° 23-01-1968, Bilzen (Belgium) – Male – Nationality: Belgian

Email: bart.bijnens@icrea.cat

Education

27/05/1997 **PhD in Medical Sciences** – Cardiac Imaging, University of Leuven, Belgium

1985-1990 **Bachelor & Master of Engineering Sciences** (Magna cum Laude) University of Leuven
Electrotechnical-Mechanical (Electronics) Engineering Sciences
(Burgerlijk Elektrotechnisch-Werktuigkundig Ingenieur, Electronica)

Appointments

Current **ICREA Research Professor** at the Department of Engineering - *Universitat Pompeu Fabra*, Barcelona, Spain
Visiting Professor *University of Leuven*, Belgium Faculty of Medicine

03/2019-03/2023 **ICREA Research Professor** at the *Institut d'Investigacions Biomèdiques August Pi i Sunyer - IDIBAPS, Barcelona, Spain*
Visiting Professor *University of Leuven*, Belgium Faculty of Medicine
Visiting Professor *University of Zagreb*, Croatia, Medical School

01/2008-03/2019 **ICREA Research Professor** at the Department of Information and Communication Technologies - *Universitat Pompeu Fabra*, Barcelona, Spain
Visiting Professor *University of Leuven*, Belgium Faculty of Medicine
Visiting Professor *University of Zagreb*, Croatia, Medical School

12/2006-01/2008 *University of Zagreb*, Croatia
Visiting Professor
- Medical School, Department of Cardiology
- Faculty of Electrical Engineering and Computing, Dept. of Electronic Systems and Information Processing

University of Leuven (Belgium) Faculty of Medicine – Cardiovascular Imaging & Dynamics
Associate Professor of Cardiovascular Imaging and Dynamics 'Hoofddocent'

05/2005-12/2006 *St George's Healthcare* NHS Trust, London (UK)
Cardiothoracic Information Systems Coordinator
- Information systems management, St Georges Hospital – Cardiothoracic Directorate
- Cardiac Imaging Research coordination

University of Leuven (Belgium) Faculty of Medicine – Cardiovascular Imaging & Dynamics
Associate Professor of Cardiovascular Imaging and Dynamics 'Hoofddocent'

2003 – 05/2005 *University of Leuven*, Faculty of Medicine – University Hospital, Dept. of Cardiology
Professor of Cardiovascular Imaging and Dynamics
Clinical Biomechanical Engineer *University Hospital Gasthuisberg*
'Hoofddocent' University of Leuven / 'Ingenieur' U.Z. Gasthuisberg

2000 – 2003 *University of Leuven*, Faculty of Medicine – University Hospital, Dept. of Cardiology
Associate Professor of Cardiovascular Imaging and Dynamics
Clinical Biomechanical Engineer *University Hospital Gasthuisberg*
'Docent' University of Leuven / 'Ingenieur' U.Z. Gasthuisberg

1997 – 2000 *University of Leuven*, Faculty of Medicine, Department of Cardiology
Guest Associate Professor of Cardiovascular Imaging and Dynamics
Postdoctoral researcher
- Part-time Associate Professor (docent) (teaching appointment)
- Postdoctoral research in Cardiac Imaging

1990 – 1997 *University of Leuven*, Faculty of Medicine, Department of Cardiology
Research Fellow – Cardiac Imaging & Biomedical Engineering
- Research in cardiac imaging (Echocardiography) From 1993: towards a PhD in Medical Sciences.

Experience

Research

- **Author (Google Scholar h-index=78 – citations:21779; SCOPUS h-index=65 – citations: 14313)** of **283 peer reviewed scientific papers** in International Journals (both in the field of Medicine and Engineering), **96** full **proceedings papers** on International Conferences (mainly in the field of Biomedical Engineering) and over >**530 abstracts** (mainly Medical Conferences) and **>250 invited lectures** at major international conferences, workshops and academic and research centers. Most of the research was performed in the field of Cardiac Imaging, Mechanics and Physiology and in close collaboration with clinical researchers (often with whom the senior authorship was shared), contributing with the ideas and supervision of the engineering/physics and fundamental physiological content of the work.
- **Promoter – Author and Operational Manager** of >50 **Research Projects** in Cardiovascular Diseases (representing > € 5,500,000).
- **Accreditation** (04/2011) of '**Advanced Research**' from **AQU** (L'Agència per a la Qualitat del Sistema Universitari de Catalunya), therefore officially being recognised to have the scientific qualities required for a Full Professor in Catalunya.
- **Author, editor, project manager and publisher** of the book *'Doppler Myocardial Imaging – A Textbook'*
- **Associate Editor** of the *European Heart Journal* (2002-2005).
- **Associate Editor** of *IEEE Transactions on Information Technology in Biomedicine* (2002-2009).
- Member of the International **Editorial Board** of the *European Journal of Echocardiography* (since 2006)
- **Organiser** of numerous **symposia** (*Doppler Myocardial Imaging* - 6 symposia in Leuven since 1999-2005; ±150 participants; *Clinical Echocardiography@StGeorge's* London, 2006; *Cardiac Resynchronization Therapy and Dilated Cardiomyopathies: understanding the deformation & mechanics of the failing ventricle*, Dubrovnik, 2007; *1st Fetal Cardiac Function Symposium and the 7th European Echocardiography Course in Congenital Heart Disease in Barcelona, 2012; and the Barcelona Myocardial Strain Hands-on Workshop, 2014-2020*).
- **Member** of the **Photon Science Division Proposal Review Committee (*Tomography*)** of the Paul Scherrer Institute, Switzerland (2018-2020).
- **Member** of the **Scientific and Organizing Committee** of the yearly General Congress and the yearly Echocardiographic Congress (Euroecho) of the *European Society of Cardiology*.
- **Reviewer** of several International Journals, both in Clinical Cardiology and Biomedical Engineering.

Management & Organisation

Research

- **Group Leader:** Translational Computing in Cardiology – UPF Dept. of Engineering (formerly at IDIBAPS)
- **Senior PI** of *BCN MedTech* - Universitat Pompeu Fabra, Barcelona, Spain (>100 researchers – Engineers, Physicists and Scientists).
- **Deputy Director** of CISTIB *(Center for Computational Imaging & Simulation Technologies in Biomedicine)* - UPF, Barcelona, Spain (>45 researchers, budget ~ € 2,000,000/y) (2008-2009).
- **Operational Manager & Co-Director** of the **Research Group *Cardiac Imaging Research*** of the *Department of Cardiology* of the *University of Leuven* (30 researchers – Cardiologists, Scientists, Physicists and Engineers; budget > € 30,000/y excl. salaries) (1995-2005).
- **Member of the Research Council** of the *University of Leuven* (responsible for managing a research fund of € 50,000,000) (ad-hoc, 2002-2005).
- **Operational Manager and Associate Editor** of the Leuven **Editorial Office** of the scientific journal *European Heart Journal* (Editor in chief: F. Van de Werf; IF: 6.1; 3rd most important journal in clinical cardiovascular diseases) (2002-2005).
- **Secretary** of the ***Professors Evaluation Committee*** of the group Biomedical Sciences – non-clinicians of the **University of Leuven** (2002-2005).

Clinical

- **Coordinator** of **Clinical Cardiac Information Systems**, including Supervision and Design of processes for Procedure Planning (Cathlab) and Medical Registration (Coding) – *Department of Cardiology, University Hospital Gasthuisberg Leuven*.
- **Project Manager - improvement and standardisation of Clinical Coding** (ICD10; OPSC 4.3) in Cardiology and Cardiothoracic Surgery with a focus on *Payment by Result* Hospital Financing (HRG coding) – *Cardiothoracic Directorate of St. George's Hospital, London*
- **Member of the Management Group of the Clinical Echo Lab** *University Hospital Gasthuisberg.*
- **Coordinator/Expert of Medical Equipment Purchasing** (Ultrasound Scanners; Cathlab Equipment; Monitoring Equipment) – *Dept. of Cardiology, University Hospital Gasthuisberg.*

Education

- **Leader of the curriculum preparation committee** of the new degree on ***Biomedical Engineering*** of the *Universiat Pompeu Fabra, Barcelona* (2009).
- **Founder and Educational Director** of the international oriented (English teaching) **Postgraduate Programme *Master of Medical Imaging*** of the *University of Leuven* (since 2000; 30 students/y).
- **Operational Manager and Assistant Educational Director** of the Programme ***Bachelor and Master in Biomedical Sciences*** of the *University of Leuven* (BA:3y; MA: 2y; 520 students/y).
- **Chairman** of the **Visitation & Accreditation Committee** *Bachelor and Master in Biomedical Sciences* of the *University of Leuven* (spring 2005).
- **Promoter and Operational Manager** of several **Educational Improvement Projects** in the Faculty of Medicine – *University of Leuven*, amongst which the *'Educational Development Programme – Faculty of Medicine'* (budget € 200,000/y).
- **Secretary** of the **Exam & Graduation Jury** *Master of Biomedical Sciences*.

Information Systems

- **Deputy Director for Infrastructures**, Dept. of Engineering, UPF, responsible for scientific- and super-computing.
- **Information Systems Coordinator** of the Cardiothoracic Directorate of *St. George's Hospital*, London, responsible for the Clinical Information Systems and improving the collection and interpretation of information for operational management.
- **Coordinator** of the informatics of the *Department of Cardiology* of the *University Hospital Leuven* (PACS/Clinical Information Systems/Organisational tools/equipment).
- **Member** of the *University of Leuven* **Steering Committee** of the TOLEDO Project, responsible for the University wide Electronic Learning Environment (40,000 users, students and academic staff).
- **Member** of the **Architecture-Cell** (students & education) of the *Annemoon-Project* (Electronic Management Tools – Administrative Information System) *University of Leuven*.
- **Founder/Manager** of the **Website** of the *European Society of Cardiology* (www.escardio.org).

