UNIVERSITÀ DEGLI STUDI DI MILANO

Dipartimento di SCIENZE AGRARIE E AMBIENTALI – PRODUZIONE, TERRITORIO, AGROENERGIA

[SALAR SHAAF] CURRICULUM VITAE

PERSONAL INFORMATION

SURNAME	SHAAF
NAME	SALAR
DATE OF BIRTH	17/07/1977

EDUCATION AND QUALIFICATION

Doctor of Philosphy
2007-2012
Plant Breeding/ Biometrical Genetics
Department of Agronomy and Plant Breeding/ University of Tehran/ Iran
(certification attached)

Master of Science
2001-2004
Plant Breeding
Department of Agronomy and Plant Breeding/ University of Tehran/ Iran
(certification attached)

PROFESSIONAL BACKGROUND

2004-2006
Crop production manager (2 yrs fix-term position)
Seed and Plant Improvement Department, Kermanshah Agriculture and Natural Resources Research Centre, Kermanshah, Iran.
Responsibilities: managing a team of 10 people to run sowing, agronomic practices, harvesting steps and collection of yield data, in the context of potato, maize, wheat and alfalfa propagation and variety testing field trials

2006-2007
Research Scientist (1 yr fix-term position)
National Plant Gene Bank of Iran (NPGBI), Karaj, Iran.
Responsibilities: training students for molecular genetics analyses of chickpea, pistachio genebank genetic resources

2011-2016
Assistant Professor.
Department of Agronomy and Plant breeding, College of Agriculture and Natural Resources, Azad University of Sanandaj, Sanandaj, Iran
(http://www.iausdj.ac.ir/_Academician/English?username=salarsh)
(certification attached)

2015-2016 **Head of Department.**
Department of Agronomy and Plant breeding, College of Agriculture and Natural Resources, Azad University of Sanandaj, Sanandaj, Iran

April 2016 – March 2017 **Postdoc (assegnista di ricerca di tipo B)**
Dipartimento di Bioscienze, Università degli Studi di Milano, Milan, Italy.
Projects: Floral integrating networks at the shoot apical meristem of rice
Finanziamento ERC FLARE

April 2017- March 2018 **Postdoc (assegnista di ricerca di tipo B)**
Dipartimento di Scienze Agrarie e Ambientali – Produzione, Territorio, Agroenergia, Universita degli Studi di Milano, Milan, Italy.
FACCE Projects:
ClimBar - An integrated approach to evaluate and utilise genetic diversity for breeding climate-resilient barley
BarPLUS, Modifying canopy architecture for increased barley biomass and yield

April 2017- present **Postdoc (assegnista di ricerca di tipo B)**
Dipartimento di Scienze Agrarie e Ambientali – Produzione, Territorio, Agroenergia, Universita degli Studi di Milano, Milan, Italy.
FACCE Project: BarPLUS, Modifying canopy architecture for increased barley biomass and yield

RESEARCH ACTIVITIES AND SCIENTIFIC PUBLICATIONS

Salar Shaaf has solid background in statistical models, experimental design and analysis of biological data from various biological fields especially data from plant genetics and breeding where the experiments must be conducted in replicated field trials over different years and locations. He has extensive theoretical background in a range of analytical methods and is proficient in the use of tools for studying Genotype by Environment Interaction (GEI). Within his PhD thesis, he worked on statistical genetics of quantitative traits conducting association mapping analyses of phenological and agronomical traits, incorporating molecular marker data to associate/find markers closely linked to quantitative trait loci (QTLs) that are involved in controlling quantitative (metric) characters of economically agronomic importance [4, 11]. Later, he became interested in genome-environment association analysis - a field of molecular population genetics aiming at the identification of genomic regions that are under natural selection, called “adaptive loci”, which are important for genetic improvement of crops under rapid climate change and various abiotic and biotic stresses [3, 7, 8]. In addition, he matured a solid background on multivariate statistical methods useful for various phenotypic and genotypic diversity analyses [2, 3, 4, 5, 7, 9, 21, 22, 23, 24, 25, 26].

