

# Student Year Book



The image shows the cover of a brochure for the Summer School Alpbach 2011. The background is a vibrant, multi-colored nebula with shades of orange, yellow, blue, and purple. At the top left is the ESA logo, and at the top right is the FFG logo. The title 'Summer School Alpbach 2011' is written in large, bold, yellow letters. Below the title, the subtitle '„Star Formation across the Universe“' is in blue, and the dates 'July 19-28, Alpbach/Tyrol - Austria' are in white. At the bottom, the website 'www.summerschoolalpbach.at' is underlined in white. The footer contains logos for the organizing institutions: the University of Innsbruck (ISI), the Institute for Space and Astronautical Sciences (ISAS), and the Austrian Space Agency (ASA).

**esa** **FFG**

## Summer School Alpbach 2011

„Star Formation across the Universe“

July 19-28, Alpbach/Tyrol - Austria

[www.summerschoolalpbach.at](http://www.summerschoolalpbach.at)

**ISI** **ISAS** **ASA**

Institute for Space and Astronautical Sciences | Observations of star-forming stars in the nearby spiral

# The Team of 2011



# Khan Muhammad Bin Asad

## Austria

- BSc in Electrical and Electronic Engineering from Islamic University of Technology, Bangladesh, 2009
- MSc in Astrophysics, Erasmus Mundus Masters Course in Astrophysics, Astromundus, University of Innsbruck, Austria, 2012
- Master thesis subject - Correlation of radio core-halo and cold fronts in Galaxy clusters through x-ray observation
- Topic of interest - Radio astronomy, X-ray astronomy, Astrophysics of Galaxy clusters and IGM, Observational cosmology



# Arnau Bernad

## Spain

- Master in Aerospace Engineering
- Background as a Systems Engineer
- Team working and communication skills
- Climbing & Travelling enthusiast



# Cédric Bonnevie

## Belgium

- Current Job: Software engineer at RHEA SYSTEM S.A. ([www.rheagroup.com](http://www.rheagroup.com)), i.e.: User requirements definition, software design, implementation, testing and maintenance. I am now specializing in space science and technologies to better serve our clients. I am a passionate about any space related subject, with a current focus on space weather.
- Key skills: Easy adapt to changing situations, flexible, accurate and strongly motivated
- Personal interests: Family, friends, mountain bike, badminton, swimming, skiing, sailing, alpinism and chess



# Adrien Cabut

## France

fields of interest:

- Mechanical engineering
- Control Systems
- Astronautics/Orbital Mechanics



# Juan Calderón Bustillo

## Spain

- Graduate (or Licenciado) in Physics, University of Santiago de Compostela
- PhD Student in the Universidad de Les Illes Balears (University of Balearic Islands), (Gravitational Waves Calculation and Detection), Relativity & Gravitation Group
- LIGO Scientific Collaboration Member



# Clara Cortijo Ferrero

## Spain

- PhD student at IAA(CSIC) in Granada / Spain
- Interested in the Starburst-AGN connection
- Performing stellar population analyses in HST multiwavelength images and Integral Field Spectroscopy data from VIMOS@VLT and PMAS@CAHA



# Grainne Costigan

## Ireland

- nearly finished second year of Phd
- working on accretion variability in low mass stars and brown dwarfs
- interested in stellar jets and outflows, circumstellar disks and stellar magnetic fields
- distraction of choice is any kind of water sport, most recently kite surfing



# Paul Dawson

## Ireland

- Ph.D, student at Dublin Institute for Advanced Studies.
- Research topics:
  - The Initial Mass Function
  - Star/brown dwarf formation
  - Circumsubstellar disks



# Erwin Dekens

## The Netherlands

- space systems engineering
- mission analysis
- orbit design



# Giuseppe Di Bernardo

## Sweden

- 2010-now Ph.D studies in Astrophysics, Department of Physics, University of Gothenburg, Sweden
- Research Plan: Turbulent Transport in Accretion Disks
- 2010 Graduate Studies in Astronomy and Astrophysics, Department of Physics, University of Pisa, Italy
- Master Degree: 110/110 cum laude
- Master Thesis: Interpretation of cosmic ray electron spectrum measured by Fermi Large Area Telescope.
- 2000 High School Diploma, Liceo Scientifico Statale A.Romita, Campobasso, Italy. Maturità Scientifica (100/100)