Other

- **Actively participated** in the *University of Leuven* postgraduate programme on ***Hospital Management and -Planning*** (no official degree obtained since a Medical Doctor Degree is required for this).

Teaching

- **Lecturer** of academic curriculum courses (graduate and post-graduate; Faculty of Medicine and Faculty of Engineering Sciences – KULeuven; Universitat Pompeu Fabra; Universitat de Barcelona; University of Zagreb) on Medical Imaging; Cardiac Imaging and Mechanics and Medical Literature/research.
- **Presenter** of numerous Invited Lectures in Cardiac Imaging and Mechanics on International Conferences in Clinical Cardiology and Biomedical Engineering.
- **Organiser/Teacher** of regular specialised courses in Cardiac Phsyiology and Clinic Cardiac deformation analysis for Cardiologists.
- **Promotor/Supervisor** of many **PhD** students (14 finished; 7 ongoing)
- **Promotor/Supervisor** of >50 **Master & Bachelor** students

Research Projects (funding obtained)

1. *Understanding the mechanisms inducing PoTS and PoTS-like symptoms in the Plain Communities. 15/11/2024-31/12/2027.* **POTS Research Trust Fund**. PI ($175,000)
2. *Detailed cardiac functional and electrical phenotyping in Propionic Acidemia. 2024.* **Propionic Acidemia Foundation**. PI ($41,000)
3. *TransCOR – translational computing solutions in cardiology,* 1/1/24 – 31/12/25. **Maria de Maetzu Innovation Program 2023,** DTIC (UPF): Sergio Sánchez / Bart Bijnens (45.000€)
4. *TransCOR – translational computing solutions in cardiology.* 1/6/23 – 31/12/23. **Xartec Salut** - Intellectual Property. Sergio Sánchez / Bart Bijnens. In kind: consulting services to develop an IP strategic roadmap and patentability study for TransCOR
5. *TransCOR – translational computing solutions in cardiology* 1/9/23 – 31/12/23. **Xarxa RDI-IA Innovation Lab,** Sergio Sánchez / Bart Bijnens (In kind: strategic consultancy services - funding roadmap, regulatory, business viability)
6. *AI-CARAMBA - Advanced Monitoring cloud-based platform for children with Congenital Heart Disease.* 01/12/22-30/11/25. **Spanish Ministry of Science and Innovation - Proyectos de Transición Ecológica y Transición Digital (TED2021-132879B-I00).** Co-PI. (€304.750)
7. *TransCOR – translational computing solutions in cardiology.* 1/9/22 – 31/12/22. **Xartec Salut**, Sergio Sánchez / Bart Bijnens. In kind: consulting services to perform a preliminary market study for TransCOR
8. *Caracterización multimodal no invasiva de la hipertrofia ventricular izquierda: Implicaciones pronosticas y terapéuticas.* 2022-2023**. Instituto de Salud Carlos III - Spanish Ministry of Science and Innovation. FIS - PI22/01598.** CoPI (56,870 €)
9. Industrial Doctorate UPF – Hospital Sant Joan de Deu – **AGAUR** – Alba Isabel, PI.
10. *CoALeS – Improving long term outcome in infants with coarctation through machine learning for data integration from fetus to childhood. 04/2021-31/12/2024.* **Fundació La Marató de TV3.** PI (€299,303)
11. *Machine learning analysis for the Umbiflow International Study.* 07/2021-12/2021. **World Health Organisation**. Project Leader (*€4000*)
12. *3D analysis of human multi-organ biopsies from patients who died from severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)* 2020, **SLS beamtime**, PI (in kind 15 shifts valued at 100,000 CHF).
13. *Machine learning from fetal flow waveforms to predict adverse perinatal outcomes. 01/01/2021-31/12/2024.* **Bill and Melinda Gates Foundation** *through* **Aga Khan University, Karachi**. CoPI (US$ 792,959)
14. *Incorporating Machine Learning approaches to optimize the clinical workflow and throughput in pediatric echocardiography.* 01/09/2020-28/02/22. **Industrial contract Hitachi USA** & Cardiology Care for Children. PI ($100,000)
15. *Fenotipo tisular y funcional de la miocardiopatía hipertrófica con imagen multimodal: caracterización multimodal y multiescalar no invasiva".* 01/01/2021-31/12/2021. **Proyecto de Investigacion Clínica en Cardiologia de la Fundación Española del Corazón 2020.** PI (€18000).
16. *Comprehensive assessment of left ventricular function in heart failure with preserved ejection fraction by deformation imaging and flow analysis utilizing machine learning techniques.* 15/09/2019-14/04/2020. **European Society of Cardiology Research Fellowhsip** - Dora Fabijanović. Supervisor (€25,000)
17. *A Simplified, Effective, Labour Monitoring-to-Action (SELMA) tool, based on Interpretable Machine Learning.* 16/11/2018-15/11/2019. **World Health Organisation**. Project Leader ($24,884)
18. *Data-driven knowledge extraction.* 01/2016-12/2019. **Maria de Maeztu Strategic Research Program. Spanish Ministry of Economy and Competitiveness.** Scientific Guaranter (€2,000,000)
19. *Machine learning from fetal flow waveforms to predict adverse perinatal outcomes*. 01/01/2018-31/12/2018. **Bill and Melinda Gates Foundation.** Collaborator ($327,352)
20. *CardioFunXion: Towards a novel paradigm for cardiac function assessment from imaging*. 01/09/2015-31/08/2019, **EU H2020- MARIE Skłodowska-CURIE ACTIONS, Innovative Training Networks - European Industrial Doctorates**. Project Leader (€1,021,497)
21. *Evaluación del riesgo de muerte súbita cardíaca en pacientes Duchenne, relacionando la forma y deformación con modelos computacionales*. 09/2016-08/2018, **Duchenne Parent Project Spain.** Project leader (€35,000)
22. *Development and validation of a unifying Model of the Heart to integrate*

heterogeneous, multimodal and multiscale measurements and information into a consistent representation. **Spanish Ministry of Economy and Competitiveness** (grant TIN2014-52923-R) and **FEDER**. 01/01/2015 - 31/12/2017 (€221,067)

23. *Studying cardiac microstructure of ex-vivo human hearts with congenital malformations using high-resolution phase contrast X-ray Tomography.*2016-18, **SLS beamtime**, PI.
24. *Studying cardiac microstructure of ex-vivo human hearts with congenital malformations using high-resolution phase contrast X-ray Tomography.*2015, **Diamond Synchrotron beamtime**, PI.
25. *Computer model derived indices for optimal patient-specific treatment selection and planning in Heart Failure (VP2HF)*. 01/10/2013-30/09/2016, **EU FP7**, Co-PI (€460,400)
26. *X-ray phase-contrast synchrotron radiation-based micro-CT of a whole rodent heart for the assessment of detailed anatomy, myofiber structure and vasculature*. 2013, **ESRF Synchrotron beamtime**, PI.
27. *Identification of (ultra-) structural changes in fetal rabbit cardiomyocytes, induced by intrauterine growth restriction.*2014, **BESSY Synchrotron beamtime.** PI.
28. *Identification of (ultra-) structural changes in fetal rabbit cardiomyocytes, induced by intrauterine growth restriction.*2014, **BioStruc-X project.** PI.
29. *Aprendizaje estadístico de representaciones para el análisis de pacientes con insuficiencia cardiac*. 01/09/2014-31/08/2018. **Obra Social "la Caixa"** (Sergio Sánchez Martínez). PI (€113500).
30. *Modelización y tecnología de la electroporación clínica con énfasis en el contexto de sus efectos sobre el corazón.* 01/05/2013-30/04/2017 **Ministerio de Educación, Cultura y Deporte – FPU** (Quim Castellvi)**.** PI (€55,200)
31. *Efecto del entrenamiento crónico sobre el ventrículo derecho: análisis por imagen de la deformación miocárdica en humanos y en un modelo matematico computacional*01/01/2013-31/12/2013. **Spanish Society of Cardiology,** Co-PI **(**€9.000)
32. *Computational model for the understanding of cardiovascular dysfunction in fetuses and children* 01/09/2012-31/08/2016. **Ayudas predoctorales de formación en investigación en salud (PFIS)** – (Patricia García-Cañadilla)PI (€62.400)
33. *An interdisciplinary, model-based, approach towards understanding changes in cardiac performance induced by competitive sports, abnormal foetal development and eating disorders.* 01/01/12-31/12/14. **Instituto de Salud Carlos III - Acción Estratégica de Salud (FIS)**, PI (€120,615.22).
34. *Lumped models of the cardiovascular circulation* 01/01/12-31/12/14. **PhD Scholarship – Dept. of Information and Communication Technologies, UPF**, PI (€43,200).
35. *Analysis of haemodynamic and biomechanic properties of the aorta in dissections using an integrated approach, focussed on the complementarity of in-silico, in-vitro and in-vivo.* 01/02/11-31/01/14 **Fondo de Investigación Sanitaria - Beca predoctotal** (P. Rudenick - FI-2011), CoPI (€43,200)
36. *The effect of chronic exercise on the right ventricle: image based myocardial deformation analysis and histopathology in a rodent model.* 01/10/2010-30/09/2011. **Premi Final Residencia "Emili Letang" - Hospital Clinic (**Beatriz Merino Sierra**)**, CoPI (€20,000).
37. *Assessment of ventricular remodeling and contractile reserve in Marfan Syndrome.* 01/09/2010- 31/08/2011. **SEC y FEC para Investigación clínica en Cardiología, Sociedad Española de Cardiología***,* CoPI (€12,000).
38. *Advanced cardiac image quantification: Application to assess therapeutic mechanisms in cardiac resynchornisation therapy.* 01/10/2009-30/09/2010. **Premi Final Residencia "Emili Letang" - Hospital Clinic (**Adelina Doltra Magarolas**)**, CoPI (€20,000).
39. *Lider EU: Aortic Outcomes Research, Trans-Atlantic (AORTA).* 26/06/2009. **Agencia de Gestio d'ajuts universitaris i de recerca.** PI (€1867,63).
40. *Education and training in research tools for cardiac deformation analysis.* 01/01/2008-31/12/2009 **Industrial contract** GE Healthcare: PI (€18,000).
41. *euHeart* **European Community FP7 Integrated Project.** 01/06/2008-30/09/2009 Collaborating Senior investigator (€512.137,00)
42. *VPHNetwork of Excellence* **European Community FP7 Network of Excellence** *01/06/2008-30/09/2009* Collaborating Senior investigator (€252.544,00)
43. *Bloodflow simulations in the human aorta* **Becas de Colaboración para la Iniciación a la Investigación del Ciber BBN.** 01/03/2008 -28/02/2009 PI (€7.200,00)
44. *An integrated, model based, approach for the quantification of cardiac function based on cardiac imaging.* 2007, **The National Foundation for Science, Higher Education and Technological Development of the Republic of Croatia**, promoter-project leader (€

90,200).