He started research on molecular diversity in a collection of chickpea (*Cicer arietinum*) landraces from different geographical regions of Iran for developing his MSc thesis during 2001-2004. This research was conducted in the National Plant Gene Bank of Iran (NPGBI), Karaj, Iran. In this context, he gained hands-on experience in the use, analysis and interpretation of different types of molecular markers (including DNA extraction, PCR optimization, and data analysis of molecular data) for fingerprinting and diversity analyses [27]. At the same time, he also conducted a morphological evaluation of the collection for various traits under both controlled and field conditions to compare the level of similarity between genetic and phenotypic distances for better classification and exploitation of large number of

chickpea accessions maintained in the Gene bank of Iran. Later, he continued his research in NPGBI as research scientist during 2005-2006, and collaborated to two projects on chickpea and pistachio, which represent major crops in agricultural production in Iran - a diversity centre for these two species. The first project regarded the molecular identification of Iranian pistachio germplasm. His responsibility was to find a molecular identity card for each accession using Randomly Amplified Polymorphic DNA (RAPD) markers. Using different multivariate statistical tools, he could identify a small subset of markers that could discriminate each accession from others with specific molecular identity card and was proven to be useful method for variety identification by screening minimum number of DNA fingerprints with most discriminating power [26]. Second, he worked on the chickpea project searching for a molecular tool that could identify the F1 hybrids from parents in interspecific hybridization programs without the need for field screening [25]. Later, he applied for PhD competition course and was successfully accepted by University of Tehran and ranked first in the competition. His research was Phylogeographic analysis and linkage disequilibrium mapping for flowering time genes in barley for developing PhD thesis during 2007-2012 . For this task, he conducted his research in Germany in the Leibniz Institute of Plant Genetics and Crop Plants Research (IPK) for 9 months in the Genome Diversity research group under the supervision of Dr. Benjamin Kilian. He evaluated more than 800 wild and domesticated barleys under field conditions and under two different vernalization treatments and scored more than ten morphological traits on 6000 individuals. At the same time, he carried out genotyping using Multiplex-PCR by running on MegaBase machine using EST-SSR markers. He conducted candidate gene sequencing using DNA sequencing machine. He amplified five candidate genes which are known to be involved in flowering pathway in barley (*HvGI*, *HvFT1*, *Ppd-H1*, *HvNAM*, *HvCO1*). The objective was to analyse phylogenetic relationships among the studied accessions and identify associations between single nucleotide polymorphisms at flowering time genes and agronomic traits including days to flowering [8, 11, 20]. For this purpose, he used different bioinformatics and statistical tools for data analysis using various programs such as Phylip, R, SAS, BioEdit, DNAsp, PowerMarker, and TASSEL. Briefly the results showed that *Ppd-H1* is the major determinant of flowering time in barley and he found SNPs at the *Ppd-H1* gene that are responsible for both early and delay flowering in barley. After graduation, He joined the department of agronomy and plant breeding of Azad University of Sanandaj, Iran, during 2012-2016 as assistant professor and started teaching mainly on statistics and genetics courses starting from 2012 for BSc, MSc, and PhD students. In Sanandaj, he focused on studying genetic variation in wild barleys from western Iran. Crop wild relatives are invaluable sources of genetic variation to broaden the genetic basis of crops and wild barley is a promising source of variation. The natural distribution area of this species is Fertile Crescent (FC) covers western part of Iran, northern Iraq, Syria, southern Turkey, Jordan, and Israel. There is, however, lack of information about the level of diversity in eastern part of FC (western part of Iran). For this reason, he started wild barley sampling and he collected fresh seed samples along an eco-geographical transect of 500 km. He evaluated this wild barley population along with different domesticated accessions under irrigated and drought conditions in Azad University of Sanandaj as assistant professor during 2014-2015. Preliminary results showed that there is a high level of diversity for various important characters and the germplasm could be a good source of breeding for barley.

