web App. JavaScript, HTML, XML, XSL, CSS, RSS, PHP
Database ORACLE (SQL Developer, Apex), MySQL, Apache Derby
App. Server JBoss, Tomcat, Apache, GlassFish
Game Dev. Unity 3d, 3ds Max, Blender

LANGUAGES

- English excellent
Italian basics

ASSOCIATION

- Secretary Catrobat (<https://catrobat.com>)
Vice-Chairman BSV Freiland (<https://bogenparcours-freiland.at>)



Graz, 11 October 2018