45. *Ventricular function in valve disease – when does the ventricle fail irreversibly, can this be detected by non invasive imaging using strain rate echocardiography?* 2006-2008, **British Heart Foundation** Co-promoter (£80,419.36 fellowship + working expenses)
46. *Multi-dimensional quantification of myocardial deformation using echocardiographic imaging: development, implementation and validation*. 2004-2006, **FWO (Fund for Scientific Research – Flanders) research project**: promoter-project leader (€ 17,344 working expenses)
47. *Non-invasive Imaging and Dynamic Modelling of the Human Myocardium*, 2002-2005, **KULeuven, Research Fund: Verkennende Internationale Samenwerking**: promoter-project leader (€ 198,300).
48. *The Development and Validation of Novel Methods to Quantify Stress Echocardiography*, 2001-2005, **KULeuven, Research Fund: Onderzoekstoelage**: Co-promoter (10,000,000 Bfr).
49. *Three-dimensional analysis of myocardial function based on fast digital Echocardiographic methods*, 2000-2004, **FWO research project**: promoter-project leader (1.500.000 Bfr equipment, 1,000,000 Bfr working expenses).
50. *An experimental study of the pathophysiology underlying the cyclic variation of the integrated backscatter in normal and ischemic myocardium*, 2002-2003, **FWO Grant for researchers**: promoter-project leader (500,000 Bfr working expenses).
51. An experimental study of the origin and the potential clinical usefulness of post-systolic thickening in chronic ischemic myocardium, 2002-2005, **FWO research project:** Co-promoter (3,000,000 Bfr working expenses).
52. *Research and development of novel echocardiographic methods,* 2000-2005, **LRD (Leuven Research and Development) project** in collaboration with GE Vingmed Ultrasound, Norway: project coordinator (10,000,000 Bfr personnel, 10,000,000 Bfr. equipment).
53. *Clinical echocardiography,* 2000-2002, Sponsoring Visiting Professorship Liv Hatle **Industrial contract** GE Vingmed Ultrasound, Norway: project coordinator(10,000,000 Bfr)..
54. *Improvement of detection methods in contrast echocardiography*, 1999, **LRD project** with GE Vingmed Ultrasound, Norway: project coordinator (265,000 Bfr).
55. *Cardiac Ultrasound: European Research Frontiers*, 1999, **FWO grant for the organization of scientific meetings in Belgium**: promoter-project leader (100,000 Bfr).
56. *Contrast echography in an animal model of controlled coronary perfusion*, 2000, **LRD project** with Bracco Research SA (Switzerland): project coordinator (240,000 Bfr).

Educational Projects (funding obtained)

- Implementation of a hands-on, integrative, practicum for Acoustic Engineering. **UPF Pla Clik** (Pla d'Ajuts de Suport a la Qualitat i a la Innovació en Aprenentatge i Coneixement) project, 2024-2025, €1500.
- *Implementation and Evaluation of the use of Multimedia Simulations for the education of human physiology and pathophysiology.* **Education oriented research, development and implementation projects (OOI), K.U.Leuven**, 1999-2000: PI-project leader (4,000,000 Bfr).
- *IMBEZE: Implementation of Supervised Self-learning*. **Education convenant Faculteit Geneeskunde** 2003-2005, PI-project leader (€ 139,000).
- *Educational Development Programme*. **Faculty of Medicine**, University of Leuven, PI-project leader. Start 2004 (€ 200,000/y)

Other

- *Languages: Dutch: Mother tongue; English: Proficient user; French: Independent user; German: Basic user; Spanish: Notions; Catalan: Notions*
- *Certificat – Project leader - animal research*

PhD Supervision

Ongoing:

- **Škreb, Nikola.** *Graft rejection detection in heart transplantation recipients by synchrotron X-ray phase contrast imaging.* University of Zagreb, Croatia.
- **Fabijanović, Dora.** *Comprehensive assessment of heart failure by deformation imaging and flow analysis utilizing machine learning techniques.* University of Zagreb, Croatia.
- **Villanueva Baxarias, Inma.** *Computational modelling of the fetal circulation.* Universitat Pompeu Fabra, Spain
- **Modrego Muñoz, Adriana.** *Implementation of Machine Learning-based tools for clinical decision-making in pediatric Cardiology.* Universitat Pompeu Fabra, Spain
- **Sara Moya.** *Temporal predictions of cardiotoxic effects in Paediatric Oncology patients.* Universitat Pompeu Fabra, Spain in Collaboration with Hospital Sant Joan de Déu.
- **María Pérez Rodríguez.** *Understanding Congenital Heart Disease through multimodal data integration using Machine Learning.* Universitat Pompeu Fabra, Spain
- **Mariana Seabra.** *Quantifying cardiac and vascular microstructures using phase-contract synchrotron imaging.* Universitat Pompeu Fabra, Spain

Finalised:

- **Martí, Pablo-Miki.** *Interpretable machine learning for exploring randomised clinical trials and cohorts.* Universitat Pompeu Fabra, Spain; 27/08/2023
- **Loncaric, Filip.** *Phenotyping of Left Ventricular Hypertrophy using Etiology-Discriminative Deformation Imaging and Data Integration.* Universitat of Barcelona, Spain; 10/09/2021
- **Nogueira, Mariana***. A dimensionality reduction approach to the study of clinical longitudinal data.* Universitat, Pompeu Fabra, Spain; 5/10/2020.
- **Bernardino, Gabriel**. *Computational anatomy as a driver of understanding structural and functional cardiac remodeling.* Universitat Pompeu Fabra, Spain; 16/12/2019.
- **Baličević, Vedrana.** *Model-based segmentation and texture analysis of multi-modal cardiac images*. University of Zagreb, Croatia; 11/07/2019.
- **Sánchez Martínez, Sergio**. *Multi-feature machine learning analysis for an improved characterization of the cardiac mechanics*. Universitat Pompeu Fabra, Spain; 21/09/2018.
- **Castellví Quim.** *Non-focal non-thermal electrical methods for cancer treatment*. Universitat Pompeu Fabra, Spain; 18/09/2017
- **Paun, Bruno.** *Image based analysis and modeling of the detailed cardiac ventricular anatomy*. Universitat Pompeu Fabra, Spain; 24/07/2017.
- **García Cañadilla, Patricia.** *Multiscale cardiovascular analysis and simulations for the understanding of intra-uterine cardiovascular remodelling*. Universitat Pompeu Fabra, Spain; 02/07/2015.
- **Rudenick, Paula.** *Analysis of the haemodynamic and biomechanical properties of the lumina in aortic dissections using an integrated approach focussing on the complementary value of in-silico, in-vitro and in-vivo assessments*. Universitat Autònoma de Barcelona, Spain; 27/06/2014.
- **González, Anna.** *Multiscale characterization of cardiac remodeling induced by intrauterine growth restriction at organ, cellular and subcellular level*. Universitat de Barcelona, Spain; 26/06/2014.
- **Hrvoje, Kalinic.** *An integrated, model based, approach for the quantification of cardiac function based on cardiac imaging*. University of Zagreb, Croatia; 17/10/2012.
- **Maja, Cikes.** *A Study of Regional and Global Myocardial Morphology and Function in Hypertrophically Remodelled Hearts*. University of Zagreb, Croatia; 18/12/2009.
- **Chirine, Parsai.** A*ssessing response to cardiac resynchronisation therapy in heart failure*. St. George's, University of London, UK; 01/09/2009.
- **Marciniak, Anna.** *Ventricular function in valve disease? Fail When does the ventricle irreversibly, can this be detected by non invasive imaging using strain rate echocardiography?*. St. George's, University of London, UK; 2009.
- **Langeland, Stian.** *Multi-dimensional quantification of myocardial deformation using echocardiographic imaging: development, implementation, and validation*. KU Leuven, Belgium; 08/02/2007.
- **Jan D'hooge**. *Interaction of Ultrasonic Waves and Tissues: modeling, simulations and applications.* KULeuven, Belgium; 1999.

Prizes & Awards

- **Awardee of the honorary Inge Edler Echocardiograhy Lecture**. Department of Cardiology. Lund University Sweden, 2017.
- **Award for International Cooperation and Scientific Productivity** from the School of Medicine of the University of Zagreb, Croatia. Handed out during the celebration of the 98th anniversary of the School of Medicine, December 17, 2015.
- **Advanced Research Accreditation,** AQU (L'Agència per a la Qualitat del Sistema Universitari de Catalunya), 03/2011
- **ICREA Research Professorship,** Catalan Institution for Research and Advanced Studies, 01/09/2008.