In 2016, he moved to the University of Milan to take up a postdoctoral fellowship first at DBS with Prof. Fabio Fornara and later at DiSAA with Prof. Laura Rossini. During these years, he applied and further developed his knowledge of statistical genetics to dissect the genetic determinism of plant developmental traits in barley, by integrating analysis of both germplasm collections and morphological mutants. Within the ClimBar project, he focused on genome wide association analysis of culm morphological traits which are under study for the first time in barley, together with other characteristics that are strongly associated to stem lodging, a major constraint causing severe yield losses and poor grain quality. He contributed to dissect the genetic control of culm traits, identifying various markers genetically linked to QTLs influencing these trait incorporating most advanced statistical genetics tools [13, 17, 18, 19]. The detected QTLs are currently under study for further validation. He is also working within the BarPLUS project integrating different

genetic and bioinformatic approaches such as gene annotation, gene prediction, forward genetics, reverse genetics, and allele mining [15, 16]. He phenotyped the barley HorTILLUS population and was able to select candidate mutant lines with erect leaf angle and increased number of tillers that are important characters in plant architecture and ideotype design for increased biomass and yield in barley [1].

BIBLIOMETRIC INDICATORS

ORCID ID: orcid.org/0000-0002-0992-8273

Scopus Author ID: 55970035000 *h* index 3, n. total citations 60 (12 November 2018)

ResearchGate *h* index 4, n. totale citazioni 72 (12 November 2018)

https://www.researchgate.net/profile/Salar_Shaaf

SCIENTIFIC PUBLICATIONS (COMPLETE LIST)

The Impact Factor refers to the year of publication; for the publications of the years 2017 and 2018 the IF refers to the year 2017 (InCites - Journal Citation Reports database).
The number of citations was taken from the WOS Core Collection and Scopus databases on 10 November 2018. For the "presented" publications, the personal contribution is briefly reported.

1. **Shaaf S**, Bretani G, Biswas A, Fontana IM, Rossini L (2018) Genetics of barley tiller and leaf development. **Journal of Integrative Plant Biology**

DOI	Accepted manuscript
PubMed ID	
Dimensions ID	
Citations	
Impact Factor	3.092
Quartile	Q1 (Plant Sciences)

Contribution: Writing – original draft, Writing – review & editing

2. Marzang N, Abdollahi Mandoulakani B, **Shaaf S**, Ghadmizadeh M, Bernousi I, Abbasi Holasou H, Sadeghzadeh B (2018) IRAP and REMAP-based genetic diversity among Iranian, Turkish and International Durum Wheat (*Triticum turgidum* L.) Cultivars. **Journal of Agricultural Science and Technology**

DOI	Accepted manuscript
PubMed ID	
Dimensions ID	
Citations	
Impact Factor	0.890
Quartile	Q2 (Agriculture, Multidisciplinary)

Contribution: Data curation, Formal analysis

3. Pournosrat R, Kaya S, **Shaaf S***, Kilian B, Özkan H (2017) Geographical and environmental determinants of wild barley genetic structure in Southeastern Anatolia. **PLoS ONE**, 13(2), e0192386, 2018

DOI	dx.doi.org/10.1371/journal.pone.0192386
PubMed ID	https://www.ncbi.nlm.nih.gov/pubmed/29420597
SCOPUS ID	85041922866
WOS CODE	WOS:000424517900068
Citations	0
Impact Factor	2.766
Quartile	Q1 (Multidisciplinary Sciences)

Contribution: Data curation, Formal analysis, Writing – original draft, Writing – review & editing

4. **Shaaf S**, Sharma R, Baloch FS, Badaeva ED, Knüpffer H, Kilian B, Özkan H (2016) The grain Hardness locus characterized in a diverse wheat panel (*Triticum aestivum* L.) adapted to the central part of the Fertile Crescent: genetic diversity, haplotype structure, and phylogeny. **Molecular Genetics and Genomics** 291 (3):1259-1275

DOI	10.1007/s00438-016-1180-5
PubMed ID	https://www.ncbi.nlm.nih.gov/pubmed/26898967
SCOPUS ID	84959148563
WOS CODE	WOS:000376509100019
Citations	4
Impact Factor	2.734
Quartile	Q2 (Genetics and Heredity)

Contribution: Data curation, Formal analysis, Writing – original draft, Writing – review & editing