# Emily Drabek

## UK

- PhD student at the University of Exeter, studying early star formation in the submillimetre range
- Before becoming an expat to the United Kingdom, I worked at Fermilab on strong gravitational lensing in galaxy clusters
- graduated with a BSc in Physics from Loyola University New Orleans in 2009 with an interest in theoretical cosmology



# Sergio Fernandez

## Spain

- Born in Sevilla (Spain) in 1984.
- BsC/MsC Telecommunication engineering (Sevilla, 2002/2007)
- Internship at the Instituto de Astrofísica de Canarias (IAC) (Canary Islands. 2007)
- Erasmus Mundus Msc in Artificial Vision and Robotics (Edinburgh, France, Girona, 2007/2009)
- PhD in Artificial Vision, 3D reconstruction (Girona, Spain 2009/2012)



# Susanne Finklenburg

## Switzerland

- Working on PhD in physics in Berne (topic: rarefied gas dynamics at comets)



# Jonathan Gardey

## France

- 3 Years of Preparatory Class in Maths and Physics
- Studied Advanced Mathematics such as Topology, Algebra (groups theory), Mathematical Series,...
- also studied Advanced Physics and Chemistry: Optic, Electromagnetism, Space Motion and general motion, Thermodynamic,...
- studied Engineering Science for small systemes (Automatic..., Mecanisms...)
- 2 Years of Enginnering School (ENAC)
- Studied the general Aeronautical Sciences during my first year : Weather Science, Aerodynamics, Radiotelecommunication,...
- During the second Year studied Telecommunication in General. (Signal processing, Numeric Signal Processing ...)



# Donnacha Gayer

## Ireland

- Hails from the farm in Cork
- Hurling is the sport of choice
- Likes films and music and all things nice



# Jan Denis Gerst

## France

- Dipl.-Ing LRT  
(aerospace engineer)  
from Stuttgart  
University
- Currently working on a  
PhD in physics, on  
electric space  
propulsion at the  
ICARE lab of the CNRS  
Orléans, France



# Thomas Gjesteland

## Norway

- Master in physics from University of Bergen
- PhD student in Space Physics
- Studying Terrestrial Gamma ray Flash (TGF) from thunder clouds



# Claas Grohnfeldt

## Germany

- **Academical Studies:**
  - Industrial Mathematics at the University of Bremen [10/2006 – 12/2011]
  - Major course: Pure and Applied Mathematics
  - Minor courses: Computer Science and Engineering with Specialization in Aerospace Engineering
  - Mathematics and Engineering at the University of Warwick, England [09/2008 – 06/2009] (Facilitated by the European support program Erasmus/Socrates)
  - Diplom Thesis at the R&D Department of Daimler AG, Stuttgart. [02/2011 – 07/2011]
- **Additional Related Activities:**
  - Internship at EADS Astrium Satellites, Ottobrunn [07/2009 – 10/2009]
  - Software Module Development for ESA/ESTEC [02/2009 – 04/2010]
  - Development of modules for Space Trajectory Analysis (STA): Satellite Constellation, Sat-Sat-Link, Sat-Ground-Link, Coverage/Observation Analysis + Visualization
  - Participation to COSPAR Conference 2010
  - Student research assistance job at the Research Group Optimization and Optimal Control, University of Bremen [04/2010 – 01/2011]
  - Participation to the Alpbach Summer School on Star Formation Across the Universe [07/2011]
- **Fields of Interest:**  
Space Science, Space Engineering, Mission Analysis, S/C Systems Engineering and Simulation



# Maryam Habibi

## Germany

- Young, massive star clusters - or starburst clusters
- Derivation of the local extinction
- Constraints on the cluster orbit and tidal disruption in the Galactic center field
- Comparison of tidal structure with existing N-body simulations
- analysis of multi-epoch near infrared imaging data obtained with adaptive optics at large optical telescope
- astrometric determination of proper motion membership
- derivation of the stellar mass distribution from isochrone fitting
- definition of cluster life cycle in the GC from orbit simulations



# Ruben Herrero-Ilana

## Spain

- Radio interferometry studies
- Luminous Infrared Galaxies
- AGN / Starburst connection



# Alexandra Jung

## Denmark

- BSc in astrophysics from the University of Copenhagen in Denmark, with focus on extrasolar planets
- studied astrophysics and aerospace engineering at the University of Colorado at Boulder.
- functioned as mission specialist on the student run sounding rocket mission RocketSat VII - a part of the Colorado Space Grant Consortium
- doing a master's degree in space science and physics at the Technical University of Denmark. The final goal is to work with space science and the integration of science in space missions.