Since from very early on in his career, B. Bijnens has focused on creating a stimulating research environment, especially focusing on coaching a lot of people. Working in a multidisciplinary environment, he has provided direct input and support for several prizes won by young researchers, both medical and engineering. These include:

- Finalist Euroecho Young Investigators Award 2004. Witold Streb.
- Young Researcher award at the Croatian Congress of Atherosclerosis 2007. M. Cikes, 2007.
- Finalist Young Investigator Award EACTS 2008. Anna Marciniak. Prediction of postoperative LV systolic function in patients with chronic aortic regurgitation undergoind valve replacement.
- UNESCO L'Oreal award "For Women in Science" 2008. M. Cikes.
- Young Researcher award at the Fifth Central European Meeting on Hypertension & Second Croatian Congress on Hypertension 2009. M. Cikes.
- Best Poster award Computers in Cardiology 2009. V. Zimmerman.
- Finalist ESC Young Investigators Award 2010. N. Duchateau.
- Winner Euroecho Young Investigators Award 2010. N. Duchateau.
- Ramon Margalef Award University of Barcelona 2010. F. Crispi.
- High Score Abstract Euroecho 2013, N. Duchateau.
- Finalist Young Investigator Award Europrevent 2014. M. Sanz.
- Finalist Young Investigator Award Euroecho 2014. M Sanz.
- Finalist Young Investigator Award Europrevent 2015. M Sanz.
- Young Investigator Award Europrevent 2017. Sanz De La Garza M.
- Young Investigator Award Europrevent 2018. Sanz De La Garza M.
- Young Investigator Award – Basic Science, Euroecho 2019. F Loncaric.
- Young Investigator Award American Society of Echocardiography 2020, finalist. Loncaric F.
- Best Oral Abstract Award – AEPC 2021 - 2nd finalist, Garcia-Canadilla P.
- Beques Daniel Bravo 2022 per a estades curtes d'investigació biomèdica a l'estranger – Pablo Marti
- Beques Daniel Bravo 2024 per a estades curtes d'investigació biomèdica a l'estranger – Inma Villaneuva

Publications – Bart Bijnens (Compiled 04/2024)

▪ International Journals

2024

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▪ Books – Author/editor

1. Sutherland GR, Hatle L, Claus P, D'hooge J and **Bijnens B**. **Doppler Myocardial Imaging - a Textbook**. In *Publisher: BSWK, Hasselt, Belgium*, 2006.

2. **Bijnens B**. **Exploiting radiofrequency information in echocardiography. Acquisition, processing and illustrated applications.**. In *Acta Biomedica Lovaniensia*, 1997.

▪ Books – Contributions

1. Nogueira M, **Bijnens B**. **AI and Decision Support**. In Duchateau N, King AP, editors. *AI and Big Data in Cardiology: A Practical Guide*. Springer Nature; 2023.
2. **Bijnens, Bart,** Filip Loncaric, and Silvia Montserrat. "**Cardiac Mechanics I: 3D Speckle Tracking Echocardiography**." In Multimodality Imaging Innovations In *Adult Congenital Heart Disease,* pp. 99-114. Springer, Cham, 2021.
3. **Bijnens, Bart,** Filip Loncaric, and Jan D'hooge. "**Principles of 3D Echocardiographic Imaging**." In *3D Echocardiography*, pp. 1-12. CRC Press, 2020.
4. Duchateau, Nicolas, Loncaric, Filip, Sitges, Marta, **Bijnens, Bart**. "**Speckle Tracking**." In *3D Echocardiography*, pp. 215-222. CRC Press, 2020.
5. **Bijnens B** and D'hooge J. **Principles of 3D Echocardiographic Imaging**. In *3D Echocardiography*. Shiota, Takahiro, CRC Press, 2013.
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9. D'hooge J and **Bijnens B**. **The principles of ultrasound based motion and deformation imaging**. In *Doppler Myocardial Imaging - a textbook* Eds. Sutherland GR, Hatle L, Claus P, D'hooge J and **Bijnens B**. , 2006.
10. Sutherland GR and **Bijnens B**. **Velocity and Deformation Imaging in Defining Clinical Ischaemic Substrates**. In *Doppler Myocardial Imaging - a Textbook* Eds. Sutherland GR, Hatle L, Claus P, D'hooge J and **Bijnens B**. , 2006.
11. **Bijnens B**, D'hooge J, Jamal F and Sutherland GR. **The changing role of echocardiography in cardiac imaging**. In *Understanding cardiac imaging techniques, from basic pathology to image fusion* Eds. Marzullo P. :45-59, 2001.

- Invited Talks

1. **Bijnens B, Heart deformation imaging, from principles to clinical applications through technical progress and challenges**. Functional Imaging and Four-D Advanced Echocardiography Course, Tunis, Tunisia, 22 Feb 2025.
2. **Bijnens B, Electrical and mechanical remodelling in corrected Tetralogy of Fallot**. Myocardial Function Imaging, Leuven, Belgium, 07 Feb 2025.
3. Bijnens B, **How to measure serial stenoses.** Lucerne Course in Clinical Echocardiography. Luzern, Switzerland, 22 Jan 2025.
4. **Bijnens B, Doppler echocardiography, Physical principles, assumptions & implications; Imaging perspectives on AI-based precision medicine.** EuroEcho-Imaging 2024, Berlin, Germany, 12 Dec 2024.
5. **Bijnens B, Practical Blood Pool Doppler Imaging – Translation from experts to clininal practice.** Advanced Swiss Cardiac Imaging Course. Aarau, Switzerland, 27 Oct 2024.
6. **Bijnens B, Machine learning for clinical decision-making**. School of Artificial Intelligence, Beijing Normal University, Beijing, China, 09 Sep 2024.
7. **Bijnens B, ML for individual clinical decision making**. Dept. Circulation and Medical Imaging, Norwegian University of Science and Technology, Trondheim, Norway, 20 Nov 2023.
8. **Bijnens B, ML for individual clinical decision making beyond large classifier models**. CREATIS, Lyon, France, 23 Oct 2023.
9. **Bijnens B, Machine learning to predict adverse perinatal outcomes**. Grand Challenges Annual Meeting 2023, Dakar, Senegal, 08 Oct 2023.
10. **Bijnens B, Practical Strain Imaging Course – Translation from experts to clininal practice**. Advanced Swiss Cardiac Imaging Course, Aarau, Switzerland, 14 Sep 2023.
11. **Bijnens B, Machine learning for clinical decision-making**. School of Artificial Intelligence, Beijing Normal University, Beijing, China, 28 Aug 2023.
12. **Bijnens B, Improving Maternal & Child Health Outcomes using Data Science Approaches**. Health Data Science Conference, Aga Khan University, Karachi Pakistan – Online, 4 Mar, 2023.
13. **Bijnens B, Dyssynchrony in the fetus, does it exist** ? Myocardial Function Imaging 2023, Leuven, Belgium, 10 Feb, 2023.
14. **Bijnens B, Artificial intelligence in the care of patients with congenital heart disease**. Sevilla Cardiology Sessions, Virgen Del Rocio University Hospital, Sevilla, Spain. 26 Jan 2023.
15. **Bijnens B, Aging of the heart: Diastolic function; How to perform a reliable strain analysis**. Echokardiographie, Luzern. Switzerland. 18 Jan, 2023
16. **Bijnens B, Integrating imaging and clinical data for decision making in fetal and pediatric applications.** AI Conference 2022, Hospital Sant Joan de Deu, Barcelona, 18 Nov 2022.
17. **Bijnens B, Understanding haemodynamics and filling in HFpEF**. When does echocardiography change clinical practice ? The added value of novel methods. Faenza, Italy, 5 Nov, 2022
18. **Bijnens B, Cardiac mechanics in the athlete heart.** When does echocardiography change clinical practice ? The added value of novel methods. Faenza, Italy, 5 Nov, 2022
19. **Bijnens B, Artificial Intelligence in cardiology : hype or hope ?** 31ème journée de cardiologie ULB, Brussels, Belgium, 8 Oct, 2022
20. **Bijnens B, How myocardial microstructure determines segmental deformation, and how deformation can tell us something about microstructure in hypertrophic hearts.** Myocardial Velocity and Deformation Imaging, Leuven, Belgium, 12 Feb, 2022
21. **Bijnens B, Hemodynamics - Mitral and Tricuspid Annulus.** Echokardiographie, Luzern, 26 Jan, 2022
22. **Bijnens B, Hemodynamics - Shunts.** Echokardiographie, Luzern, 26 Jan, 2022
23. **Bijnens B, Dyssynchrony - Is there a role for echocardiography in CRT ?;** When does echocardiography change clinical practice ? The added value of novel methods. Faenza, Italy, 9 Oct, 2021**.**
24. **Bijnens B, Differential diagnosis in hypertrophic phenotypes - The role of echocardiography and MRI;** When does echocardiography change clinical practice ? The added value of novel methods. Faenza, Italy, 9 Oct, 2021**.**
25. **Bijnens B, Valve disease and assessing cardiac dysfunction;** When does echocardiography change clinical practice ? The added value of novel methods. Faenza, Italy, 9 Oct, 2021**.**
26. **Bijnens B, The future - new tools and artificial intelligence** When does echocardiography change clinical practice ? The added value of novel methods. Faenza, Italy, 9 Oct, 2021.
27. **Bijnens B. AI in Clinical Decision Making - Are We Ready ?** American Society of Echocardiography 2021 - A Revolution in Cardiovascular Imaging, 19 Jun, 2021
28. **Bijnens B. Data mining and physiological modelling for interpretable patient stratification.** 5th Barcelona VPH Summer School, 8 Jun, 2021
29. **Bijnens B. Machine learning and clinical decision making.** EACVI webinar: Digital health in CVI: challenges and future perspectives, 10 Mar, 2021
30. **Bijnens B. HFpEF - Non-invasive assessment of hemodynamics**, Echokardiographie, Luzern – online, 14 Jan, 2021
31. **Bijnens B. Artificial intelligence and machine learning in practice,** EACVI - Best of Imaging 2020 – Online, Discussion panel, 9 Jan, 2021
32. **Bijnens B. Cardiac adaptation to elite training,** Online - Great Ormond Street Hospital Multidisciplinary Web Sessions, 14 Jul, 2020
33. **Bijnens B**. **Which are the expectations, if any, for the coming six months period? The view from an expert on Artificial Intelligence.** In Webinar: Heart Transplantation in the current COVID-era, 17 July, 2020.