5. Rafeipour M, Mirzaghaderi G, **Shaaf S**, Badakhshan H (2016) SSR assessment of the genetic diversity of emmer wheat with emphasis on Iranian landraces (*Triticum dicoccon* Schrank). **Genetic Resources and Crop Evolution**: 63 (4) 595-600

DOI	10.1007/s10722-016-0379-y
SCOPUS ID	84959148563
WOS CODE	WOS:000373116600002
Citations	2
Impact Factor	1.130
Quartile	Q2 (Agronomy)

Contribution: Data curation, Formal analysis, Writing – original draft, Writing – review & editing

6. Abdollahi-Mandoulakani B, Rahmanpour S, **Shaaf S**, Gholamzadeh-Khoei S, Rastgou M, Rafezi R (2015) Towards the identification of retrotransposon-based and ISSR molecular markers associated with populations resistant to ZYMV in melon. **South African Journal of Botany** 100:141-147

DOI	10.1016/j.sajb.2015.05.027
SCOPUS ID	84931260976
WOS CODE	WOS:000361254700021
Citations	1
Impact Factor	1.442
Quartile	Q2 (Plant Sciences)

Contribution: Data curation, Formal analysis, Writing – original draft, Writing – review & editing

7. **Shaaf S***, Sharma R, Kilian B, Walther A, Özkan H, Karami E, Mohammadi B (2014) Genetic structure and eco-geographical adaptation of garlic landraces (Allium sativum L.) in Iran. **Genetic Resources and Crop Evolution** : 61 (8) 1565–1580

DOI	10.1007/s10722-014-0131-4
SCOPUS ID	84911996306
WOS CODE	WOS:000345377800010
Citations	6
Impact Factor	1.130
Quartile	Q2 (Agronomy)

Contribution: Data curation, Formal analysis, Writing – original draft, Writing – review & editing

8. Jakob SS, Rödder D, Engler JO, **Shaaf S**, Özkan H, Blattner FR, Kilian B (2014) Evolutionary history of wild barley (Hordeum vulgare subsp. spontaneum) analyzed using multilocus sequence data and paleodistribution modeling. **Genome Biology and Evolution** 6 (3): 685-702

DOI	10.1093/gbe/evu047
PubMed ID	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3971598/
SCOPUS ID	84959148563
WOS CODE	WOS:000334578100022
Citations	32
Impact Factor	3.940
Quartile	Q1 (Genetics and Heredity)

Contribution: Data curation, Formal analysis, Writing

9. Mohammadi B, Khodadadi M, Karami E, **Shaaf S*** (2014) Variation in agro-morphological characters in Iranian garlic landraces. **International Journal of Vegetable Science**. 20:202-215.

DOI	10.1080/19315260.2013.788594
SCOPUS ID	84902581581
Citations	2
Impact Factor	

Contribution: Data curation, Formal analysis, Writing – original draft, Writing – review & editing

10. Andeden EE, Yediay FE, Baloch FS, Shaaf S, Kilian B, Nachit M, Özkan H (2011) Distribution of Vernalization and Photoperiod Genes (Vrn-A1, Vrn-B1, Vrn-D1, Vrn-B3, Ppd-D1) in Turkish Bread Wheat Cultivars and Landraces. **Cereal Research Communications** 39(3), pp. 352–364.

DOI	10.1556/CRC.39.2011.3.5
SCOPUS ID	80052911874
WOS CODE	WOS:000294761300005
Citations	14
Impact Factor	0.489
	Q4 (Agronomy)

Contribution: Data curation, Formal analysis, Writing

11. **Shaaf S***, Behamta MR, Talee AR, Mohammadi VA, Kilian B (2012) Association analysis of flowering time and single nucleotide polymorphisms at *Ppd-H1*, *HvCo1*, and *HvGI* genes in barley (*Hordeum vulgare*). **Modern Genetics Journal** 7:179-191 (in persian)

Journal web site	http://mg.genetics.ir
Impact Factor	0.075[1]

Contribution: Data curation, Formal analysis, Writing – original draft, Writing – review & editing. 1. Impact factor is among Iranian journals evaluated by Ministery of Science and Technology (http://journals.msrt.ir/).