# Fatemeh Sadat Kiaeerad

## Sweden

- Studying the star forming Galaxies at  $z \sim 2$  by building the SED using
- space-based and ground-based data
- Observing in Multi-wavelengths of extragalactic objects, studying
- their dynamics
- Reducing and analyzing optical and IR data using IRAF and SExtractor
- Data Calibrating and writing software for the NOT (Nordic Optical
- Telescope)
- Instrumentation and payload design
- Star Formation in Galaxies and Starburst regions
- Multi-wavelength observation (studying the dynamics in extragalactic objects and stellar evolution)



# Benjamin Kraetzig

## Germany

- Born in Sweden
- Studies of aerospace and aeronautics at the University of Stuttgart



# Jens-Kristian Krogager

## Denmark

- bachelor in astrophysics from 2006 – 2009
- started PhD in galaxy evolution and chemical enrichment at Copenhagen University, 2011
- specialty in absorbing galaxies, Damped Lyman-alpha Absorbers



# Cornelia Lex

## Austria

- mechanical design
- vehicle dynamics controls, driver assistance systems
- metrology, measurement signal processing



# Yuejia Lui

## The Netherlands

Direct Study, TU Delft, Sep. 2008 -  
Apr. 2009

Academic Experience: TU Delft,  
Delft, the Netherlands Sep.  
2010 - Present

- Course projects in design and analysis
- Exploring Aerospace Engineering
- Design and Construction
- Materials and Structures for Aircraft and Spacecraft
- Structural Analysis and Design
- Programming
- Engineering Drawing



# Philipp Maier

## Germany

- 5th year student of aerospace engineering at TU Dresden, Germany
- fields of knowledge: AOCS, satellite communications, systems engineering
- field of interest: manned spaceflight
- further field of interest: space for developing regions, Engineers without Borders



# Andreas Maurer

## Germany

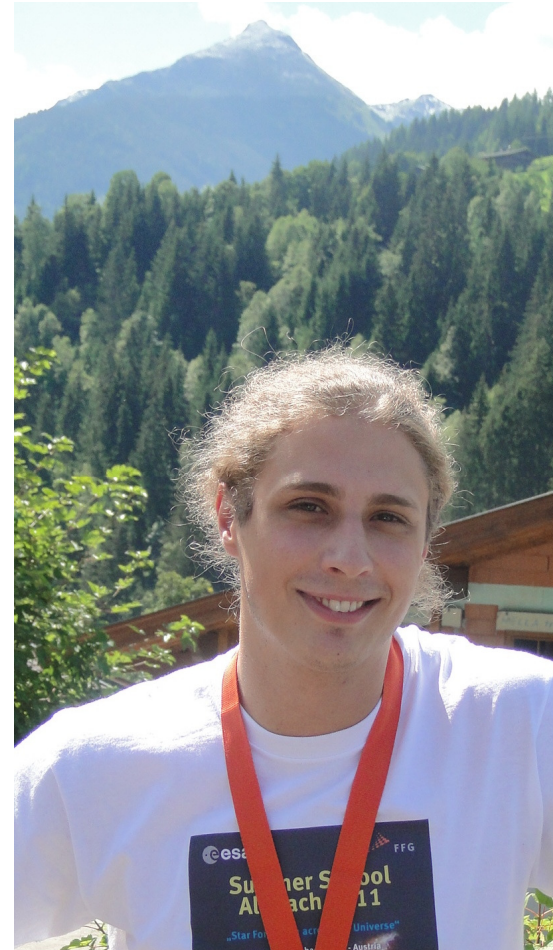
- met a lot of interesting people
- was surprised how much work can be done during our stay
- got inspired by all the good ideas around
- is proud of our team



# Stefan Meingast

## Austria

- Studying Astronomy at the University of Vienna, soon continue on PhD
- Working on Young Open Clusters, Star forming regions and Life in the Universe
- Interested in: Ground based observations, image processing, stellar pulsations, star formation