34. **Bijnens B**. **Machine learning for clinical decision making and improved understanding in Cardiology**. Cardiovascular Medicine Lunchtime Seminar, University of Oxford., UK - United Kingdom, 24 Feb, 2020.
35. **Bijnens B**. **Machine learning to explore subtle changes in full regional strains patterns**. Myocardial Velocity and Deformation Imaging, Leuven, Belgium, Belgium, 6 Feb, 2020.
36. **Bijnens B**. **3D cardiac shape analysis separating relevant biventricular remodelling from expected confounding factors in athletes and adults born with low birthweight**, Myocardial Velocity and Deformation Imaging, Leuven, Belgium, Belgium, 6 Feb, 2020.
37. **Bijnens B**. **In the footsteps of giants - Where do we come from and where are we heading for: Will artificial intelligence take over**?, Giants of Echocardiography, Belgium, 4 Feb, 2020.
38. **Bijnens B**. **Non invasive assessment of hemodynamics in Aortic Regurgitation**, Echokardiographie, Luzern, Switzerland, 16 Jan, 2020.
39. **Bijnens B**. **Myocardial fibers and cardiac mechanics**. EuroEcho 2019 - Vienna, Austria, 5 Dec, 2019.
40. **Bijnens B**. **Which AI for my heart failure patient ?.** EuroEcho 2019 - Vienna, Austria, 5 Dec, 2019.
41. **Bijnens B**. **Clustering Strain curves : does it help?,** EuroEcho 2019 - Vienna, Austria, 5 Dec, 2019.
42. **Bijnens B**. **Imaging and quantifying tissue and vascular microstructure by synchrotron X-ray micro-CT**, Research seminar - Beijing Normal University, China, 22 Nov, 2019.
43. **Bijnens B**. **Machine learning for assessment of cardiac hemodynamics in HFpEF**, Congress of the Belgian Working Group for Non Invasive Cardiovascular Imaging of the Belgian Society of Cardiology, Brussels, Belgium, 15 Nov, 2019.
44. **Bijnens B**. **Understanding cardiac microstructure by synchrotron X-ray micro-CT**, Cardiology Research Seminar - Hospital Universitari Germans Trias i Pujol, Badalona, Spain, 5 Nov, 2019.
45. **Bijnens B**. **Cardiac function and deformation - the basics**; 2nd Fetal Cardiac Function Symposium, UPF, Barcelona, Spain, 8 Oct, 2019.
46. **Bijnens B**. **Coarctation of the aorta, does it differ from aortic stenosis?,** 2nd Fetal Cardiac Function Symposium, UPF, Barcelona, Spain, 8 Oct, 2019.
47. **Bijnens B**. **Artificial Intelligence for Clinical Decision Making - Challenges and Opportunities**, HUMAINT Workshop on the Impact of Artificial Intelligence on Healthcare, Spain, 5 Jul, 2019.
48. **Bijnens B**. **Artificial Intelligence for Clinical Decision Making - Challenges and Opportunities, Exploring Artificial Intelligence** - Round Table organised by the UPF Master in Scientific, Medical and Environmental Communication, Spain, 17 Jun, 2019.
49. **Bijnens B**. **Welcome and Introduction from the Organiser**, 1st International Workshop Cardiovascular X-ray Phase-Contrast Imaging, Other, Spain, 13 May, 2019.
50. **Bijnens B**. **Understanding cardiac microstructure by synchrotron X-ray micro-CT**, Joined Meeting of CardioNet and CiberER working team "Salut Cardiovascular en Malalties Rares"/ Barcelona, Spain, 24 Apr, 2019,
51. **Bijnens B**. **What does exercise do to the RV?** 4th RV Symposium, Toronto, Canada, 07/04/2019.
52. **Bijnens B**. **Machine learning for assessing fetal haemodynamics**. Myocardial Velocity and Deformation Imaging, Leuven, Belgium, 07/02/2019
53. **Bijnens B**. **Limitations of Doppler measurements in Pulmonary Arterial Hypertension**, Echokardiographie, Luzern, Switzerland, 09/01/2019.
54. **Bijnens B**. **Myocardial fibers and cardiac mechanics**. Euroecho Imaging 2018, Milano, Italy, 07/12/2018.
55. **Bijnens B**. **Artificial intelligence and machine learning for the (imaging) researcher - hype or hope ?** ALBA, Barcelona. 23/05/2018.
56. **Bijnens B**. **Machine learning as a tool to improve clinical diagnosis?** Echokardiographie, Luzern Switzerland 17/01/2018.
57. **Bijnens B**. **ECG, echo and more - How to characterize the perfect patient?** EuroEcho-Imaging 2016. Lisbon, Portugal. 07/12/2017.
58. **Bijnens B**. **Cardiac Mechanics and Deformation in the setting of Cardiotoxicity in Paediatric oncology**. Workshop on Echocardiography in Paediatric Oncology. Wilhelmina Child Hospital, Utrecht, The Netherlands. 17/11/2017.
59. **Bijnens B**. **Synchrotron-based Phase Contrast X-ray Imaging. A novel view into the heart.** Hospital Sant Pau, Barcelona, Spain. 16/11/2017.
60. **Bijnens B**. **Cardiac Mechanics. Or how the heart deforms/performs.** Honorary *Inge Edler Echocardiograhy Le*cture. Lund University Sweden. 20/10/2017.
61. **Bijnens B**. **Assessment of systolic function - a practical approach**. 12th European Echocardiography Course in Congenital Heart Disease. Prague, Czech Republic. 01/10/2017
62. **Bijnens B**. **RV function and mechanics**12th European Echocardiography Course in Congenital Heart Disease. Prague, Czech Republic. 01/10/2017
63. **Bijnens B**. **Where computational techniques meet clinical practice: understanding the working of the heart in health and disease.** Creatis – INSA, University of Lyon, France. 19/09/2017
64. **Bijnens B**. **Cardiac Adaptation to Elite Training – cardio-mechanics and physiology**. 7th World Congress of Pediatric Cardiology & Cardiac Surgery. Barcelona, Spain. 16/07/2017
65. **Bijnens B**. **Strain Twist & Torsion**. 7th World Congress of Pediatric Cardiology & Cardiac Surgery. Barcelona, Spain. 17/07/2017
66. **Bijnens B**. **Predicting response: CRT for the failing RV.** 7th World Congress of Pediatric Cardiology & Cardiac Surgery. Barcelona, Spain. 18/07/2017
67. **Bijnens B**. **Understanding fetal cardiovascular changes and the role of modelling** 2nd VPH Summerschool. Barcelona, Spain. 26/05/2017.
68. **Bijnens B**. **Myocardial function and deformation in children with inherited cardiomyopathies**. Symposium Pediatric Cardiology. Aga Khan University, Karachi, Pakistan. 26/02/2017