CHAPTERS OF BOOKS TO INTERNATIONAL DIFFUSION

12. Kilian B, H. Özkan H, **Shaaf S**, Hübner S, Pasam RK, Sharma R, Neumann K, Weißgerber W, et al (2012) Comparing genetic diversity within a crop and its wild progenitor: a case study for barley. In: Maxted N, Dulloo M E, Ford-Lloyd B V, Frese L, Iriondo J M, Pinheiro de Carvalho M A A (Eds.): **Agrobiodiversity Conservation: Securing the Diversity of Crop Wild Relatives and Landraces**. CABI Publishing, Wallingford.

DOI	10.1079/9781845938512.0186
ISBN	978-1-84593-851-2
WOS CODE	WOS:000344370500026
SCOPUS ID	84873064664
Citations	1

Contribution: Data curation, Formal analysis, Writing

PARTICIPATION IN FINANCED RESEARCH PROJECTS

The following are the research projects

Financing Institution	Title of the project [duration]	Role
MIUR, ERANET+ FACCE SURPLUS	BarPLUS: modifying canopy architecture and photosynthesis to maximize barley biomass and yield for different end-uses [2016-2019] https://barplus.wordpress.com/	Post-doctoral fellow (assegnista di ricerca di tipo B)
MIPAAF, ERANET+ FACCE JPI	ClimBar - An integrated approach to evaluate and utilise genetic diversity for breeding climate-resilient barley" [2015-2017]	Post-doctoral fellow (assegnista di ricerca di tipo B)

PROFESSIONAL RECOGNITIONS

- **Referee activities:**
  Modern Genetics Journal (Persian).
  Archives of Agronomy and Soil Science

SEMINARS ON ORAL AND POSTER COMMUNICATIONS AT CONGRESSES

ORAL COMMUNICATIONS

13. Bretani G, **Shaaf S**, Hotti A, Tondelli A, Cattivelli L, Delbono S, Waugh R, Thomas B, Russell J, Bull H, Keith R, Igartua E, Casas A, Gracia P, Schulman A, Rossini L (2018) ***Genome Wide Association study for barley culm-related traits across different European countries***. LXII SIGA Annual Congress "Plant development and crop productivity for sustainable agriculture. September 24th- 28th, Verona, Italy. Role: presenter of the talk

14. Toppino L, Ribolzi S, **Shaaf S**, Bassolino L, Carletti G, Fadda S, Rossini L, Boyaci HF, Caliskan S, Unlu A, Rotino GL (2018) ***Development of an introgression lines population and genetic mapping of novel traits linked to key breeding traits in eggplant***. LXII SIGA Annual Congress "Plant development and crop productivity for sustainable agriculture. September 24th- 28th, Verona, Italy.

POSTER COMMUNICATIONS

15. **Shaaf S**, Trabanco N, Pesaresi P, Confalonieri R, Paleari L, Tondelli A, Guerra D, Delbono S, Rizza F, Jöst M, Kappel C, Lenhard M, Chmielewska B, Janiak A, Biswas A, Mohammadi-Aghdam S, Rossini L (2018) ***Exploring natural and induced variations for the genetic improvement of barley biomass and yield***. LXII SIGA Annual Congress "Plant development and crop productivity for sustainable agriculture, September 24th- 28th, Verona, Italy.

16. **Shaaf S**, Trabanco N, Pesaresi P, Confalonieri R, Paleari L, Tondelli A, Guerra D, Rizza F, Jost M, Kappel C, Lenhard M, Chmielewska B, Janiak A, Rossini L (2018) ***Integrated genetic approaches to modify canopy architecture for improved barley biomass and yield***. EUCARPIA cereal section/ IWIW2 meetings, March 19th – 22th, POLYDOME, Clermont-Ferrand, France.

17. Britani G, **Shaaf S**, Hotti A, Tondelli A, Cattivelli L, Delbono S, Waugh R, Thomas B, Russel J, Bull H,, Keith R, Igartua E, Casas A, Gracia P, Schulman A , Rossini L (2018) ***Genome scan to detect loci involved in culm morphological traits in a diverse barley collection***. EUCARPIA cereal section/ IWIW2 meetings, March 19th – 22th, POLYDOME, Clermont-Ferrand, France.