# Christophe Merleni

## France

- General design of satellite : mechanics, thermal, electronics and SCAO
- Space Propulsion : solid, liquid and hybrid technologies
- Space mechanics
- General design of observation instrument



# Javier Navarro Gonzalez

## Spain

- PhD student:  
  
Main topic: cosmological simulations analyzing the output data, searching early type synthetic galaxies and comparing the evolution and the characteristics of those galaxies with the observed ones
- Interested in: Astronomy and Electronic engineering



# Paul Nizenkov

## Germany

- Study of Aerospace Engineering at the University of Stuttgart
- Specialization in thermodynamics and gas dynamics
- Interest in astrophysics and human spaceflight



# Fabio Pacucci

## Italy

- Bachelor's degree in Physics (2010) - 110/110 cum laude  
Thesis: "Maps of the Cosmic Microwave Background"  
Advisor: Prof. Paolo de Bernardis  
Sapienza" University of Rome
- Master's degree in Astrophysics (in progress)  
"Sapienza" University of Rome
- "Sapienza" University of Rome - Department of Physics (05/2011 ->)  
Studies and simulations for fluidodynamical models of star formation processes.  
Supervisor: Prof. Roberto Capuzzo Dolcetta
- Internship at the Astronomical Observatory of Rome (Monteporzio Catone observatory, INAF) (07/2011 ->)  
XMM-Newton satellite data analysis.  
Supervisor: Dr Enrico Piconcelli (INAF - Astronomical Observatory of Rome)
- Member of the Managing Board of UAI - Union of Italian Amateur Astronomers (06/2011 ->)  
My primary occupation is to manage the relationships between the professional astronomical world (such as observatories, scientific institutions, universities) and the community of amateur astronomers.



# Nicole Pawellek

## Germany

Fields of interest:

- Radio astronomy
- Star formation  
(formation of brown  
dwarfs) and neutron  
stars
- Extragalactic  
(especially AGN)



# Andre Pinto

## Portugal

- Astrodynamics
- Aerodynamics
- Propulsion



# Christian Rab

## Austria

- Computational Astrophysics
- Circumstellar Disks
- Radiative Transfer



# Arvind Singh Rajpurohit

## France

- working as a Ph.D student at Observatoire des Besancon, France on " Low-mass stars as tracers of the Milky Way populations : Investigating the effects of metallicity in cool atmospheres". M-dwarfs are the most numerous stars in our galaxy which makes them an important probe for our galaxy to understand their kinematics and atmospheric properties
- using using atmosphere models to determine their physical parameters by comparing them with the observations
- this study will help to develop the atmosphere model



# Marissa Rosenberg

## The Netherlands

- Interstellar medium in near-by galactic centers, near-IR to mid-IR spectroscopy
- Polycyclic Aromatic Hydrocarbons (PAHs) in starburst galaxies
- Orbital Dynamics



# Daniel Schmid

## Austria

- scientific background:  
study Technical Physics in  
Graz
- master thesis:  
dipolarization fronts in the  
Earth's magnetotail at  
the IWF in Graz
- and likes cats, dogs and  
cows :)



# Daniel Sebastian Germany

## interests:

- general interests in Astronomy and Astrophysics especially in public outreach and student education (amateur astronomer and member of the public observatory URANIA Jena)
- special field of research: stellar spectral classification and transiting Exoplanets

## background:

- Diploma in Physics
- experiences in optical observations (mostly spectroscopy at 2m/TLS)
- now: PHD-student at the Thueringer Landessternwarte Tautenburg



# Asmund Skjaeveland

## Norway

- Saw my first large display of aurora borealis at age 19, decided to study them and ended up doing a PhD in ionospheric physics. Topic: Radar/optical studies of thermal plasma upflows in the dayside polar ionosphere
- Some pastimes: Photography, playing clarinet, fishing, hiking, programming, gaming
- Have lived for three years in the arctic settlement Longyearbyen (78 deg. N)
- Currently live in Oslo, Norway



# Przemyslaw Smakulski

## Poland

special fields of interest:

- Cryogenics
- Heat transfer
- Power engineering



# Maria Louise Strandet

## Denmark

- Galaxy formation and evolution
- Star formation
- radio, submm and mm observations



# Maria Sundl

## Austria

- Studying for a Masters degree in Astronomy, University of Vienna

Exoplanets: Detection, Habitability/Stability, Formation ...