69. **Bijnens B**. **Cardiac mechanics in cardiomyopathies in isolated populations.** Myocardial Velocity and Deformation Imaging Leuven, Belgium. 9/02/2017.
70. **Bijnens B**. **Rare cardiomyopathies**. Echokardiographie, Luzern Switzerland 25/01/2017.
71. **Bijnens B**. **Can imaging assist new CRT approaches?** EuroEcho-Imaging. Leipzig, Germany. 07/12/2016.
72. **Bijnens B**. **Right ventricular/Left ventricular interaction: how does it affect function and measurements?** EuroEcho-Imaging. Leipzig, Germany. 09/12/2016
73. **Bijnens B**. **Basic and advanced echocardiography for constrictive pericarditis**. Imaging in Pericardial Disease - Belgian Working Group Non-Invasive Imaging, Brussels, Belgium. 18/11/2016
74. **Bijnens B**. **Understanding HFPEF – complementarity of clinical research and machine learning.** Philips Research. Hamburg, Germany. 30/06/2016.
75. **Bijnens B**. **Current and future role of TVI in cardiac disease.** University Hospital Oslo, Norway. 22/06/2016.
76. **Bijnens B**. **Basic Science and Clinical Understanding - Cardiovascular Pathophysiology**. Barcelona VPH Summer School. 03/06/2016.
77. **Bijnens B**. **Deformation patterns in Cardiovascular Diseases**. 3rd Barcelona Myocardial Strain Hands-on 27/05/2016.
78. **Bijnens B**. **Is measuring strain amplitudes the best way to investigate mechanical remodelling in cardiomyopathies ?** Myocardial Velocity and Deformation Imaging Leuven, Belgium. 4/02/2016.
79. **Bijnens B**. **Do fetal conditions change structurally normal hearts so that we're more vulnerable to cardiac disease as an adult?** Echokardiographie, Luzern Switzerland 14/01/2016.
80. **Bijnens B**. **Role of computer modelling in congenital heart disease; Tissue Doppler and speckle tracking** EuroEcho-Imaging Sevilla, Spain 03/12/2015.
81. **Bijnens B**. **Diastolic Heart Failure and inter-atrial conduction delays; LV-pacing in brady indications** Pacemaker Update. Putten, Netherlands 13/11/2015.
82. **Bijnens B**. **Myocardial Strain**. Symposium on recent developments in congenital cardiomyopathies. Lancaster General Hospital. Lancaster PA, USA. 29/10/2015.
83. **Bijnens B**. **Introduction to cardiac mechanics** 10th European Echocardiography Course in Congenital Heart Disease. Leuven, Belgium 14/10/2015
84. **Bijnens B**. **Where engineer.ing meets clinical practice: understanding the working of the heart in health and disease** ICABME 2015 (Third International Conference On Advances In Biomedical Engineering) - Keynote speaker. Beirut, Lebanon 16/09/2015.
85. **Bijnens B**. **Does the Right Ventricle Contract Differently from the Left Ventricle?** 8th International Conference on Neonatal & Childhood Pulmonary Vascular Disease. San Francisco, United States of America 27/04/2015.
86. **Bijnens B**. **Right Ventricular Function - Global strain** XXXIV Reunion of the Cardiac Imaging section of the Spanish Society of Cardiology. Las Palmas, Spain 13/03/2015.
87. **Bijnens B**. **Cardiac deformation – case studies.** USART Summer School on "Cardiac Imaging: Acquisition and Analysis - Ultrasound" Llafranc, Spain. 22/09/2015.
88. **Bijnens B**. **Cardiovascular Computational Modelling: from imaging to clinical applications** American University of Beirut Spring School on Biomedical Engineering. Beirut, Lebanon. 20/02/2015.
89. **Bijnens B**. **Parametric mapping of cardiac chambers: Understanding ventricular trabeculations.** Myocardial Velocity and Deformation Imaging. Leuven. Belgium. 05/02/2015.
90. **Bijnens B**. **Classification of myocardial velocity patterns in HFPEF**. Myocardial Velocity and Deformation Imaging. Leuven. Belgium. 05/02/2015.
91. **Bijnens B Electrical activitation patterns in normal, LBBB and infarcted hearts: an experimental stud**y. Myocardial Velocity and Deformation Imaging. Leuven. Belgium. 06/02/2015.
92. **Bijnens B**. **The athlete's heart: It's all in the right ventricle?.** Echokardiographie. Luzern. Switzerland. 08/01/2015.
93. **Bijnens B**. **Ischemic heart disease; Right ventricular/left ventricular interaction: how does it affect function and measurements?.** EuroEcho-Imaging 2014. Vienna. Austria. 03/12/2014.
94. **Bijnens B**. **Present and future possibilities of ultrasound**. 28th European Association for Cardio-Thoracic Surgery (EACTS) Annual Meeting. Milan. Italy. 13/10/2014.
95. **Bijnens B**. **The fetal RV: Pump ingenuity and subclinical dysfunction/Does the RV really contract differently from the LV?.** The 3rd Toronto RV Symposium. Toronto. Canada. 04/06/2014.
96. **Bijnens B**. **Myocardial mechanics: recent developments and future visions**. Cardiology in the Young. London. United Kingdom. 14/04/2014.
97. **Bijnens B**. **Visualisation of myocardial fibre structure and micro-anatomy by synchrotron radiation.** Myocardial Velocity and Deformation Imaging. Leuven. Belgium. 06/02/2014.
98. **Bijnens B**. **Clinical implication of MAPSE for patients with various cardiovascular disease**. Echokardiographie. Luzern. Switzerland. 08/01/2014.
99. **Bijnens B**. **Impact of ischaemia on cardiac mechanics**. Euroecho - European Association of Echocardiography. Istanbul. Turkey. 11/12/2013.
100. **Bijnens B**. **The shape of the LV - What, why and how does it change ?.** Cardiovascular imaging research. Wuerzburg. Germany. 28/11/2013.
101. **Bijnens B**. **Pacing location in heart failure with normal ejection fraction.** Pacemaker Update. Putten. Netherlands. 15/11/2013.

102. **Bijnens B**. **Cardiac mechanics**. 8th European Echocardiography Course in Congenital Heart Disease . Bologna. Italy. 26/10/2013.
103. **Bijnens B**. **Cardiac and vascular (re-) modelling during abnormal development**. bioMMeda - Institute Biomedical Technology. Gent. Belgium. 24/06/2013.
104. **Bijnens B**. **Atrial deformation during the cardiac cycle: changes in health and disease**. Functional Imaging and Modelling of the heart.. London. United Kingdom. 19/06/2013.
105. **Bijnens B**. **Tissue Deformation Imaging: does it help in clinical decision making?** . Cardiovascular imaging behind routine: why and how? - Update Teaching Course at the 47th Annual Meeting of the Association for European Paediatric and Congenital Cardiology. London. United Kingdom. 22/05/2013.
106. **Bijnens B. Cardiac structural and functional remodelling during abnormal development**. Seminar Medical University of Graz, Klinische Abteilung für Kardiologie . Graz. Austria. 29/04/2013.
107. **Bijnens B**. **Cardiac structural and functional remodelling during abnormal development**. Myocardial Velocity and Deformation Imaging. Leuven. Belgium. 08/02/2013.
108. **Bijnens B**. **Basics and reminders about cardiac mechanics and hemodynamics in the normal heart; The news of strain deformation imaging.** Euroecho - European Association of Echocardiography . Athens. Greece. 05/12/2012.
109. **Bijnens B**. **Cardiac Deformation Imaging and Analysis**. Philips Medical Systems Research Paris Medical Imaging Systems Group (Medisys). Paris. France. 21/11/2012.
110. **Bijnens B**. **Cardiac Mechanics & ventricular performance; Ventricular function in LBBB**. 7th European Echocardiography Course in Congenital Heart Disease . Barcelona. Spain. 06/10/2012.
111. **Bijnens B**. **Doppler techniques and quantification**. 7th European Echocardiography Course in Congenital Heart Disease. Barcelona. Spain. 03/10/2012.
112. **Bijnens B**. **Fetal cardiac function and mechanics& Techniques: tissue Dopple**. 1th Symposium on Fetal Cardiac Function. Barcelona. Spain. 02/10/2012.
113. **Bijnens B**. **Electro-mechanical coupling in non-LBBB and small QRS complexes**. Pacemaker Update. Brummen. Netherlands. 20/09/2012.
114. **Bijnens B**. **Electro-Mechanical Interaction – Is This Something the Clinical Electrophysiologist Has to Care about or Is This only of Interest to the Cellular Researcher?**. Cardiostim 2012 18th WORLD CONGRESS Cardiac Electrophysiology & Cardiac Techniques. Nice. France. 15/06/2012.
115. **Bijnens B**. **Understanding LV failure in valvular heart disease - comprehensive review on cardiac mechanics** . CONTROVERSIES IN VALVULAR HEART DISEASE – 2012. Katowice. Poland. 09/06/2012.
116. **Bijnens B**. **Deformation versus ventricular size versus stroke volume - What we need to know to correctly interpret strain measurements.** Myocardial Velocity and Deformation Imaging . Leuven. Belgium. 10/02/2012.
117. **Bijnens B**. **Aortic dilatation – an interplay of pressures, flow and wall properties**. Echokardiographie. Luzern. Switzerland. 11/01/2012.
118. **Bijnens B**. **Aortic flow and dilatation**. Myocardial Velocity and Deformation Imaging . Leuven. Belgium. 11/02/2011.
119. **Bijnens B**. **New tools to assess cardiovascular function in echocardiography**. *University Hospital Wuerzburg*, Germany, Feb 24,2011.
120. **Bijnens B**. **Right Heart function and exercise**. *Heart Centre - Grand Rounds*,King Faisal Hopital and Research Centre, Riyadh, Saudi Arabia, Feb 12,2011.
121. **Bijnens B**. **Novel approaches to assess cardiovascular function**. *Cardiology Grand Rounds*,King Faisal Hopital and Research Centre, Jeddah, Saudi Arabia, Feb 14,2011.
122. **Bijnens B**. **New insights in cardiac mechanics - Speckle Tracking and Tissue Doppler Imaging Tools in Clinical Practice.** *GE Healthcare*,Berlin, Germany, April 7-8,2011.
123. **Bijnens B**. **Aortic valve - patient missmatch "the high pressure problem after surgery" pathophysiologic background and how to solve the problem in clinical practice.** *Echokardiographie*,Luzern, Jan 12,2011.
124. **Bijnens B**. **Aortic wall and flow properties: what do we want to quantify and how do we approach it?**. *Myocardial Velocity and Deformation Imaging*,Leuven, Feb 10,2011.
125. **Bijnens B**. **New insights in cardiac mechanics - Speckle Tracking and Tissue Doppler Imaging Tools in Clinical Practice.** *GE Healthcare*,Berlin, Germany, October 6-7,2011.
126. **Bijnens B**. **Imaging Ventricular Function in Congenital and Acquired Heart Disease: From Doppler to Deformation – State-of-the-Art**. *Mayo School of Continuous Professional Development*,Rochester, MN, USA - October 13-14,2011.
127. **Bijnens B**. **Do we need Echo for CRT candidates ?.** *XXIII Jornadas de actualizacion en imagen cardiaca*,Barcelona, Spain - Nov 25,2011.
128. **Bijnens B**. **Doppler techniques and quantification / Effect of loading and geometry on myocardial function: Is it possible to measure "contractility"?.** *European Echocardiography Course in Congenital Heart Disease*,Munich, Germany, Nov 16-19,2011.
129. **Bijnens B**. **Integrated functional assessment in chronic heart disease**. *Euroecho - European Association of Echocardiography*,Budapest, Hungary, Dec 8,2011.
130. **Bijnens B**. **Volume and pressure overload: how does it change rotation/torsion?.** *Euroecho - European Association of Echocardiography*,Budapest, Hungary, Dec 9,2011.