18. Britani G, **Shaaf S**, Hotti A, Tondelli A, Cattivelli L, Delbono S, Waugh R, Thomas B, Russel J, Bull H, Igartua Arregui E, Casas A, Pilar G, Rossini L (2017) ***A genome wide association study to dissect culm morphological traits in barley***. Biodiversity and ecological engineering for sustainable intensification of agriculture, April 24th - 26th Dakar, Senegal.

19. Bretani G, **Shaaf S**, Hotti A, Tondelli A, Cattivelli L, Delbono S, Waugh R, Thomas B, Russell J, Bull H, Igartua E, Casas A, Gracia P, Rossini L (2017) ***Genetic dissection of natural variation for culm morphological traits in barley***. Proceedings of the joint Congress SIBV-SIBA. September 19th - 22th, Pisa, Italy.

20. Sharma R, **Shaaf S**, Özkan H, Pasam RK, Walther A, Ceccarelli S, et al (2014) ***Genetic basis of photoperiod-insensitivity in barley*** In: Lohwasser W, BÖrner A (Eds), I•T•M•I Conference Eucarpia Section Genetic Resources, Wernigerode, Germany, 28 June- 4 July, 2014, pp . 56

21. Konovalov F, Kilian B, **Shaaf S**, Graner A (2010) ***Genetic diversity of wild wheat assessed by retrotransposon-based markers***. 10th Gatersleben Research Conference 2010 (GRCX)

22. Hoori M, Ghamari Zarea A, Sadat Noori S, Omidi M, Najafi MS, **Shaaf S** (2009) ***Efficient embryogenesis from tuber in Carum carvi***. The 6th National Biotechnology congress of Iran,13-15, Aug, Summit Meeting Conference Hall, Tehran-Iran.

23. Hoori M, Ghamari Zarea A, Sadat Noori S, Omidi M, Najafi MS, **Shaaf S** (2009) ***Regeneration of microtubers from callus in Carum carvi***. The 6th National Biotechnology congress of Iran, 13-15, Aug,Summit Meeting Conference Hall, Tehran-Iran.

24. Hoori M, Ghamari Zarea A, Sadat Noori S, Omidi M, Najafi MS, **Shaaf S** (2009) ***Optimization of embryo regeneration in Carum carvi***. The 6th National Biotechnology congress of Iran, 13-15, Aug,Summit Meeting Conference Hall,Tehran-Iran.

25. Sabri H, Mozafari J, Jafar Aghaei M, **Shaaf S** (2007) ***The use of RAPD technique for the verification of interspecific hybrids in the genus Cicer***.The 5th National Biotechnology congress of Iran,24-26 Nov,Summit Meeting Conference Hall, Tehran-Iran.

26. Mozafari J, **Shaaf S**, Rezaei Kamal Abadi A (2007) ***Fingerprinting Iranian pistachio cultivars using RAPD technique***. The 5th National Biotechnology congress of Iran,24-26 Nov, Summit Meeting Conference Hall, Tehran-Iran.

27. **Shaaf S**, Mozafari J, Abdmishani C, Jafar Aghaei M (2004) ***Study on genetic diversity in Iranian chickpea (cicer arietinum) landraces based on RAPD markers***. Proc. The 8th Iranian Crop Science Congress. 24-26 Aug. Rasht-IRAN

TEACHING ACTIVITIES

Salar Shaaf has six years-experience in teaching genetics, statistics, and design and analysis of statistical experiments gained as an assistant professor and later post-doctoral fellow, conducting tutorials in the field of genetics and statistics, lecturing and supervising numerous undergraduates, both in Italy and in Iran. Since his entry into service as a researcher in 2010, he has carried out a continuous and intensive teaching activity as lecturer responsible for various courses in genetics, statistics and plant breeding for master's degree courses, masters and research doctorates. He has supervised numerous master and doctoral students.

FRONTAL TEACHING ACTIVITIES

Disciplines held as assistant professor in the context of institutional courses of Azad University of Sanandaj, Iran, Faculty of Agriculture and Natural Resources.