- and when there is time: Reading, writing



# Nikolett Szalai

## Hungary

scientific background:

- Solar System: TNOs, zodiacal light
- star formation, radio spectroscopy
- infrared astronomy



# Elza Szegedi-Elek

## Hungary

Professional  
experience:

- emission line stars
- temporal behavior of  
young  
stars



# Graeme Taylor

## UK

- From Milton Keynes, UK
- Studies Masters in Space Systems Engineering at the University of Southampton, UK
- Enjoys hiking up the highest mountain in sight



# Leo Teeney

## UK

- Studying Aerospace Engineering at the University of Manchester, UK. Completed 3rd year
- Interests include deep space exploration, and also human exploration of space
- play Violin, enjoy cycling, and want to travel the world!



# Bogdan Termegan

## Romania

- Aerospace Systems
- Propulsion Systems able to achieve orbital velocities
- Electromagnetic fields applied to jet and non-jet propulsion



# Angel Usunov

## Austria

- Bachelor of physics student at Vienna University
- Ineterests:  
Manned space exploration  
Magnetostatics



# Elena Vellutini

## Italy

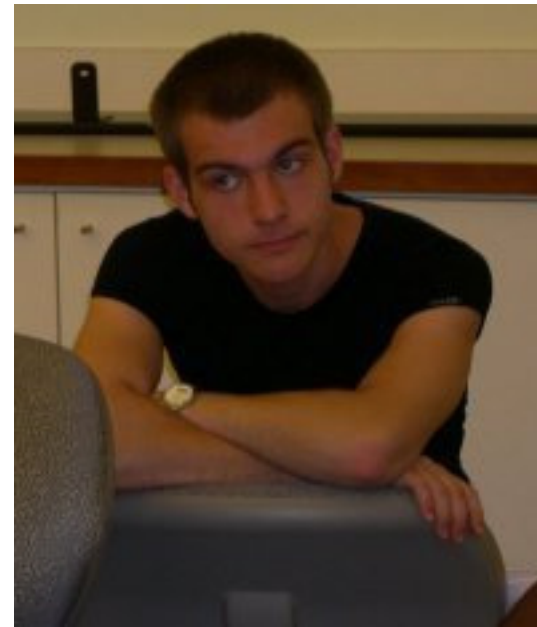
- Spacecraft trajectory design
- Low-thrust space propulsion
- Interplanetary mission optimization



# Dimitar Vlaykov

## Austria

- from Pazardzhik, Bulgaria
- BA in Mathematics from Cambridge, UK
- currently studying in the Astromundus programme for a Masters in Astrophysics (to be completed in 2012)



# Angela Volpe

## Italy

- 10/2010-09/2013: PhD in Physics at CNRS (National Scientific Research Center), Grenoble, France. Topic: development of a  $^3\text{He}$ - $^4\text{He}$  closed cycle dilution refrigerator for space applications
- 10/2007 – 07/2010: Master Degree in Astronomy and Astrophysics at *University of Rome “Sapienza”*. Master degree thesis title: SAGACE: a spectroscopic space mission to study the CMB, and its cryogenic system
- 05/2010-11/2010: internship at ASI (Italian Space Agency), Rome. Topic: Science with Stratospheric Balloons
- 10/2003 – 07/2007: Bachelor Degree in Physics and Astrophysics at *University of Rome “Sapienza”*



# Laura Volpes

## Austria

- from Rome, Italy
- Bachelor degree in Physics at the University of Rome, Tor Vergata
- Currently attending a the Astro Mundus master course in Astrophysics



# Daniel Wallner

## Austria

Fields of Interest:

- Nonlinear Dynamics
- Vehicle Safety
- Automotive Engineering



# Gabriele Warth

## Germany

- studied Physics at the University of Tübingen  
main subject: Astrophysics
- currently doing PhD at the University of Tübingen  
topic: diffuse X-ray emission of the interstellar medium of the Large Magellanic Cloud



# Henning Wende

## Germany

- studied physics in Göttingen and Tübingen
- specialized in astrophysics
- phd position at the High Energy Astrophysics Department of the Institute for Astronomy and Astrophysics Tübingen
- interested and currently working in the development of detector and instrument electronics
- lives south of Stuttgart with his wife and four children