131. **Bijnens B**. **Hypertrophic Heart Disease: Different Deformation Patterns in Different Etiologies.** *Myocardial Velocity and Deformation Imaging*,Leuven, Feb 5,2010.
132. **Bijnens B**. **Hypertrophic heart disease: different deformation patterns in different etiologies.** *Echokardiographie*,Lucerne, Jan 14,2010.
133. **Bijnens B**. **Assessment of LV function and mechanics with new imaging modalities**. *Reunion CardioImpulso - Sociedad Balear de Cardiologia*,Palma de Mallorca - Spain - April 29,2010.
134. **Bijnens B**. **Aortic wall and flow properties: what do we want to quantify and how do we approach it?**. *Euroecho - European Association of Echocardiography*,Copenhagen, Denmark, December 9,2010.
135. **Bijnens B**. **How to describe function? From fibre function to deformation/rate**. *Euroecho - European Association of Echocardiography*,Copenhagen, Denmark - December 8,2010.
136. **Bijnens B**. **Hypokinesia and post systolic shortening: the art to diagnose ischemic substrates**. *Euroecho - European Association of Echocardiography*,Copenhagen, Denmark - December 8,2010.
137. **Bijnens B**. **Strain (-rate) Imaging - Is it of any clinical use ?**. *XXII Jornadas de actualizacion en imagen cardiaca*,Barcelona, Spain - Nov 26,2010.
138. **Bijnens B**. **Doppler techniques and quantification**. *European Echocardiography Course in Congenital Heart Disease*,London, UK - Oct 6,2010.
139. **Bijnens B**. **Twist - torsion**. *Turkish Cardiac Imaging Working Group Meeting*,Izmir, Turkey - May 14,2010.
140. **Bijnens B**. **Myocardial mechanics in different substrates of hypertrophic myopathies**. *CNIC (Centro Nacional de Investigaciones Cardiovasculares) Seminar*,Madrid, Spain - May 12,2010.
141. **Bijnens B**. **Cardiac mechanics in LBBB and its relevance for CRT**. *Echokardiographie*, Lucerne, Switserland. Jan 14-15,2009.
142. **Bijnens B**. **Conduction delays and cardiac mechanics**. *Myocardial Velocity and Deformation Imaging*, Leuven, Belgium. Feb 5-6,2009.
143. **Bijnens B**. **Myocardial velocity and deformation imaging**. *International Academy of Medical Ultrasound*, Vienna, Austria, April 23-24,2009.
144. **Bijnens B**. **Myocardial motion and deformation imaging: how to do it and what clinical information does it provide**. *41. Jahrestagung der Deutschen Gesellschaft für Pädiatrische Kardiologie*, Weimar, Oct 6,2009.
145. **Bijnens B**. **Normal left ventricular mechanics**. *Teaching Course on Imaging in Coronary Artery Disease*, Istanbul, Oct 22,,2009.
146. **Bijnens B**. **Myocardial deformation imaging**. *Teaching Course on Imaging in Coronary Artery Disease*, Istanbul, Oct 22,2009.
147. **Bijnens B**. **Myocardial velocity and deformation imaging**. *International Academy of Medical Ultrasound*, Vienna, Austria, October 8-9,2009.
148. **Bijnens B**. **Tissue Doppler and Speckle tracking: How to interpret contradictory results**. *XXI Jornadas de actualizacion en imagen cardiaca*, Barcelona, Spain, November 20,2009.
149. **Bijnens B**. **Cardiac deformation and twist - what can we do with it in pacing and heart failure ?**. *Echo Pacing Symposium*, Rotterdam. Netherlands, Nov 27,2009.
150. **Bijnens B**. **How does fibre orientation influence ventricular shortening and twisting and what changes in pressure overload**. *Euroecho - European Association of Echocardiography*,Madrid, Spain, December 9-12,2009.
151. **Bijnens B**. **Mechanisms underlying ventricular dilatation in volume overload and cardiomyopathies**. *Euroecho - European Association of Echocardiography*, Madrid, Spain, December 9-12,2009.
152. **Bijnens B**. **Can we learn anything from cardiac rotation and torsion?**. *Euroecho - European Association of Echocardiography*, Madrid, Spain, December 9-12,2009.
153. **Bijnens B**. **Myocardial velocity and deformation imaging**. *International Academy of Medical Ultrasound*,Vienna, Austria, April 10-11,2008.
154. **Bijnens B**. **Cardiac geometrical and functional remodelling**. *Echokardiographie, Jan 9-10*,Lucerne, Switserland,2008.
155. **Bijnens B**. **Myocardial velocity and deformation imaging**. *International Academy of Medical Ultrasound*,October 9-10, Vienna, Austria,2008.
156. **Bijnens B**. **Cardiac geometrical and functional remodelling in pressure/volume overload and in activation abnormalities**. *The Sick Kids Hospital*,May 2, Toronto, Canada,2008.
157. **Bijnens B**. **Cardiac geometrical and functional remodelling in pressure/volume overload and in activation abnormalities**. *Kings College - St. Thomas Hospital*,London, July 9,2008.
158. **Bijnens B**. **The Changing Role of Cardiac Imaging in Cardiomyopathies**. *The Royal Society of Medicine - Meeting of the Cardiology Section*,London, Sept 17,2008.
159. **Bijnens B**. **Principles of deformation analysis Doppler Myocardial Imaging/Speckle Tracking - Cardiac Function, Deformation and Torsion**. *IInd Workshop on Tissue Doppler and Myocardial Deformation*,Barcelona, Spain, Sept 29,2008.
160. **Bijnens B**. **Ischaemic substrates**. *7th Congress of the Croatian Cardiac Society*,Opatija. Croatia, Oct 17,2008.
161. **Bijnens B**. **Cardiac Resynchronization Therapy**. *Echokardiographie Kongress 2008*,Cologne. Germany, Nov 1,2008.
162. **Bijnens B**. **Imaging in Cardiac Resynchronization Therapy: What after PROSPECT ?**. *Echo Pacing Symposium*,Rotterdam. Netherlands, Nov 7,2008.

163. **Bijnens B**. **Principles of deformation analysis: Doppler Myocardial Imaging/Speckle Tracking; Cardiac function (LV and RV) Deformation and torsion; Valve regurgitation. When does the ventricle fail?; Left ventricle hypertrophy**. *ANALISIS DE LA FUNCION VENTRICULAR - Doppler Myocardial Imaging-Cardiac Deformation*,Barcelona. Spain, Nov 20,2008.
164. **Bijnens B**, Sebastian R, Romero D and Frangi A. **Anatomo-functional model suitable for Cardiac Resynchronization therapy**. *4th European Congress for Medical and Biomedical Engineering*,Antwerp. Belgium, Nov 24,2008.
165. **Bijnens B**. **Cardiac Imaging in the assessment of resynchronization therapy. Is it useful?**. *Servicio de Cardiologia - Sesion Clinica General.*,Vall d Hebron Hospital, Barcelona, Spain. Dec 5,2008.
166. **Bijnens B**. **2-D Strain versus doppler derived regional deformation - A comparison of the techniques. Are they complementary?**. *Euroecho - European Association of Echocardiography*, Lyon, France, Dec 10-13,2008.
167. **Bijnens B**, Frangi A and Sebastian R. **From 3D images to cardiac models: the Virtual Physiological Human (VPH) and its potential for clinical cardiology.**. *Euroecho - European Association of Echocardiography*, Lyon, France, Dec 10-13,2008.
168. **Bijnens B**. **Myocardial velocity and deformation imaging**. *International Academy of Medical Ultrasound*,April 19-20, Berlin, Germany,2007.
169. **Bijnens B**. **A Novel Approach to Better Predict Responders to CRT based on identifying the pathophysiological substrate**. *Myocardial Velocity and Deformation Imaging*,Leuven, Belgium,2007.
170. **Bijnens B**. **DMI in pressure/volume overload pathologies**. *Myocardial Velocity and Deformation Imaging*,Leuven, Belgium,2007.
171. **Bijnens B**. **Cardiac function: Contractility versus deformation**. *CRT and Dilated Cardiomyopathies: understanding the deformation & mechanics of the failing ventricle*,Dubrovnik, May 17-18,2007.
172. **Bijnens B**. **Principles of strain and strain-rate imaging based on Tissue Doppler or Speckle Tracking**. *CRT and Dilated Cardiomyopathies: understanding the deformation & mechanics of the failing ventricle*,Dubrvnik, May 17-18,2007.
173. **Bijnens B**. **Velocities and deformation in different Ischemic Substrates**. *CRT and Dilated Cardiomyopathies: understanding the deformation & mechanics of the failing ventricle.*,Dubrovnik, May 17-18,2007.
174. **Bijnens B**. **Changes in cardiac mechanics induced by LBBB and the septal flash**. *CRT and Dilated Cardiomyopathies: understanding the deformation & mechanics of the failing ventricle*,Dubrovnik, May 17-18,2007.
175. **Bijnens B**. **2D strain/3D echo**. *CRT and Dilated Cardiomyopathies: understanding the deformation & mechanics of the failing ventricle*,Dubrovnik, May 17-18,2007.
176. **Bijnens B**. **Assessing Cardiac Function in Dilated and Failing Hearts. The Influence of Contractility, Geometry and Dyssynchrony.** *Universitat Pompeu Fabra*,Barcelona, June 19,2007.
177. **Bijnens B**. **Myocardial velocity and deformation imaging**. *International Academy of Medical Ultrasound*,Oct 4-5, Berlin, Germany,2007.
178. **Bijnens B**. **Doppler techniques and quantification**. *European Echocardiography Course on Congenital Heart Disease*,Oct 10-13, Prague,2007.
179. **Bijnens B**. **Will 3D Echo take over from 2D ?**. *Echo, Pacing en Strain*,June 22, Rotterdam,2007.
180. **Bijnens B**. **Future Techniques - Speckle tracking and others ?**. *European Echocardiography Course on Congenital Heart Disease*,Oct 10-13, Prague,2007.
181. **Bijnens B**. **Myocardial Velocity and Deformation Imaging: How to measure ?**. *European Echocardiography Course on Congenital Heart Disease*,Oct 10-13, Prague,2007.
182. **Bijnens B**. **Why should a heart failure mechanism based approach be used for selecting responders ?**. *Cardiac Resynchronization Therapy: How to assess potential candidates and how to optimise treatment.*,Nov 16, London,2007.
183. **Bijnens B**. **Strain and Strain-rate imaging: Principals and perspectives**. *Advanced non-invasive cardiac imaging in non-academic Hospitals*,Nov 30, Tilburg,2007.
184. **Bijnens B**. **2D arrays for real time 3D echocardiography**. *Euroecho - European Association of Echocardiography*,Dec 5-8, Lisbon, Portugal,2007.
185. **Bijnens B**. **Assessing myocardial function using an integrated and image based approach**. *Cardiac Imaging - An interdisciplinary and international research domain*,Dec 14, Zagreb, Croatia,2007.
186. **Bijnens B**. **A visiting researcher in Croatia – experiences and opportunities.** *Cardiac Imaging - An interdisciplinary and international research domain*,Dec 14, Zagreb, Croatia,,2007.
187. **Bijnens B**. **Personalised geometrical and functional models of the heart**. *Cardiac Imaging - An interdisciplinary and international research domain*,Dec 14, Zagreb, Croatia,2007.
188. **Bijnens B**. **Myocardial function in valve diseases**. *Croatian Cardiac Society*,Zagreb, Croatia.,2006.
189. **Bijnens B**. **Intelligent echocardiographic reporting systems. Technical and software requirements**. *Euroecho - European Association of Echocardiography*,Prague, Czech Republic,2006.
190. **Bijnens B**. **Why measure myocardial velocities or deformation? What do they represent?.** *Euroecho - European Association of Echocardiography*,Prague, Czech Republic,2006.
191. **Bijnens B**. **Myocardial velocity and deformation imaging**. *International Academy of Medical Ultrasound*,April, 27-28, Vienna, Austria,2006.
192. **Bijnens B**. **Myocardial velocity and deformation imaging**. *International Academy of Medical Ultrasound*,Oct 5-6, Vienna, Austria,2006.