Discipline	**Degree Course**	**A.A.**
Introduction to probability and statistics	BSc degree in Agronomy and Plant Breeding	2011-2012 2012-2013 2013-2014 2014-2015 2015-2016
Advanced crop breeding	BSc degree in Agronomy and Plant Breeding	2014-2015
Statistical analysis of designed experiments		2011-2012 2012-2013 2013-2014 2014-2015 2015-2016
Application of computer in agronomy and crop science	MSc degree in Agronomy	2012-2013 2013-2014 2014-2015 2015-2016
Advanced statistical methods (Regression and linear models)	MSc degree in Plant Breeding	2014-2015 2015-2016
Multivariate statistical methods	MSc degree in Plant Breeding	2014-2015 2015-2016
Research methodology	MSc degree in Agronomy	2012-2013 2013-2014 2014-2015 2015-2016
Advanced statistical designs	PhD degree in Plant Breeding	2014-2015 2015-2016
Molecular data analysis using computer	PhD degree in Plant Breeding	2014-2015 2015-2016

THESIS SUPERVISED and ADVISED

THESIS IN MASTER DEGREE

Student name	Degree course	A.A.	*Thesis title*
Hana Hamidi	Molecular and Cellular Biology	2011-2012	Characterization of genetic diversity in Iranian improved wheat cultivars using ISSR molecular markers
Farshad Mahmoudian	Agronomy	2012-2014	Phenotypic evaluation of cultivated and wild barleys in Iran
Ebrahim Bazarkhak	Agronomy	2012-2014	Safflower response to ascorbic acid under drought stress conditions
Shahram Moradi	Agronomy	2012-2014	Performance of spring vs. winter sowing in commercial chickpea cultivars grown in Kurdistan
Saba Khavarian	Agronomy	2013-2015	Effect of different irrigation regimes on agronomic traits in safflower genotypes
Pouya Mahtabani	Agronomy	2013-2015	Morphological and agronomic evaluation of chickpea cultivars and landraces collected from different geographical regions
Ako Mohammadi	Agronomy	2013-2015	Effect of different irrigation regimes on safflower yield and yield components
Sabah Mohammadi	Agronomy	2013-2015	Effect of chickpea seed priming with ascorbic acid on yield and agronomic characters under supplementary irrigation and dryland conditions
Kourosh allamii	Agronomy	2013-2016	Phenotypic evaluation and response of cultivated and wild barleys to experimentally imposed water stress
Jahangir Azhari	Agronomy	2014-2016	Effects of foliar application of methanol and micronutrients fertilizer on growth and yield of two chickpea cultivars under rain-fed conditions
Omid Rahmani	Agronomy	2014-2016	Grain yield and yield components of chickpea genotypes in Kurdistan
Jamshid Sharafvandi	Agronomy	2014-2016	Response of maize cultivars to different levels of biological fertilizers under water stress and well-watered conditions
Taofigh Botkadeh	Agronomy	2014-2016	Response of chickpea (*Cicer arietinum* L.) cultivars to foliar application of Ascorbic acid under dryland and supplementary irrigation conditions
Alessandro Gerli*	SCIENZE DELLA PRODUZIONE E PROTEZIONE DELLE PIANTE (magistrale)	2016-2017	ANALISI DELLA VARIABILITA' GENETICA PER CARATTERI DEL CULMO IN ORZO (*HORDEUM VULGARE* L.): MAPPATURA DI ASSOCIAZIONE IN UNA COLLEZIONE DI GERMOPLASMA EUROPEO

Co-tutor, Università degli Studi di Milano

SUPERVISIONE DI DOTTORANDI

Nome dottorando	Ruolo di supervisione	Status	Institution
Abhisek BiswasΦ	Co-Tutor	ongoing	Università degli Studi di Milano
Sina Mohammadi Aghdam	Co-Tutor	ongoing	Urmia University, Iran
Reza Pournosrat	Co- Tutor	ongoing	Sanandaj University, Iran

ΦDottorato in Agricoltura, Ambiente e Bioenergia

Date 15,11,2018

Place MILAN

Signature