193. **Bijnens B**. **The myocardial response to pressure overload: mechanisms and monitoring**. *Euroecho - European Association of Echocardiography*,Prague, Czech Republic,2006.
194. **Bijnens B**. **Deformation Patterns Characteristics for Different Ischemic Substrates**. *Doppler Myocardial Imaging*,Leuven, Belgium,2006.
195. **Bijnens B**. **Ventricular Function in Valve Disease**. *Doppler Myocardial Imaging*,Leuven, Belgium,2006.
196. **Bijnens B**. **Pressure & volume overload: contractility/deformation; deformation/loading; geometry/remodelling /contractility**. *Alpe-Adria Cardiology Meeting and Meeting of the Croatian Sociaty of Cardiology*,Cavtat, Croatia,2006.
197. **Bijnens B**. **Myocardial Imaging and Deformation Course**. *Alpe-Adria Cardiology Meeting and Meeting of the Croatian Sociaty of Cardiology*,Cavtat, Croatia,2006.
198. **Bijnens B**. **Technical principles behind a good acquisition: How to acquire reliable MVI datasets: problems and pitfalls**. *New imaging techniques in Pediatric Echocardiography*,Leuven, Belgium,2006.
199. **Bijnens B**. **Deformation Patterns Characteristics for Different Ischemic Substrates**. *Clinical Cardiac Imaging Symposium*,London, UK,2006.
200. **Bijnens B**. **Prospective Identification of Responders to CRT**. *Clinical Cardiac Imaging Symposium*,London, UK,2006.
201. **Bijnens B**. **Cardiac information: how do we integrate it and how do we implement this in clinical practice?**. *Euroecho - European Association of Echocardiography*,Firenze, Italy,2005.
202. **Bijnens B**. **Myocardial velocity and deformation imaging**. *International Academy of Medical Ultrasound*,April 18-19, Vienna, Austria,2005.
203. **Bijnens B**. **Myocardial velocity and deformation imaging**. *International Academy of Medical Ultrasound*,Oct 13-14, Vienna, Austria,2005.
204. **Bijnens B**. **Potential mechanisms for post-systolic motion and deformation**. *Leuven Teaching Course: Doppler Myocardial Imaging*,Leuven, Belgium,2005.
205. **Bijnens B**. **Technological developments and perspectives of echocardiograpy**. *Zagreb-Mayo: Advanced topics in Cardiology*,Dubrovnik, Croatia,2005.
206. **Bijnens B**. **Post-systolic motion and deformation. When does it occur and what does it mean ?**. *Zagreb-Mayo: Advanted topcis in Cardiology*,Dubrovnik, Croatia,2005.
207. **Bijnens B**. **Parallel processing and theoretical limits to ultrasonic frame rates**. *Euroecho - European Association of Echocardiography*,Athens, Greece,2004.
208. **Bijnens B**. **Myocardial velocity and deformation Imaging.** *International Academy of Medical Ultrasound*,May 14-15, Vienna, Austria,2004.
209. **Bijnens B**. **Myocardial velocity and deformation imaging**. *International academy of medical ultrasound*,Oct 21-22, Vienna, Austria,2004.
210. **Bijnens B**. **Modelling deformation: the influence of loading,activation and segment interaction**. *Leuven Teaching Course: Doppler Myocardial Imaging*,Leuven, Belgium,2004.
211. **Bijnens B**. **Modeling deformation: the influence of loading, activation and segment interaction**. *Doppler Myocardial Imaging Symposium*,Napels, Italy,2004.
212. **Bijnens B**. **Doppler Myocardial Imaging: physical principles**. *Doppler Myocardial Imaging Symposium*,Naples, Italy,2004.
213. **Bijnens B**. **Basic principles of Doppler hemodynamics**. *Echocardiography course of the working group on echocardiography and cardiac Doppler*,Brussels, Belgium,2004.
214. **Bijnens B**. **How should we cope with digital ultrasound datasets? Data organisation and integration in the digital echo laboratory**. *Euroecho - European Association of Echocardiography*,Barcelona, Spain,2003.
215. **Bijnens B**. **Myocardial velocity and deformation imaging**. *International Academy of Medical Ultrasound*,Oct 23-24, Vienna, Austria,2003.
216. **Bijnens B**. **Doppler Myocardial Imaging: physical principles & data processing**. *Leuven Teaching Course: Doppler Myocardial Imaging*,Leuven, Belgium,2003.
217. **Bijnens B**. **A digital echolab: The gateway to tele-echocardiography**. *Annual congres of the European Society of Cardiology*,Berlin, Germany,2002.
218. **Bijnens B**. **Data management and quantification tools**. *Annual congres of the European Society of Cardiology*,Berlin, Germany,2002.
219. **Bijnens B**. **Real time image analysis vs. post processing: different approaches for different goals ?**. *New Challenges in Echocardiography*,Loreto Aprutino, Italy,2002.
220. **Bijnens B**. **Strain and strain rate imaging: physical principles, pathophysiological concepts, and clinical applications**. *New Challenges in Echocardiography*, Loreto Aprutino, Italy,2002.
221. **Bijnens B**. **Workflow: The ultrasound research lab**. *Euroecho*,Munich, Germany,2002.
222. **Bijnens B**. **Ultrasound datasets and data organisation: integrating the digital echo laboratory into research**. *Euroecho*,Munic, Germany,2002.
223. D'hooge J and **Bijnens B**. **Approaches towards improved ultrasonic strain rate imaging**. *Forum Acusticum*,Sevilla, Spain,2002.
224. **Bijnens B**. **Real time 3d echo: technical limitations/sollutions**. *Euroecho*,Nice, France,2001.
225. **Bijnens B**. **Miniaturisation will influence image quality**. *Euroecho*,Nice, France,2001.

226. **Bijnens B**. **Implementatie en evaluatie van het gebruik van multimedia simulaties voor de studie van de humane fysiologie en fysiopathologie.** *Studiedag onderwijsvernieuwing aan de K.U.Leuven*,Leuven, Belgium,2000.
227. **Bijnens B**. **Implementatie en evaluatie van het gebruik van multimedia simulaties voor de studie van de humane fysiologie en fysiopathologie.** *Computers en multimedia op School en Thuis*,Antwerpen, Belgium,2000.
228. **Bijnens B**. **Tracers, bubbles or contrast agents: what are the differences**. *Congres of the German Society of Cardiology*,Mannheim, Germany,2000.
229. **Bijnens B**. **Principles of power doppler imaging**. *International Postgraduate Course on Advances in Cardiac ULtrasound*,Davos, Switserland,2000.
230. **Bijnens B**. **Safety of contrast imaging**. *International Postgraduate Course on Advances in Cardiac ULtrasound*,Davos, Switserland,2000.
231. **Bijnens B**. **Problems and pitfalls in myocardial perfusion imaging**. *International Postgraduate Course on Advances in Cardiac ULtrasound*,Davos, Switserland,2000.
232. **Bijnens B**. **Clinical applications in contrast echocardiography: Safety aspects**. *Congres of the European Society of Cardiology*,Amsterdam. The Netherlands,2000.
233. **Bijnens B**. **Bubbles and physics**. *European Society of Cardiology, Education and Training Programme: Practical course on cardiac contrast echocardiography*,Nice, France,2000.
234. **Bijnens B**. **Postprocessing, analysis, terminology**. *European Society of Cardiology, Education and Training Programme: Practical course on cardiac contrast echocardiography*,Nice, France,2000.
235. **Bijnens B**. **Doppler myocardial imaging: The future, 3-d velocities and strain**. *Leuven Teaching Course: Doppler Myocardial Imaging*,Leuven, Belgium,2000.
236. **Bijnens B**. **Doppler myocardial imaging: Physical principles and data processing**. *Leuven Teaching Course: Doppler Myocardial Imaging*,Leuven, Belgium,2000.
237. **Bijnens B**. **Principles and methods of ultrasound based strain estimation**. *Leuven Teaching Course: Doppler Myocardial Imaging*,Leuven, Belgium,2000.
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239. **Bijnens B**. **Real time 3d echo: 2d arrays**. *Euroecho*,Lisbon, Portugal,2000.
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